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## The Mediating Manager for Effective Troubleshooting in Organizations: A Transdisciplinary View from HPTD-M

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\*This paper reflects the exclusive opinion of this author, not necessarily the view of any public institution.

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**Abstract**: This article proposes the idea of mediating manager, as well as the analytical and the synthetic model of quaternary complementarities of the HPTD-M theory (Holopraxis Transdisciplinary Management), published throughout 2022 and 2023. In the context of the ESG (Environmental, Social, and Governance), the view of transdisciplinarity (TD) in public management and general management is developed, including concepts of governance and governability with the types of leadership. The MBTI system of self-leadership and management within the HPTD-M synthetic model is explained, an innovation presented by HPTD-M for classification in four epistemic ways or quadrants. The mechanistic, systemic, TD, and HPTD-M paradigms are described as instruments for effective troubleshooting. Finally, the HPTD-M model developed from Jung's Analytical Psychology with concrete examples: Shadow levels of the collective unconscious. The results of this text publication may eventually start a new vision of training for managers, having in mind the perspective of ESG, of not only to public managers but also project managers (for planning and strategic planning purposes), besides business managers in state-owned companies, i.e., this article can be applied to public and private organizations. This is the idea of the mediating and TD leader, under the holopraxis dialectical perspective for effective problem-solving. Management problems cannot be solved only with mechanisms because human phenomena are much more complex than mechanical, biological, and ecological issues, even in a systemic vision, hence the TD paradigm as a way of approaching the experienced reality, while considering the mechanistic and systemic paradigms, when applied as a simpler way of solving problems. Finally, the training for the mediating manager seems to be compatible with courses that simulate work groups concretely, especially through the instructor's behavior, so that conflicts and distinct opinions build solutions through maieutics. This method of eliciting knowledge by a series of questions and answers forms the dialectics of abstract ideas to be shaped in solutions discussed concretely, through a feedback cycle between the concrete and the abstract, starting from the synthetic method, in the scope of the deductive and inductive method, which provoke questions to bring back doubts to the abstract field, until the cycle stresses itself to reach simplified and effective solutions. This formula can work not only for management training but also for courses envisaging academics and practitioners of TD interested in understanding transdisciplinary mediation.

Keywords: Mediation. Management. Problem-solving. Effectiveness. Transdisciplinarity. HPTD-M.

### 1 Introduction

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Since the 18th century Enlightenment or Age of Reason, our Modern Age has promoted unequivocal advances in the field of technoscience and quality of life in material terms, but a cycle has been created in which the hypertrophy of logic and analysis makes it difficult to solve concrete questions involving the complexity of human phenomena. A more comprehensive understanding, as per ancient philosophies and traditions, has been lost. Understanding has been reduced to knowledge, fractioned by narrow analytical and scientific views of reality. Many human sciences borrowed such rationalist models from the hard sciences, configuring a reductionist approach of merely mechanistic or biological-environmental views, which can't be applied effectively to complex human phenomena.

As an example, ESG - Environmental, Social, and Governance is supposed to deal comprehensively with problems from a biological-environmental and social aspect. [1]

However, our Western culture inherited from the Age of Reason tends to reduce the subject to the object. The human phenomena in ESG are based on ethical behavior, belief structure, and collective/personal values. After all, people make things happen (or not). So, the idea of ESG seems to be distorted when not considering the psychological personal and collective levels, the complementarity of conscious and unconscious as per Analytical Psychology. In this perspective, the socio-environmental governance of ESG needs to effectively go beyond sustainability on an economic-financial and environmental level, by addressing the internal and external environment of organizations on a psychological level, not just through physical and material resources. In this sense, sustainability on a psychological level means i) paying attention to the balance of relationships among all stakeholders or actors and ii) avoiding unreasonable stressful pressures at the personal and collective levels. Those two may lead not only to an awful environment but also to unnecessary costs for the organizations as a result, which can be prevented like a fire extinguished before it spreads. The essential idea here is taking proactive measures to address a problem or conflict early on before it escalates or becomes more difficult to manage.

In this connection, quaternary complementarities are the basis of this author's HPTD-M Theory published in 2022, the Holopraxis Transdisciplinary Management [2]. Complementarity is a principle coming from modern physics, from particle-wave duality [3] and mass-energy convertibility [4]. Quaternary because HPTD-M involves four archetypal elements, i.e., universal patterns independent of culture. Complementary because these four elements interact two by two, as the HPTD-M models show. Holopraxis in the transdisciplinary sense of Weil, Crema, and D'Ambrosio, namely the idea of holistic vision as holology (study of the whole) and holopraxis (the practice of the whole). [5]

The HPTD-M theory was influenced by Carl Gustav Jung (1875-1961), a psychiatric scientist and physician who created Analytical Psychology, a complementary school to Freud's Psychoanalysis. The Jungian vision involves not only technoscience but also philosophy and traditions, besides the four archetypal elements – the analogy between states of matter, namely Solid, Liquid, Gas, and Plasma (from the most solid to the most dispersed), with the psychological functions, respectively Sensation, Feeling, Thinking, and Intuition (from the most concrete or solid to the most abstract or dispersed).

Such functions, which Jung discovered empirically in his patients, interact in complementarities, and Jung himself already hinted in a 1957 interview that the psyche is a quality of matter, a different kind of matter. [6]

No wonder Jung coexisted and discussed his theory with modern physicists. Even the Nobel Prize winner Niels Bohr was aligned with the Jungian view of complementarity between subject-object and conscious-unconscious. [7]

This is the basis of transdisciplinarity (TD) and the HPTD-M view, as a way of dealing with the complexity of human phenomena for concrete and effective problem-solving or troubleshooting.

In this context, the objective of this article is to introduce the understanding of the following items:

- The proposal of the mediating manager, the analytical and the synthetic model of quaternary complementarities, including governance and governability for organizations in general, with the types of leadership perspective.
- The MBTI system of self-leadership and management within the Synthetic Model, an innovation presented by HPTD-M for classification in four epistemic ways or quadrants.
- The Mechanistic, Systemic, TD, and HPTD-M paradigms as tools to effectively solve problems.
- The HPTD-M model developed from Jung's Analytical Psychology with concrete examples: Shadow levels of the collective unconscious.

Furthermore, this article is a result of a first edition of a training course for the mediating manager of 14 hours, in 7 meetings of 2 hours, developed by this author for Brazilian public managers, held in March 2023 with participants public servants in the federal, state, and municipal spheres (average age of 44). Four concrete case studies and three group dynamics of 50min each were part of the content of the course. [8]

As complementary material for quick reading/listening, to corroborate the paradigm of the mediating manager, the course presented as homework two short articles on ESG, governance, and effectiveness, besides an 18min lecture about scientific dogmatism. Everything can be read and seen in no more than 50 minutes:

- Corporate Governance, ESG from Strategy to Execution (in Portuguese). [9]
- Corporate Governance: Measuring Effectiveness, Efficacy, and Efficiency (in Portuguese). [10]
- The Illusion of Science. 18-minute presentation by Sheldrake, Cambridge University scientist, signatory of the 1986 Venice Declaration (UNESCO), antecedent of TD (in English). [11]

Besides, considering this author's background as a transdisciplinary theorist, the course may be extended to members of the international academy of TD and practitioners with a focus on mediation, not only for managers. In this sense, an idea for a mediating manager profile is shown in the Appendix, based on principles taken from the Charter of Transdisciplinarity of the First International Congress in 1994.

Finally, the results of this article publication may eventually provoke a new vision for students and academics of TD, not only for training managers, having in mind the perspective of ESG for public managers and project managers, i.e., for planning and strategic planning purposes, besides business managers in state-owned companies. So, this article applies to public and private organizations. This is the idea of the mediating and TD leader under the holopraxis dialectical perspective for effective problem-solving.

## 2 The Proposal of the Mediating Manager – Four Dimensions

Considering the rationalist models borrowed from the hard sciences, configuring a reductionist approach of merely mechanistic or biological-environmental views, which can 't be applied to complex human phenomena, the proposal of the mediating manager emerges as a possible alternative. This idea evolved from a 2023 training course together with an article published in Portuguese at the same time [8, 37]. The mediating manager searches for effective troubleshooting in the organizations and can have four dimensions by the HPTD-M view:

-Generalist: Manager as an articulating leader, a generalist articulating many specialists.

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**-Peacemaker:** A mediator promotes agreement between the parties to resolve conflicts before judicializing an issue, including by using techniques along the lines of the Systemic Law discipline of the Brazilian Bar

- [12]. In the case of public management, the manager in the role of facilitator, articulator, and conflict harmonizer.
- -Ghostbusters: With the ability to put the right people in the right place. Two mediators in a social audit (different from an accounting audit) looking for the "ghosts in the organizations' environments", according to the vision of the French economist and mediator Dr. Hubert Landier the ever-present, yet unspoken memory of an event or a person that destabilized the community and contributes to keeping this collectivity divided, for no apparent reason [13]. In the specific case of the public manager, the development of the expertise to put the right people in the right place so that "ghosts" are prevented through organizational synergy.
- **-Welcoming:** The capacity to listen, to hear, and to welcome all the actors. A therapist is a mediator for the conscience development of his clients, on a personal, family, or organizational level. As for the manager, the ability to listen and welcome (accept and integrate) all stakeholders or actors involved in work groups and organizations, so that the best solutions are developed. About the levels of listening within working groups:
  - level 1 Distracted listening, not paying attention completely to what is said.
  - level 2 Listening rationally: according to personal/organizational mindset or mental model. Those may swear that listen to everyone but they do it only proforma or bureaucratically, not accepting different opinions.
  - level 3 Welcoming:
    - **acceptance:** the leader must emotionally accept to discuss new ways or ideas, even if considered weird or unusual, through the skill of emotional intelligence to be seen in the next section.
    - **integration** of all stakeholders into the workgroup, making everybody feel included, which is difficult, but it is what solves the problem dialectically and effectively, as per the HPTD-M analytical model attributes to be seen in the next section.

## 3 Analytical Model and Synthetic Model by HPTD-M Theory and Praxis

In the context of the mediating manager, psychology emerges as an important issue. There are four Jungian functions of conscience, which imply, as per HPTD-M, four types of intelligence, namely empirical, emotional, rational, and intuitive. In the literature, as Prof. Dr. Mircea Nita informed this author in November/2021 from Bucharest, Romania, at the 8th Annual International Conference on Law and Administrative Justice from an Interdisciplinary Perspective [14], it had been very common to consider three types of intelligence in Romania, i.e., rational, emotional, and spiritual. These can be translated to the HPTD-M paradigm as follows:

- Rational (Rational stricto sensu plus Empirical in HPTD-M).
- Emotional (Emotional in HPTD-M).
- Spiritual (Intuitive in HPTD-M).

On the other hand, according to Figure 1, Prof. Nita himself corroborates the quaternary view of reality, by proposing a new type of Public Administration education, in the sense of learning to:

- KNOW the methods that help distinguish reality from illusion (Rational intelligence in HPTD-M).
- DO something in professional specialized practice (Empirical intelligence in HPTD-M).

- LIVE respecting the norms and bases of human community interaction (Emotional intelligence in HPTD-M).
- BE questioning oneself continuously in a process of self-knowledge (Intuitive intelligence in HPTD M).

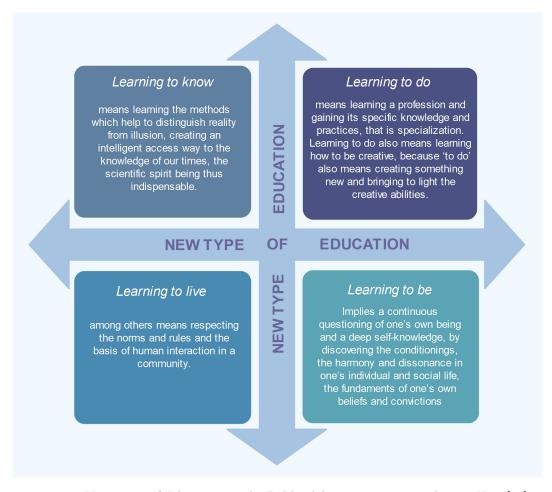


Figure 1: New Type of Education in the Public Administration according to Nita [15].

Figure 2 shows the HPTD-M analytical model built from the four archetypal elements. These elements interact in complementarities. That is the meaning of "quaternary complementarities", as already mentioned. As the HPTD-M approach demonstrates, these elements are reflected in various scientific views, philosophies, and traditions, not only in Jung's Analytical Psychology and Nita's framework for a new type of education in Public Administration.

Examples of hard skills and analytical methods – Empirical and Rational Intelligence [8]:

- a) Empirical Intelligence by discretionary need when it fits, without science or bureaucracy to support it (inductive method):
  - An engineer, by experience, uses his empirical formula for project sizing, which is not possible to be deduced mathematically.
  - A physician prescribes to his patient an off-label medication, given the few calculated side effects and his professional experience in similar/analogous concrete cases.

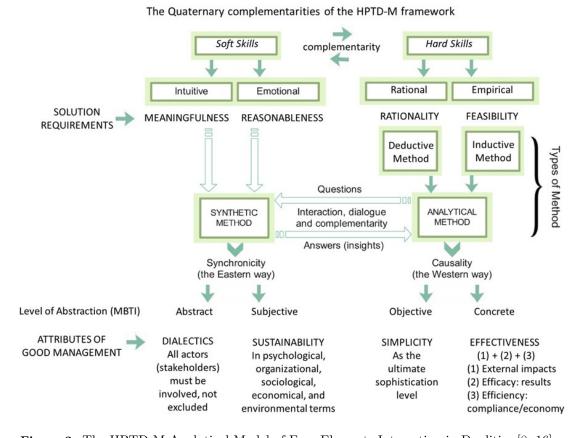


Figure 2: The HPTD-M Analytical Model of Four Elements Interacting in Dualities [8, 16].

- b) Rational Intelligence through published scientific models or deduced modeling, mathematically or otherwise (deductive method):
  - Modeling in economics: econometric models deduced with mathematical equations.
  - Drug research by laboratories with published results scientifically proven through statistics.

Examples of soft skills and synthetic methods – Emotional and Intuitive Intelligence [8]:

- c) **Emotional Intelligence** the ability to deal with oneself and others:
  - The manager learns to control himself psychologically (conscience development by various forms of therapies helps).
  - Understands how their colleagues behave psychologically (the MBTI [17, 18, 19] is a good learning reference as a self-leadership and management system).
  - Knows how to decide based on what he diagnoses and on the feedback from his colleagues.
  - Understands what may be rational, but not reasonable, as to sensibleness, acceptability, and proportionality.
  - d) **Intuitive Intelligence** searches for decision-making elements when data/diagnosis are insufficient:
    - A police investigator follows his "guts" and searches for clues to solve a case.
    - Politicians follow their "feeling" to take a certain course of action in uncertain situations.

- A businessman follows his instinct and goes against the results of an economic-financial viability study with an attractive internal rate of return, deciding not to invest.
- Insights can give the manager ideas for innovation.
- An idea that does not make sense should not go on, because making sense is the starting point.

As for the attributes of attention of the mediating manager, according to the last line of Figure 2 [8, 16]:

- Effectiveness (concrete, empirical, inductive): more than the mere Efficacy of internal results of an organization or the Efficiency of the economy (costs) and conformity of processes (compliance and bureaucracy). Effectiveness means the result of management in the perception of civil society the external environment impacts. However, the concepts of Efficacy and Efficiency, as described, are comprised in Effectiveness. This perspective of Effectiveness containing Efficacy and Efficiency is in the Brazilian Public Administration mainstream.
- Sustainability (subjective, emotional, synthetic): the final balance of economic and environmental resources, considering the sociological realm, and especially human psychological well-being at collective and personal levels (human resources at the personal and organizational levels).
- **Simplicity** (objective, rational, deductive): a consequence of discussions with all stakeholders and studies to transform the complexity of human phenomena into simplicity as the ultimate sophistication, which should not be confused with a reduction to the mechanical phenomena of hard science or simplism.
- **Dialectics** (abstract, intuitive, synthetic): through the friction of opposites in a discussion (complementarities), the abstract idea is polished until it reaches its mature point of realization, considering that all actors (stakeholders) must be involved, heard, and not excluded for this to occur.

In this context, dialectics is the key attribute for solving problems concretely, for decision-making given the large amount of information that exists today, which needs to be treated in terms of quality. The idea is to listen to all stakeholders (actors), given the alternative paths that each one proposes, and objectively reach a middle ground. Welcoming all ideas is the basis for finding the best way out. Nobody does anything alone, and standardized scripts for decision-making do not seem to be effective in this sense, given the subjective nature of decisions, involving emotional intelligence and the idea of quality instead of mere quantity. So, numbers and data out of context (quantitative approach) mean nothing if the quality view is not comprised.

A recent example of group work in which this author participated: there was a trade-off (dilemma) involving meeting one legislation standard over another. Rationally, there was no way to comply with both. Since both were in the same decree hierarchy, precedence was given to the more specific one to the detriment of the more general one. This was a reasonable solution after exhaustive discussion among three participants, including this author.

Figure 3 presents the synthetic model which, besides the types of intelligence, requirements, and attributes in the quaternary structure, also presents the view of the organization as a circle, which delimits the internal environment, while the external environment is outside the circle. Furthermore, the idea of Knowing vs. Understanding emerges as complementarity, as Judgment vs. Perception. The latter is one of the polarities of the MBTI system of self-leadership and management, related to Jung's typology, to be seen in this article. Finally, Figure 3 explores the concept of the 4 epistemic ways in the **transdisciplinarity** (**TD**) view, at the center: Technoscience, Philosophy, Tradition, and Art:

- Technoscience (empirical and rational intelligence).
- Philosophy (rational and intuitive intelligence).

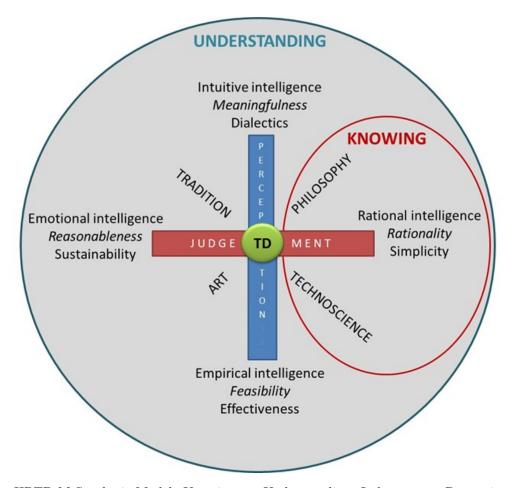


Figure 3: HPTD-M Synthetic Model. Knowing vs. Understanding, Judgment vs. Perception, and the Four Epistemic Ways of TD: Technoscience, Philosophy, Tradition, and Art [2, 16]

- Tradition (intuitive and emotional intelligence).
- Art (emotional and empirical intelligence).

Important to mention that these connections are relative, considering Art has intuitive aspects, Tradition (including religions) has developed rational foundations, and Science (deductive method) itself often starts its theories on an intuitive level. So, this synthetic model must be seen as a compass, not as a rational, mechanistic, exhaustive, or peremptory model. The whole framework is compatible with the idea of quaternary complementarities of HPTD-M because there will be always a pair of complementarities to be understood in the whole context. Summing up, like in modern physics this model is relative, depending on the point of view of the observer, it will never be absolute.

### 4 Definitions and Concepts of TD

Besides the TD perspective in the center of Figure 3, there are four HPTD-M concepts:

- **Disciplinarity:** disciplines studied separately by specialists (isolated disciplines).
- Multidisciplinarity: specialists in a meeting, working group, or research, with no interaction between disciplines (multi = several).

- **Interdisciplinarity:** interaction and interchange among or between disciplines in a meeting, working group, or research, which may even create new disciplines (inter = among or between).
- **TD:** the unity of understanding beyond the disciplines (trans = beyond + through), complementary and synergic interactions between specialists and generalists through various ways.

Those concepts are influenced by **Nicolescu's methodology**, for which there is a fertile complementarity between disciplinarity and TD, comprising the logic of **Third Included** and the idea of Hidden Third [20]. There is a connection to the HPTD-M view of **complementarity** as a balance of opposites, since this Nicolescu's third included element of harmonization may emerge also in the **dialectics of Plato** (427 347 BC), as the fourth level of knowledge in Plato's Divided Lines, another HPTD-M reference [2]. This view differs from the logic of Aristotle (384 322 BC), which separates the opposites, comprising the linear logic which is still our Western society's dominant view, the causality paradigm.

Therefore, considering also Figure 3, TD seems to be a new cultural, philosophical, technoscientific, and creative approach that goes beyond and through disciplines (TRANS), in search of UNDERSTANDING reality to solve problems, more than simply KNOWING rationally. Here are two authors who corroborate this vision, as per the difference between UNDERSTANDING and KNOWING:

- Max-Neef: economist and academic, Alternative Nobel for his Barefoot Economics theory. For 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: Einstein [...] declared that "the intuitive mind is a sacred gift, and the rational mind is a faithful servant. We have created a society in which we honor the servant and have forgotten the gift." [21]
- Crema: anthropologist, psychologist, therapist, and TD theorist, creator of the 5th Force in Therapy. In the scholar's view, there is a hypertrophy of information and knowledge, of broad, unrestricted, and immediate access, concomitant with the atrophy of the process of discernment and understanding. [22]

Other sources that may establish a bridge do TD:

• Corporate Feedback – Missel. [23]

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- Transpolitics (TD in politics) Viparelli. [24]
- Transdisciplinarization of Law (TD applied to Law) Wiviurka. [25]
- Systemic Law Brazilian Bar OAB. [12]
- "Hammer-Nail" allegory replicated by the website of a technology company [26]:

"There is an old saying: If the only tool you have is a hammer, you will start treating all your problems like a nail.

Abraham Maslow modified it in 1966 to:

If all you have is a hammer, everything looks like a nail."

### 5 TD in Public and Private Organizations

Given the broader view of ESG as a requirement tendency for both public and private organizations, which involves not only the internal environment but also the external environment, understanding public management in a TD view seems to be valuable for effectiveness and concrete problem-solving.

The scientific administration of the two engineers Taylor and Fayol was a trend until the first half of the 20th century, according to the chronology of Uwizeyimana & Basheka for Public Administration, which also shows that Public Administration emerged as a separated discipline from Politics at the end of 19th century [30]. Taylor and Fayol are also part of business and Public Administration courses even

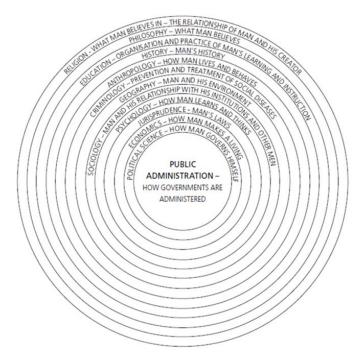


Figure 4: Disciplines in Public Administration as Quoted by Uwizeyimana and Basheka [30].

nowadays, i.e., scientific approaches seem to be remaining as a mainstream tendency, even unconsciously and unintentionally.

In this context HPTD-M comes out as an alternative, a theory influenced by the holistic TD of Weil, Crema, and D'Ambrosio [5], which understands reality through four epistemic forms or disciplines, always in interaction and/or integration: technoscience, philosophy, tradition, and art. This is a soft skills approach, tending to focus more on psychology and the subject, while Nicolescu's [20] and Capra's [31] tend to be more connected to hard skills, tending to focus on the object or sociology. In all these approaches subject and object are inseparable. Jung's most important successor, Franz (1915 – 1998) explains this principle very well in the context of Analytical Psychology, commenting on Bohr's view of modern physics that it is difficult to separate subject and object. [32]

Engineering has deep connections to HPTD-M, for having been the initial graduation and profession of this author. Engineering is naturally a mixture of technoscience and art, an art of solving problems concretely. HPTD-M understands technoscience and art as concrete, and philosophy and tradition as abstract.

Management, economics, and law, together with engineering, are disciplines combining technoscience and art, and those who do not recognize this try to inappropriately reduce the complexity of human phenomena to mechanical phenomena, as if management, economics, and law could be limited to technoscience. This kind of vision is not uncommon, and according to HPTD M, it is responsible for a series of distortions in Public Administration.

To understand the interactions among disciplines in Public Administration, which is much more complex than business administration, however, connected to the ESG that brings business closer to public management, an adaptation of the model shown by Uwizeyimana & Basheka [30] appears. Those authors quote a model of twelve disciplines gravitating around Public Administration through concentric circles. Public Administration is in the center (see Figure 4).

This author disagrees with the assumption that philosophy is "what man believes", as per the 12th circle of Figure 4, since this concept would be closer to religion. Philosophy is the conjunction of rational

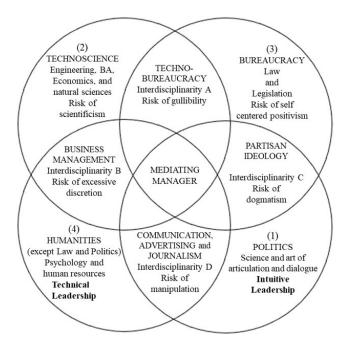


Figure 5: Disciplines in Public Administration through the HPTD-M View [29].

and intuitive intelligence, as already seen in Figure 3. However, the model of Figure 4 seems to be an interesting framework as starting point. So, HPTD-M has condensed all those twelve disciplines of Figure 4 into four major groups, which make up the mediating manager at the center of this new model:

- (1) **Politics** not to be confused with ideological partial p
- (2) **Technoscience** including economics and administration.
- (3) **Bureaucracy** law and legislation.
- (4) **Humanities** including psychology.

Thus, the model in Figure 5 can help in understanding Public Administration as an interaction of those four main disciplines, in the context of the mediating manager.

In general terms, HPTD-M sees TD in Public Administration as follows:

- Education: To transform the rational bureaucratic culture in public organizations, civil servants must educate themselves with new principles and paradigms, with the help of management training. [8, 15]
- Economics: There is a trade-off between creative management and rational bureaucracy. This can be translated into the duality of quality and control. Therefore, the cost and benefit of control in terms of the quality of public spending must be evaluated. [14, 29]
- Law: Human transformation through self-education and training (Bottom-up) is not enough to transform cognitive behavior if legislation is not compatible with new procedures linked to new paradigms (Top-down). This is a concrete case to be discussed in more bureaucratic countries, like Brazil, for example. [29]
- **Psychology:** As an epistemic form, Psychology emerged as a discipline separated from Philosophy at the end of the 19th century. Understanding how the actors involved behave is important, and the MBTI system of self-leadership and management [17, 18, 19] seems to be an interesting tool, combined with the HPTD-M synthetic model of Figure 8.

- Politics: Good governance (managing the internal environment) is not enough if governability is not observed (the legitimacy of politicians with the support of civil society). Politicians must be convinced of the advantages of management proposals in Public Administration. Therefore, it is convenient for technobureaucrats to learn how to deal with politics without prejudice, otherwise, governability is undermined even if there is good governance. [16]
  - In this context of politics in a broad sense, the concepts of governance, governability, and compliance must be understood for the purpose of the mediating manager not only in public organizations but also in private ones. There are analogies between the external environment in a broad sense and governability. For example, the socio-environmental governance of ESG tends to be a paradigm closer to public management, but now is being applied also to business management. So, ESG tends to be a requirement for public and private organizations.
- Governability (external environment management) is the ability to make decisions that consider
  the interests of civil society. The more political parties, the worse the governability and the decisionmaking process, however more representative of the diversity in civil society.
- Governance (internal environment management) is how to transform these decisions into concrete actions: it has to do with the result of the State's delivery of goods and services to the population; it involves the conformity of processes, but this is not its essence; many have confused the concept of governance with Compliance, in this context, reducing it to management controls, but the concept of governance is much broader, depending on the point of view.
- Compliance goes beyond the mere conformity of processes, according to the Brazilian Institute of Corporate Governance (IBGC). Compliance is mechanisms and internal procedures of integrity, auditing, prevention, detection, and response, also including Governance. The latter is defined by IBGC as the map of the decision-making process and the system by which organizations are directed, monitored, and encouraged. [27, 28]

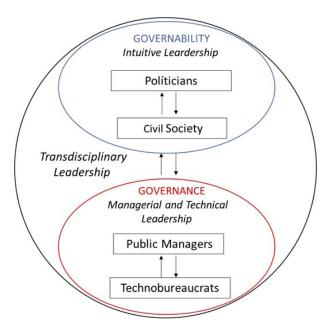


Figure 6: Governance and Governability – TD Leadership of the Mediating Manager [16].

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Figure 6 invites technobureaucrats, understood as technicians, bureaucrats, scientists, and other specialists, to exercise a more proactive role, in the sense of presenting proposals that they understand to be meritorious to their superior managers, thus not being restricted to the discourse that they

are "exempt" and that they are limited to reacting to the demands they receive (a typical behavior related to more bureaucratic systems).

A possible leadership classification comes from the dialogue between governance and governability. In practice there can be imbricated combinations among them:**technical**, **managerial**, **intuitive**, **and TD** [16]:

- **Technical** (academic) leader: These tend to be stricto sensu post-graduates such as M.Sc. and Ph.D. They deal quite efficiently with technocracy, bureaucracy, and legislation, but sometimes they do not consider listening to all the stakeholders involved in the issues to be dealt with, because they tend to be solitary researchers, due to their training.
- Managerial (executive) leader: These are usually lato sensu post-graduates at the management level, such as MBA. Many of them come from the private sector, with experience in business management, so they tend to be generalists, sometimes even in the modus operandi of an entrepreneur or business manager. They are concerned with their management, but with a certain inattention to bureaucracy and legislation, because in the private sector everything that the law does not forbid can be done, unlike in the Brazilian public sector, for example.
- Intuitive Leader (politician): Politicians, community leaders (civil society), businessmen and police investigators all have in common the so-called intuition, the ability to follow the internal voice or "guts" to solve problems when there is no concrete evidence to start from. This has nothing to do with formal education, it is an inherent ability, a soft skill related to the leader's psychological type, and may be also taken from professional experience.
- TD Leader (mediating manager integration of the three types): Regardless of the technobureaucratic/academic and managerial/executive training, or the intuitive/political praxis, these are the managers who manage to overcome the academic/technical or managerial/executive bias, through the dialog between the two paths, that is, through complementarity. This profile of managers without technical or executive biases tends to consider the entire bureaucracy, the legislation, the decision-making process, and the stakeholders in political terms. This type of leader tries to approach the proposals taken to their superiors not only technically, but also in a didactic, clear, and convincing way to the decision-makers, who may be in the Executive or the Legislative, for a systemic, yet simple vision of the problem to be solved, contemplating all the actors involved in the solution that can be identified.

Also through the HPTD-M perspective, otherfour types of mediating leaders may be seen after considering the analogy with the types of Mediating Manager in section 1: generalist, peacemaker, ghostbuster, and welcoming.

# 6 TD from Jung 's Typology and the MBTI: Self-leadership & Management

There are four psychological functions that Jung empirically mapped in his patients as a psychiatrist: sensation, feeling, thinking, and intuition. [32]

In this sense, Jungian typology considers eight possible combinations based on the predominance of a certain function of the psyche with the focus on introversion (subject or internal part) or extroversion (object or external part): i) extroverted or introverted sensitive; ii) extroverted or introverted sentimental; iii) extroverted or introverted thoughtful; and iv) introverted or extroverted intuitive. [33]

As an evolution of this Jungian classification came the Myers Briggs Type Indicator (MBTI), a self-leadership and management system that has some formal variations in the same essential idea of classification [17, 18, 19], which can be an instrument to identify personal characteristics and preferences. In this case, the preference is in the sense of something innate, such as being left-handed or right-handed,

not meaning a conscious choice. Katharine Cook Briggs and her daughter Isabel Briggs Myers developed the system at the time of World War II. The MBTI is often used in the areas of career counseling, pedagogy, group dynamics, career guidance, leadership training, marriage counseling, and personal development, among others. However, it is not used for recruitment and labor selection. The same Jungian functions are abbreviated as letters: sensation (S), feeling (F), thinking (T), and intuition (N). The dualities Extroversion (E) vs. Introversion (I) and Judgment (J) vs. Perception (P) complete the classification of each type made of 4 letters reflecting the four dualities or preferences [34], i.e.:

- E x I.
- S x N.
- T x F.
- J x P.

Figure 7 is self-explanatory and makes the comparison between the MBTI and Jung's Typology.

MBTI Types:	Jungian Types:						
ISTJ – The duty fulfillers (inspectors)  ESTJ – The guardians (supervisors)  ISFJ – The nurturers (protectors)  ESFJ – The caregivers (providers)	Dominance of function	Complementary focuses: Extroverted or Introverted Object or subject External or internal	Psychological profile				
$\underline{\text{IS}\underline{\text{TP}}} - \textit{The mechanics (crafters)}$	Sensitive	Extroverted	Cold engineer, experimenter, empiric				
ESTP – The doers (promoters)	Sensitive	Introverted	Painter (artist) detailing well his colors				
ESFP – The performers (performers)  ISFP – The artists (composers)  ENTJ – The executives (field marshals)	Sentimental	Extroverted	Reasonable, friendly, soften the environment, supportive. They like ready proverbs, so as not think. They tend to fanaticism.				
INTJ – The scientists (mastermind)		Introverted	They are often the ethical basis of a group.				
ENTP – The visionaries (inventors) INTP – The thinkers (architects)	Thoughtful	Extroverted	Organizers, they may hold high level government positions. They have a sentimental connection with ideals.				
ENFJ – The givers (teachers)		Introverted	Theorists, full of ideas				
INFJ - The protectors (counselors)	7	Extroverted	Major investors, entrepreneurs and politicians.				
ENFP – The inspirers (champions)	Intuitive	Introverted	Religious prophet, seer type, like a shaman, or even other types of visionaries and innovators.				
INFP - The idealists (healers)			083				

Figure 7: Sixteen MBTI Types vs. Eight Jungian Types [2, 34].

Figure 8 is an innovative HPTD-M synthetic model created to detail and explain the MBTI essence. From the MBTI test, two dominant functions become clear, as seen in the perspective of the graph in Figure 8 which shows, in the HPTD-M perspective, the dominant discipline or epistemic form of each psychological type, depending on the TD quadrant, a new psychological approach created by HPTD M in this article:

I- PHILOSOPHY
II- TRADITION
III- ART
IV-TECHNOSCIENCE

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For example, this author's type is ISFJ, with the dominance of (S) and (F), in that order, which configures the ART quadrant. (S) is underlined in this article (not in the MBTI itself) as the primary function and therefore the F function as secondary, according to the types shown in Figure 7, another innovation of HPTD-M, published in 2020 in this author's book. [34]

The quaternary complementarities of HPTD-M are manifested by the four functions, (S), (N), (T), (F), which are related by complementary preferences, including (J) and (P), the horizontal and vertical axes of the HPTD-M synthetic model.

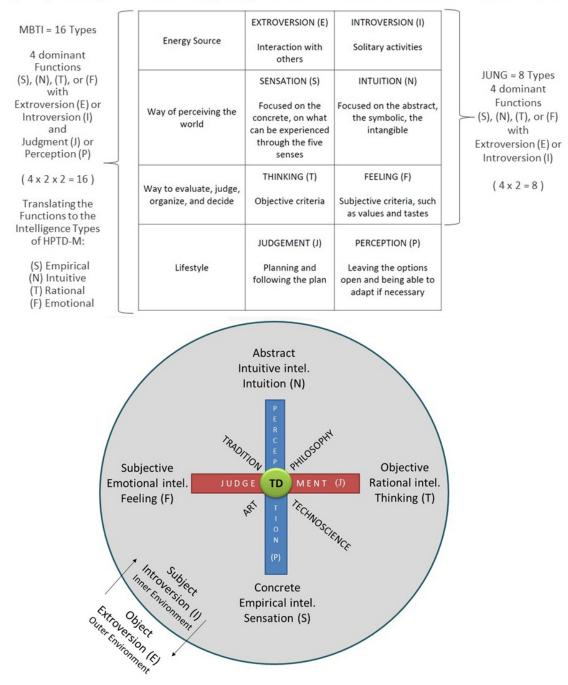


Figure 8: HPTD-M View of MBTI vs. Jung [2, 34].

In a group of around 40 public servants from the economic-financial area who simultaneously took the test with this author during a 2017 course for managers, the dominance of the overwhelming majority was (T) followed by (S) or (S) followed by (T). Therefore, the sampled servants from economic-financial area

are dominantly in the TECHNOSCIENCE quadrant.

The examples of this author (ART) and colleagues from public service (TECHNOSCIENCE) can be compared with others to illustratively close the four quadrants. A philosopher, poet, painter, and author who has a dominant function (N) followed by (F). Dominant, therefore, is intuitive intelligence followed by emotional intelligence (TRADITION quadrant). Someone connected to abstract concepts and who cares a lot about people. A psychologist, therapist, and author, a remarkable theorist who fits the dominant function (N) followed by (T), i.e., intuitive intelligence followed by rational. A book author in the PHILOSOPHY quadrant, therefore.

Real cases have been considered for the examples of the four quadrants, which can be visualized simply in the synthetic model of a cross inscribed in a circle as the lower part of Figure 8, derived from the HPTD M synthetic model already seen in Figure 3.

In the end, the Jungian Typology together with the MBTI can be understood as a system of self-leadership and management, since it involves the manager's self-knowledge of their own psychological type, strengths, and weaknesses, as well as the profile of the co-workers, in the same sense, so that the best synergies can be created in terms of work groups or organizational functions, i.e., to put the right people in the right places.

## 7 Mechanistic, Systemic, Synchronistic, TD, and HPTD-M Paradigms

This framework was taken from reference [35] and refined in this paper as an evolved tool for effective problem-solving. The HPTD-M view of paradigms involves Greek philosophy, in which SOMA is the physical level, PSYCHE is the psychological level, and NOUS is the individual spiritual level. Four paradigms are the basis of HPTD-M:Mechanistic, Systemic, Synchronistic, and TD.

- Mechanistic: Cartesian referring to the philosopher René Descartes (1596 1650) or Newtonian referring to the father of classical physics and calculus, Isaac Newton (1643 1727). This paradigm is focused on causality, cause-and-effect, and objects, something typical of machines. The predominant reference is dualism, within the separative principle. There is an analogy with the Greek view of SOMA, in which only matter exists. This is the paradigm of most scientists of the Modern Age since the late
- in which only matter exists. This is the paradigm of most scientists of the Modern Age since the late 18th century. Therefore, in this reductionist approach, the physical matter SOMA is separated from the PSYCHE. The method is completely analytic.

   Systemic: The idea of systems involves sets of parts or elements that are organized and interconnected
- Systemic: The idea of systems involves sets of parts or elements that are organized and interconnected with each other. This paradigm focuses on processes, interactions, and relationships, not objects. Cause-and-effect relationships are not clear, in feedback, as in living systems that are self-regulated in this interaction. The reference is to duality, with analytic and synthetic elements resulting from the SOMA in dialogue with the PSYCHE, because there are psychological interactions with matter. The view of consciousness is restricted to living processes. This paradigm differs from HPTD-M because it is technoscientific in its essence, basically an analogy to systems theory through living organisms. As an evolution of mechanism, the systems view considers that there is an interaction of various causes and effects between objects, hence the attention on processes, since these cause-and-effect relationships are unclear, with constant feedback between them. Thus, subjective and psychological factors arise. However, there is a similarity with mechanism, because in both paradigms, consciousness is inherent to the processes or objects of each study considered, so there is no consciousness without them. This is a paradigm close to Capra's holistic systems [31]. The main method is analytic, but the synthetic can be also seen in the sense of "protosynthetic" (proto = primitive + synthetic) since psychology tends to be incipient in this paradigm.
- **Synchronistic:** Consciousness is independent of living processes. The main element is synthetic, symbolic, and correlated with the personal sphere, the Greek vision of NOUS. The idea of synchronicity is related to meaning in the broader context, as opposed to causality. It was conceived by Carl Gustav Jung. The

method is completely synthetic and does not apply to problem-solving, it can be only part of the TD perspective for troubleshooting.

- **TD** is a new way of dealing with reality when other simpler models cannot be effectively applied, at the mechanistic and/or systemic levels, i.e.:
  - a) Newtonian physics and Cartesian mechanism are applied to simpler cases, where the variables have more predictability.
  - b) The biological and ecological vision of living systems is suitable when the variables become more complex, sometimes incorporating the social as in socio-environmental governance like in ESG.
  - c) When none of these two references are adequate, TD enters to deal with the complexity of human phenomena, which includes ideas from modern physics (quantum and relativistic), psychology, philosophy, and traditions.

The holistic view has a deep connection to TD, especially regarding the Holistic TD of Crema, Weil, and D'Ambrosio, for whom the holistic view is made of holology (study of the whole) and holopraxis (praxis of the whole) [5]. The idea of holopraxis of HPTD-M (Holopraxis Transdisciplinary Management) comes from this perspective. Moreover, D'Ambrosio (1932 – 2021) is one of the signatories of the Venice Declaration of 1986 (UNESCO), an antecedent of TD as a concept, a document signed by eminent Ph.D. scientists like him, Basarab Nicolescu, and Rupert Sheldrake [42]. In this context of TD, the principle of complementarity is shown in modern physics, as already commented in the introduction regarding the wave-particle and energy-mass, considering that physics is the mother of all sciences, in the view of Capra [31]. In a 1989 interview [44], the same Capra describes that, according to Descartes, in an analogy or allegory with a tree, metaphysics [45] is the root, physics is the trunk, and the other disciplines are the branches. Thus, TD emerges even from the Cartesian mechanistic point of view.

- HPTD-M: An integrated dialogue between all views, mechanistic SOMA, systemic PSIQUE, and synchronistic NOUS, including the duality (complementarity) of analytical and synthetic methods. This viewpoint dialogues with technoscience, philosophy, tradition, and art. It is a holistic view (holological, the study of the whole, and holopractical, the practice of the whole). The HPTD-M does not oppose the mechanism that prevails in most official sciences, as in allopathic medicine and Freudian psychology (Psychoanalysis), nor contradict the systemic reference like in Capra's holistic systems theory inspired by modern physics and living systems [31]. The most appropriate paradigm can be applied without prejudice. Also, HPTD-M incorporates all the TD concepts, as a more complex troubleshooting instrument when the mechanistic or systemic paradigm can't be applied. So, the HPTD-M paradigm integrates the three visions of problem-solving, i.e., Mechanistic, Systemic, and TD, applying what fits most simply to each specific case.

Some examples taken from the treatment of diseases can be given. In purely physiological origins, whether genetic, contamination by toxic elements in the environment, or even viruses, bacteria, protozoa, fungi, or even resulting from an accident with physical trauma, mechanistic medical intervention will be effective. Even in psychogenic diseases or those of psychosomatic origin, if there is a life-threatening emergency, mechanistic intervention is the most appropriate. On the other hand, if the disease is psychogenic, i.e., of psychological origin, that cannot be solved with allopathic drugs. One can seek the path of conscience development, through psychological approaches, so that the intervention is not a mere palliative for mistaken psychological cognitive behavior or bad emotional postures. This is true for both individuals and organizations, even in a systemic view. However, the HPTD-M paradigm goes further when it incorporates reflection (mindfulness) as a tool typical of the synchronistic paradigm, a type of consciousness development that goes beyond Psychoanalysis, closer to the Analytical Psychology of Jung.

From all those mentioned elements, causality or cause-and-effect relation is the Western way of seeing the world in terms of KNOWING, while the Eastern way is synchronicity or the MEANING of things. UNDERSTANDING can be seen, roughly, as the conjunction of KNOWING with MEANING. So, HPTD-M sees UNDERSTANDING as something broader than KNOWING, by the meeting of causality, linked to

reason, with synchronicity, linked to intuition. At the end of the day, HPTD-M is also the dialogue between causality and synchronicity, involving the two concepts Jung demonstrated in his synchronicity theory. [43]

PARADI	GM Focus	Duality vs. Dualism	Type of Method				
MECHAN Causal	linear and	Dualism, one opposite (one or another)	Analytic, mainly deductive		HPTD-M		
SYSTEN Interacti	Non-linear	Duality	Analytic, deductive and inductive; Protosynthetic	TD	SYSTEMIC	MECHANISTIC	
SYNCHROI Meani Synchror	ng Refletion	Not applicable, s since this paradigm does not solve problems concretely	Synthetic	HPTD-M uses not only the TD as a tool, but also the SYSTEMIC and the MECHANISTIC paradigms for problem-solving. In the HPTD-M view, the simplest and most			
HPTD- (TD inclu Causali Interacti Synchron Dialect	ded) Subject and Object ity, Interaction and vity, Integration of a icity, approaches	the best option	Analytic, deductive, inductive, and Synthetic	suitable alternative must be considered.  Source: Evolution of the HPTD-M  model from the original table of  paradigms published in 2022. [35]			

Figure 9: Analytic and Synthetic View of the Four Paradigms.

This vision is detailed in the model of Figure 9, an improvement of the 2022 already published model of paradigms [35], especially in the sense of placing individuality not only at the personal level but at various levels of the collective unconscious, which works for an organizational model and public management, especially regarding analogies of organizations with individuals.

TD would be a particular case of HPTD-M, as shown in Figure 9. The principle of complementarity is fundamental in HPTD-M. The specialist attributions can't be confused with the generalist's because the idea is the search for joint solutions between them – one does not interfere in the role of the other but there is an honest dialogue of different points of view.

In summary, by Figure 9 there are four basic paradigms for understanding reality. Mechanistic, Systemic, and TD are for problem-solving. Synchronistic, the fourth, can´t be applied to troubleshooting, considering its abstract nature. The Mechanistic view works when variables are predictable, like a machine or a clock. Causality and linear thinking are the basis, the binary logic. The Systemic view is for biological-ecological or self-regulating systems. Mere causality cannot be applied, considering cause-and-effect feedback. Finally, TD is for the complexity of human phenomena, especially sustainability in terms of collective and individual psychological levels.

Technology or technique often interacts with science, but frequently technology tends to be confused with science. Technology is applied, coming from concreteness and the inductive method. Science is theoretical, coming from abstraction and the deductive method. Both complement each other in a feedback

process, as shown in Figure 10.

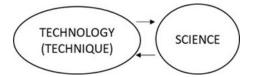


Figure 10: Technology vs. Science [37].

In this sense, Figure 11 shows TD placing technoscience (technology vs. science) as one of the ways of viewing reality. Philosophy, tradition, and art are the other epistemic forms that make up the unity of understanding by TD:

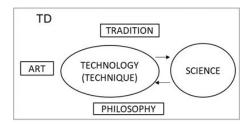


Figure 11: TD as Technology vs. Science, Tradition, Philosophy, and Art [37].

In summary, TD can be seen as more than science and more than technoscience, as it also incorporates the insights of philosophy, tradition, and art for a comprehensive understanding of experienced reality, as per Figure 12.

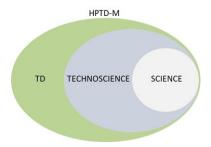


Figure 12: HPTD-M, TD, Technoscience and Science [37].

Hence the dangers of "following science" as if it were a kind of dictatorship, or dogmatism, as demonstrated by Prof. Dr. Sheldrake [11]. Science is only one epistemic way of understanding reality. If viewed exclusively, it can generate distortions and imbalances psychologically, at personal and collective levels. As an example, traditional Chinese medicine is 5,000 years old and works based on tradition and empiricism, including anesthesia for invasive surgeries only through acupuncture, but it is not science. After all, something can be verified empirically, through a technique, but not scientifically. This is one of the consequences of the TD and HPTD-M visions of reality to effectively solve problems, which is already known by engineers, doctors, and other professionals who deal with technoscience in praxis.

Summing up, based on Figure 9 and Figure 12, Figure 13 merges two views of HPTD-M. Going through two different ways, the HPTD-M theory emerges as a fourth element to harmonize TD with two analogous perspectives:

1) SYSTEMIC paradigm connected to TECHNOSCIENCE (in the feedback of cause-and-effect).

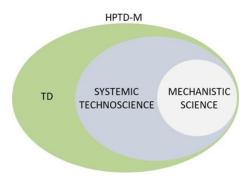


Figure 13: Two Merged Views of HPTD-M – TD, Systemic Technoscience, and Mechanistic Science. Source: Figure 9 and Figure 12.

2) MECHANISTIC paradigm connected to SCIENCE (in the causality and the mainly deductive method).

In this connection two concepts come out: Systemic Technoscience and Mechanistic Science (see Figure 13).

Moreover, to emphasize how science alone does not say everything, according to the psychiatrist, philosopher, and Jungian therapist Bernardo de Gregorio, the Greeks created logic from mythology [38], i.e., rationality was created from symbolism, roughly speaking. Corroborating Gregorio's idea:

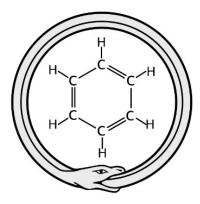


Figure 14: Kekulé's Dream that unraveled the Benzene formula [40].

- 1) As shown in Figure 14, August Kekulé, a 19th-century German chemist discovered the benzene formula after much work on the subject, through a dream of the image of a serpent biting its tail, a variation of an ancient alchemical symbol: the Ouroboros. According to Kekulé: Gentlemen, let us learn to dream, and perhaps then we shall find the truth [...] but let us also be careful not to publish our dreams until they have been examined by the waking mind. [39]
- 2) Through the TD derived from the award-winning economic theory (Barefoot Economics), Max Neef quotes Einstein, in a certain way recalling Kekulé's view: Einstein [...] declared that "the intuitive mind is a sacred gift, and the rational mind is a faithful servant. We have created a society in which we honor the servant and have forgotten the gift." [21]

So, Kekulé's and Einstein's reflections are an invitation to the synchronistic paradigm, to meaning, meaningfulness, symbols, abstraction, and new ideas. Likewise, the mediating manager must be attentive to his insights without despise because great ideas can arise through the deep abstract field. Those ideas need to be checked by the analytical method in the dialectic process and eventually can become effective solutions.

Our modern Western culture, inherited from the Enlightenment rationalism of the late 18th century, on the one hand, has led to great technoscientific advances and improvement in the quality of life in terms of material resources. On the other hand, tends to reduce the subject to an object, that is, the internal environment to the external.

## 8 The Consciousness Development Process at the Personal and Collective Levels

Those reflections provoke a new HPTD-M model: Shadow Levels of the Collective Unconscious. Some previous concepts to understand the model: according to Jung's Analytical Psychology, the levels of the psyche can be classified as [8, 37]:

- Personal Conscious: whose content is the EGO, a personal center of consciousness.
- **Personal Unconscious:** related to the SHADOW, the rejected or unknown part, the shadow of the unconscious, the "alter ego". The shadow may contain qualities that need to be integrated in favor of a more comprehensive ego structure.
- Collective Unconscious: also called the objective or transpersonal unconscious, whose contents are archetypal images on level 8 of the HPTD-M model: archetypes are images and patterns of emotional and intellectual behavior, models, or universal scripts, independent of culture.
- Collective Conscious: the cultural world of shared values and forms.
- **SELF:** the regulatory center of the psyche, a fifth unifying function, which transcends sensation, feeling, thought, and intuition (the four Jungian functions of the psyche).

Figure 15 schematizes the relationships between all these levels of the psyche in the HPTD-M view. It was examined by anthropologist, psychologist, creator of the Fifth Force in Therapy, and TD theorist Roberto Crema, who, in an email sent to this author on August 27, 2021, considered creative the proposal of the model, with the various strata of the shadow, from the most local to the most universal domain, pertinent to the sphere of the HPTD-M research in Crema's opinion. By the way, in the book The Power of the Encounter [36], Crema claims that no one transforms anyone, and no one transforms himself alone, we transform ourselves in the Encounter.

Going a little further but in the same vision of Crema, HPTD-M understands that the Encounter involves an interaction with the other in the external environment, but also in the personal internal environment, with the unconscious, that interacts unintentionally, in an imbricated way, in several levels of collectivity, also in connection with Jung's Analytical Psychology.

According to Jung, the conscience is like a headlight traveling through the field; only the illuminated points are conscious. The unconscious, or dark side, the part that is usually unconscious, is the shadow sphere. To be conscious you must be focused; we are always conscious of something specific. The total personality could be described as the conscious plus the unconscious. There is the area of the habitually unconscious and the area of the relatively unconscious; there are times when we are conscious of this and times when we are conscious of something else.[41]

In the HPTD-M view, prejudice (with generalizations or particularizations) occurs when all the points illuminated by the various headlights of conscience are not considered. Self-reference is one of the symptoms, often existing in members of the same organizational structure, conditioned in their idiosyncrasies, which can be seen more easily by outsiders.

As a result of the model, the following issues can be applied in the context of organizations:

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- **Technobureaucratic exemption:** The need to transform the posture of the civil servant, e.g., in Brazil given the interactions of technobureaucrats, managers, politicians, and civil society, as per the model of Figure 6.

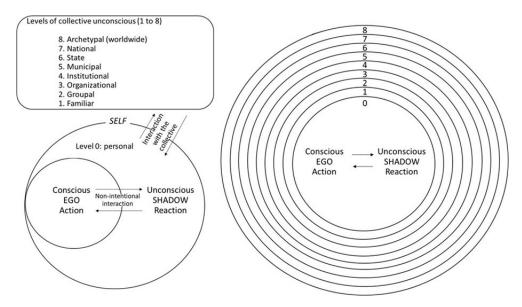


Figure 15: Shadow Levels of the Collective Unconscious [8, 37].

- Focus on Corruption: To think concretely about waste due to bad management, not only about corruption and compliance. This is a relevant issue in Brazil, considering most of the public spending waste is due to bad management and not corruption, as also seen in a 2009 study made in Italy. [14]
- Lack of listening in decision-making: the mediating leader and manager can solve this by being the mediator of himself and others, a promoter of dialogue. This certainly can be applied anywhere in the world. If the SHADOW on the personal and collective level is not considered, it can react and erupt in uncontrolled ways, like a pressure cooker with a stuck valve. This is the idea of enantiodromia that Jung took from the Greek philosopher Heraclitus (540 480 BC). According to Jung:

Old Heraclitus, who was indeed a very great sage, discovered the most marvellous of all psychological laws: the regulative function of opposites. He called it enantiodromia, a running contrariwise, by which he meant that sooner or later everything runs into its opposite. [46]

### Historical examples:

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- 1) From Jung: The period of the Enlightenment closed, as we know, with the horrors of the French Revolution. [47]
- 2) Another well-known historical event: The Treaty of Versailles humiliated and provoked hyperinflation in Germany, promoting Hitler's takeover in 1933.

So, the enantiodromia principle is clear in the sense that every extreme creates another extreme, even as an unconscious reaction, which applies to collective levels from small groups or organizations to large countries, as seen in the figurative 8 levels of the model.

Finally, given Figure 15, organizations can become ill on a personal and collective level. PSYCHE (psychological level in Greek) and SOMA (physical level in Greek) interact in a dynamic equilibrium, both on a personal and collective level. Unresolved imbalances at the emotional and/or mental/intellectual level end up being so physiologically if they continue at the psychological level (psychosomatic approach), e.g., through psychotherapy it is possible to understand unconscious defense mechanisms, which avoid dealing directly with the issues.

Some examples of defense mechanisms: i) Rationalizing everything, as if the mere logical understanding of a problem would automatically imply the solution. This defense mechanism tends to be the most common in our rational Western culture. ii) Dramatizing emotion, as in a theater, is an unconscious way of not dealing directly with emotional discomfort. It may even be an intermediate resource to be used to indirectly cope with the pain. iii) "Somatizing" as a last systemic resource to balance the escape from solution at the psychological level. When a psychogenic illness happens, it means that the psyche does not accept the problem or could not consciously deal with it, so the last instance of a solution to balance the system is physical. [35]

As Jung once said: Until you make the unconscious conscious, it will direct your life and you will call it fate. One of the main instruments of the alchemical tradition as an epistemic way are the images bringing to consciousness unperceived contents in everyday life, which need to be expressed for the evolution of being in its psychological process, which Jung called individuation. According to Prof. Dr. Peterson, the individuation process involves i) the integration of feeling and thinking in one direction, ii) turning abstract (intuition) ideas into actions concretely (sensation), and iii) integrating subject with object. [49]

This idea of individuation can be seen clearly in Figure 8, through i) the horizontal axis of judgement functions, i.e., feeling vs. thinking, ii) the vertical axis of perception functions, i.e., intuition vs. sensation, and iii) the interaction between the subject as introversion and object as extroversion, As already seen, HPTD-M understand reality through complementarity, which is exactly the case of items (i) to (iii), in line with Peterson's perspective. An important issue that emerges in Figure 8 is the difference between subject vs. object and subjective feeling vs. objective thinking. The first is connected to introversion and extroversion, as per the focus on the subject or the object. The second involves the complementary characteristics of judgment functions, i.e., by its nature thinking is objective and feeling is subjective.

Also, the process of individuation can be seen as a tool for the mediating manager or the academics of TD. HPTD M sees it as a useful resource applied to problem-solving in relationships. Individuation in managerial terms means paying attention not only to the person of the leader in terms of self-control and self-knowledge, but also to the development of social and psychological skills through the relationship with the stakeholders and actors involved in the organizations. There are many issues hidden "under the carpet" in all institutions, which can be understood only through a long process of observation and reflection, not only at the level of the subject but interacting subject and object, i.e., the manager must accept emotionally to be influenced by the way others see the events or the problems to be solved. Accepting proforma or only rationally the different points of view is not enough. This is the path for understanding, instead of only knowing, in the HPTD-M perspective. The individuation process could be concretely and objectively operationalized this way.

As per the dialogue between the collective conscious and collective unconscious, it is one of the subproducts of the individuation process of the leaders, which through their influence tends to establish in the working groups new patterns of collective conscious. The cultural transformation of the organizations is a result of this consciousness development.

### 9 Conclusion

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Human phenomena complexity cannot be reduced to mechanical, biological-environmental phenomena. The replication of human phenomena is possible if the context is considered, the meaning, i.e., numbers and data out of context (quantitative approach) mean nothing if the quality view is not comprised.

As per HPTD-M, the key to good management is: i) effectiveness - not just efficacy and efficiency; ii) sustainability, especially at the psychological level; iii) simplicity in design; and iv) dialectics - all stakeholders involved, heard, and stressed. This is an up-and-down cycle of concrete questions and abstract answers coming from dialogue, fed back by new questions.

In the HPTD-M paradigm, the training of the TD mediator manager goes through conscience development, not only through the stricto sensu training of KNOWLEDGE but especially the development of UNDERSTANDING, of learning to learn, with oneself and with others. The conscience development,

which Jung named the "individuation" process, in the view of HPTD M applies not only to the individual but also to the collective level of organizations, especially the collective unconscious and the shadows that permeate the many levels, like in the "ghosts" detected in Landier's social audits.

The traditional prejudice against psychology as an instrument for conscience development must be dissolved. Rationalists, mechanists, and reductionists tend to call for psychology only when they understand that there is a disorder like a disease, as this author has already witnessed in the speech of a foreign professor, in a lecture on emotional intelligence, when he replied, regarding organizational therapies, that psychological disorders should be dealt with "separately".

Management problems cannot be solved only with mechanisms because human phenomena are much more complex than mechanical, biological, and ecological issues, even in a systemic vision, hence the HPTD-M paradigm is a way of approaching the experienced reality, while considering the mechanistic and systemic paradigms, when applied as a simpler way of solving problems.

Finally, the training for the mediating manager seems to be compatible with courses that simulate work groups concretely, especially through the instructor's behavior, so that conflicts and distinct opinions build solutions through maieutics. This method of eliciting knowledge by a series of questions and answers forms the dialectics of abstract ideas to be shaped in solutions discussed concretely, through a feedback cycle between the concrete and the abstract, starting from the synthetic method, in the scope of the deductive and inductive method, which provoke questions to bring back doubts to the abstract field, until the cycle stresses itself to reach simplified and effective solutions, as seen in the HPTD-M analytical model of Figure 2. This formula can work not only for management training but also for courses envisaging academics of TD and practitioners of mediation interested in understanding the idea of transdisciplinary mediation.

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## Appendix. The Mediating Manager TD Profile

As per the Charter of TD in the First World Congress of TD (1994), the HPTD-M can see three main concepts involving the mediating manager TD profile. For that purpose, one paragraph and two articles of the Charter are transcribed below [48]:

#### - Complexity

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Whereas only a form of intelligence capable of grasping the cosmic dimension of the present conflicts is able to confront the complexity of our world and the present challenge of the spiritual and material self-destruction of the human species;

### - Levels of Reality Governed by Different Types of Logic

Article 2: The recognition of the existence of different levels of reality governed by different types of logic is inherent in the transdisciplinary attitude. Any attempt to reduce reality to a single level governed by a single form of logic does not lie within the scope of Transdisciplinarity.

#### - Ethics

Article 13: The transdisciplinary ethics rejects any attitude that refuses dialogue and discussion, regardless of whether the origin of this attitude is ideological, scientistic, religious, economic, political, or philosophical. Shared knowledge should lead to a shared understanding based on absolute respect for the collective and individual Otherness united by our common life on one and the same Earth.

This is the HPTD-M viewpoint for those concepts, considering the mediating manager as an effective troubleshooter for groups, organizations, and civil society:

- Complexity: the complexity of human phenomena needs to be treated in an adequate and non-reductionist way, using mechanistic, systemic, and transdisciplinary paradigms, each one with its scope of action and level of suitability according to the variables to be treated, without exclusion beforehand or prejudice against any of these three forms of approaching reality.
- Levels of Reality Governed by Different Types of Logic: the binary logic must dialogue with the logic of the third included, depending on the concrete case to be dealt with, the more adequate way for the approximation of reality. In this context emerges the concept of quaternary complementarities of the HPTD-M, which considers the interaction between archetypal principles of complementarity and four elements. The principles named earth, water, air, and fire in Greek philosophy and ancient traditions can also be seen as levels of reality, not only symbolically, but also in terms of functions of consciousness, according to Analytical Psychology: sensation, feeling, thinking, and intuition, or as the features derived from the MBTI system: concrete, subjective, objective, and abstract, respectively.
- Ethics: HPTD-M understands that four epistemic ways need dialogue: technoscience, philosophy, tradition, and art. As a heritage from the Modern Age and the Enlightenment, the lack of dialogue in our Western rationalist culture tends to provoke a scientificism combined with ideologism, which tends to harm technoscience, as if only science matters and there is no possibility of the existence of technologies or technics not originated or explained by science. The cultural traditions go in the direction of dogmatism as if there could be no diversity of viewpoints of reality, only the "true" one, considering the others are "false" by the ideology corroborated by the science of the moment. In other words, science can be approached in an ideological way, when scientific results are selectively used to substantiate or justify a particular ideology or belief system, ignoring or distorting scientific information that does not fit into that perspective. This can occur in political ideologies as well as in religious ideologies.

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