The **Pi Matrix** is a generative tool used in ideation, creativity techniques and project completion. It was designed by Thomas Pieds in 2017, and completed in its final form in 2019. The word 'Pi' is not related to the Greek figure (π), it is derived from the first letters of its creator's name.

The **Pi Matrix** is presented as a multi-input (4, 8, and 16) algorigram involving an algorithmic execution in three sequential steps. It allows to generate a creative solution according to a multi-tendential context that is intentionally heterogeneous and contradictory. Optimization relies on the relevance of the tendential poles at the start, then their logic to converge in a reflexive and related way towards a central core during its resolution.

The combinational implications of transversal processes and the mutual influence of multi-tendential aggregates result in the development of a creative solution with functional validity and a unified result. The ideational product and its ecosystem are deemed to be harmonized in coherence when each of the variables is interdependent and reciprocal within the algorithm. The notion of finite value allocation scheme and viable semantic positioning is thus usable.

The dynamic and retroactive nature of the **Pi Matrix**'s organizational model favors the mechanisms of emergence as part of a heuristic or iterative process. There is a lot of room for error and creative adjustments. Cognitive development, psychological flexibility, and knowledge transformation are at the heart of its approach. Empirical and hypothetic-deductive investigations, exploratory circularity, and pseudo-random stimulations are therefore invited until a significant result is obtained.

Despite its objectifying properties, the result is valid for a specific situation in a finite experiential framework, without exemption from being reassessed later, in the case of a semantic mutation of one of its variables, for example, or an attributional readjustment of one of its poles, following a new contextual markup. It's worth mentioning that due to its autopoietic nature, updating a partial repolarization doesn't automatically impact the final result or the structural balance of the matrix organization.

The use of the **Pi Matrix** in educational, professional, or training settings proves to be an accelerator of creativity, as well as a guidance instrument and structural benchmark for operational and strategic purposes. It is part of the «decision aids» in its way of visualizing a context, synthesizing, classifying and re-identifying issues, assess the challenges and rationalize the margin of action before setting a goal, obtain original solutions related to the socio-economic and macro-environmental realities of a situation.

At the autoreferential level, completing a matrix configuration is equivalent to being successful in a self-project, whether it is temporary or ongoing. Organized in a

system, the existential option and its values proposition objectify themselves according to the principle of reality, providing new reference points and polarizing anchors to a psychosocial position. In a systemic understanding of identity, it will be possible to use the schematic representation of relational processes and their implicative interactional modes, to designate, decompose, demerge and undertake modifications.

Method and protocol

The three levels of metamodeling in the **Pi Matrix** engage attributional processes, from simple to complex.

1. **Cross-shaped figure (Figure 1)**

The cross-organization involves assigning 4 equidistant poles with a close to reasonably distant connection to the subject. Within each pair, the poles have the task of opposing one another from a semantic point of view but belonging to the same thematic field. Hence their name in reference to the Taoist symbols, which, despite being contradictory, perform complementary and even interdependent functions within a single Whole.
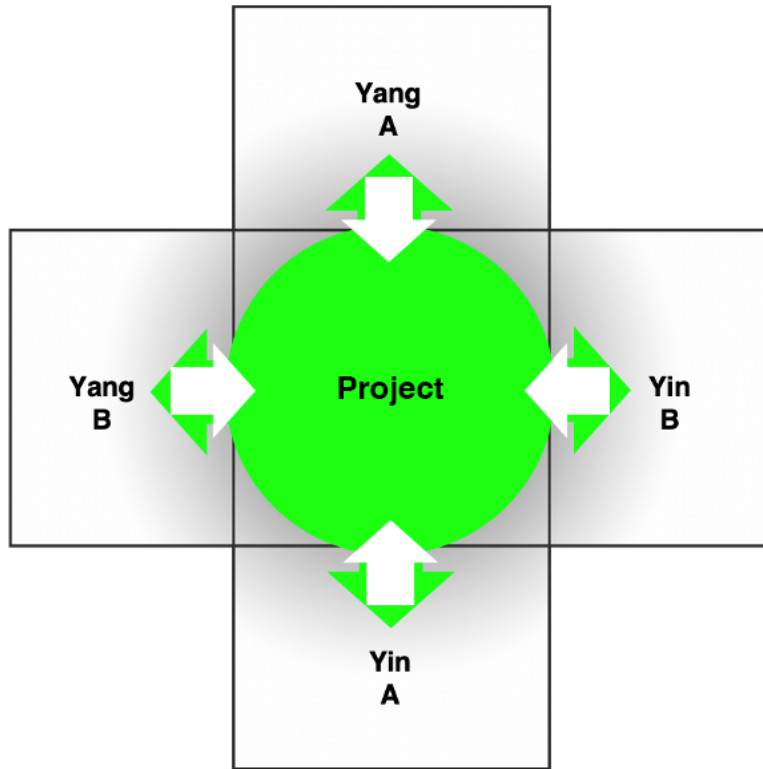*Example: Pair 1 (Yin and Yang A): "Women – Men".*

The pair of tendential poles Yin and Yang, once their symmetrical reciprocity is proven, are not required to occupy the same thematic field. Conversely, the more distinct these are, the more the dynamics in place can exert their influence and be productive.
Example: Pair 1 (Yin and Yang A): "Women – Men". Pair 2 (Yin and Yang B): "Past – Future".

It is recommended to accompany each step with a formal visualization (such as using images or mood boards). This double verification will clarify the relationship between signifier and signified by ensuring correct terminological adequacy, on one hand, to circumscribe the membership of a pole to its respective perimeter, avoiding redundancies or discordant analogies on the other hand.

The central section is dedicated to the innovative solution that is currently being developed and represents the most relevant synthesis of convergent tendential environments. By assimilation and feedback, the central core has the ability to transform external influences by inducing them to re-evaluate. Driven by its self-plastic adaptability, it does not confine itself to its own self but implements its own area of influence within the system. As an agent of matrix fusion, it accredits variables by making them operant.

Figure showing a central green circle labeled "Project" with four arrows pointing inward from four directions. The poles are labeled: Yang A (top), Yang B (left), Yin B (right), Yin A (bottom).

2. Octagonal figure (Figure 2)

During the second stage of the process, which is known as the octagonal organization, four other intermediate poles (Yin and Yang C, Yin and Yang D) are generated from the first one. Similar to the previous tendential poles, these new ones are both contradictory and complementary, but they are also expected to be consistent with their right and left neighbors. The neighborhood interdependence, if successful, must thus allow for a meaningful circular reading.

The positioning of the source poles has an impact on the future result. This is one of the first organizational semantic problems to be addressed before integrating the new intermediate poles.
Example : In a configuration of 'Women - Men', the result will differ depending on whether you have chosen 'Past – Future' or 'Future – Past' in the X-axis.
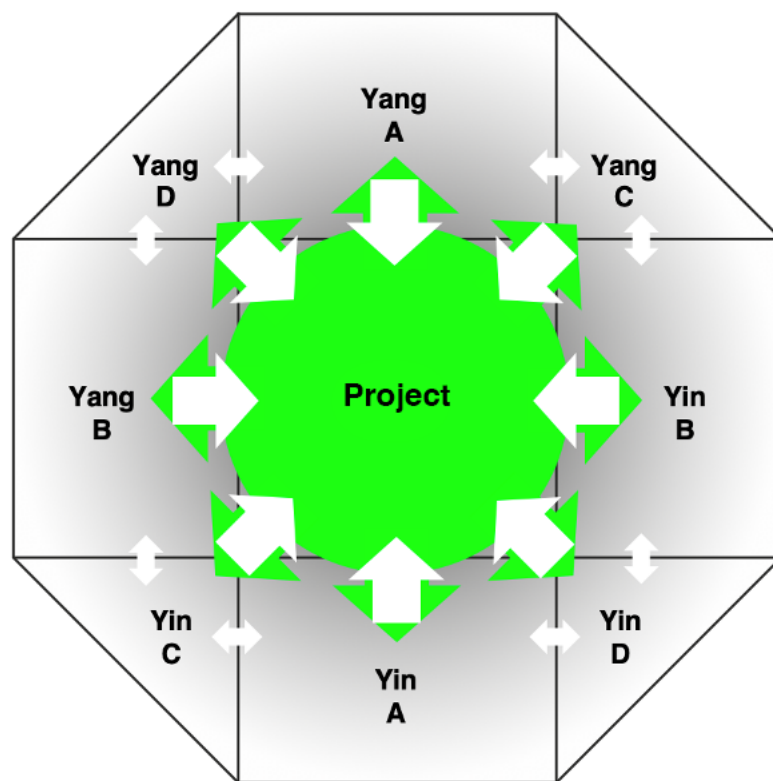
Two leading pole sources who are unable to find a neighborhood context for any of their intermediate poles have the task to create one. The concept can be either prospective or fictitious.
Example : In a configuration where an intermediate pole is located in the neighborhood of 'Women' and 'Future', it will be possible to propose 'Women equal to men' while waiting for this ideal to be verified.

This level of operational stratification is considered to be structuring. It aids in maintaining aggregate choices and detecting impostures or approximations. The progressive regulation of the octagonal figure generally allows for the reading of the

emergence of intentionality in its core at this stage. In a maieutic dual-qualification approach, the subject must name this first intent and illustrate it visually.

Harmony between the ideational product and its ecosystem is achieved when the 8 poles are interdependent in neighborhood and reciprocal in symmetry, and the mutualized product of their convergence interacts with one another.

3. Hexadecagonal figure (Figure 3)

The third and final step of the execution protocol serves the function of being confirmatory and validating. It consists in subdividing each pole obtained into two, and thus result in a figure with 16 entries (Yin and Yang A1 A2, Yin and Yang B1 B2, Yin and Yang C1 C2, Yin and Yang D1 D2). On the same model as before, the new tendential poles must be reciprocal in symmetry and interdependent in neighborhood.
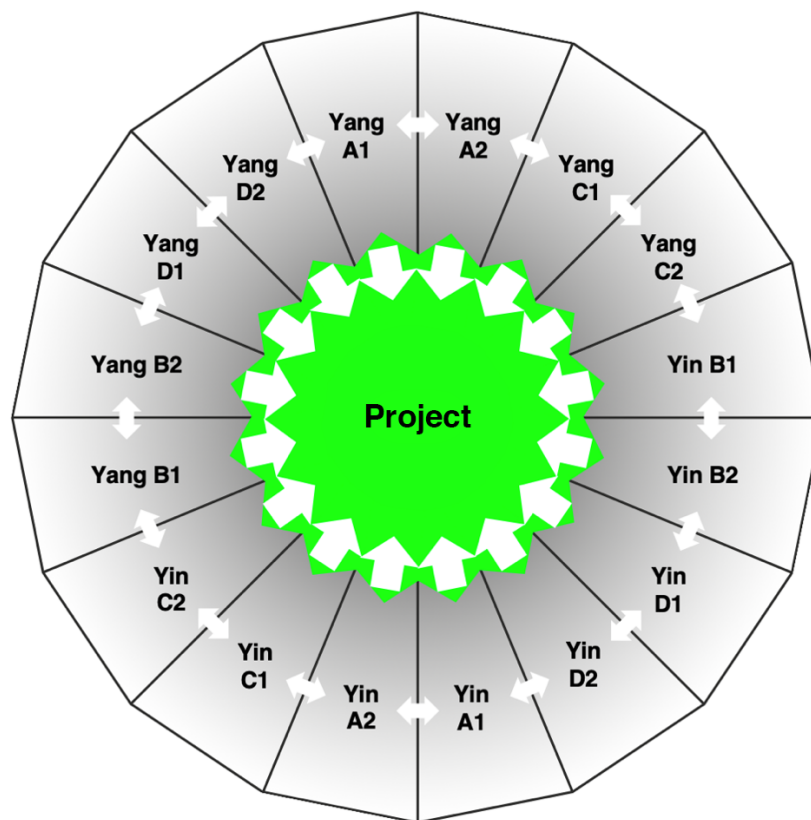
As the matrix configuration gets more exact, the source and intermediate poles tend to dissolve their statutory differences to form a single presentist ensemble.
The more the 8 poles of the octagonal period have a comparable quality of influence, the easier it will be to subdivide them. Conversely, their possible previous imbalances will prevent homogeneity in the hexadecagonal period, making a retroactive adjustment from one figure to another necessary.

The purpose of this concluding intervention is to guarantee that the poles' attributional relevance supports the weighting of a dual functional specification. Acceding to the dialectical contradiction within it allows each variable to be grasped in the complexity required by reality and be stated in a critical form.
Example: In the case of a theme "Women equal to men", we have the option to propose different approaches, such as legal ("women's rights") and biological ("transidentitive procreation"), historical ("matriarchy") and mythological ("Amazons"), sexual ("orgasm") and archetypal symbolic ("Animus").
The possibilities are as numerous as the neighbourhood polarisationist subdivision requires.

Objectified, conscientized and ideologically compensated, the configuration obtained can then claim to be a finite value attribution scheme and a viable semantic positioning.

Approach the result

Resulting from a tri-sequential metamodeling, the solved project appears as an experiential referent of first order, guarantor of a memory where the different attempts to solve and layers of elaboration have made the result. More than a simple algorithmic resolution, it is the learning mix and its polysemic historicity that will have to be claimed. The core of the Matrix is, from this point of view, heritage and

common good, reconciliation of speculative vagaries of any self-respecting ideation, and the crystallization of a substantial flow of transformative nature.

Ad Note

Proposed by Thomas Pieds to the students of 5th year at Penninghen School (Paris) as part of their master's degree in communication, artistic direction, and interior architecture, the **Pi Matrix** was submitted more than a thousand times from 2017 to 2024. The panel thus constituted has made it possible to demonstrate the capacity of this ideational tool to bring diploma subjects to light and/or solve their positioning.