

Universal language of thoughts? Abstraction and Creativity

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ABSTRACT

To see, you must close your eyes; to see beyond you must understand.

As a mental process, Creativity has an abstract nature, meaning that no empiric perception is directly involved, not even words, which would bring semantic ballast. However, the relationship between the level of abstraction and the creative outcome has been largely neglected.

Abstraction is not a homogenous block, but a nuanced entity.

Our research considers five sublimation levels of abstraction: Paradigmatic, Pragmatic, Etiologic, Axiological and Archetypal and links them to the corresponding hierarchy of originated ideas: new Approaches, new Concepts, new Paradigms and new Formal Expressions (designs).

The results show that: rising the abstraction level the number of ideas increases and reach a stronger originality and more seminal power, with a spectacular apex on the Archetypal level of abstraction. Therefore, we define the Etiologic level of abstraction as the threshold of new content.

This perspective induces an efficient taxonomy of ideas, which enables the evaluation of the original mental outcome, introducing a hierarchy of ideas' quality, based on two criteria: disruptivity – degree of originality and seminality- aptitude of inspiring a bundle of subsequent ideas.

This integrative theoretical approach facilitates the management of ideas and the navigation in the fluid mental outcome.

In the paper we are describing an original methodology, which is facilitating the abstraction pathway to Archetypal Perspective and is illustrating the relationship between Abstraction levels, Speculation methods and the expected quality and quantity of original outcome.

KEY WORDS: *Kenotomy, Creativity, Ideas management, Levels of abstraction, Archetypal Perspective*

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I. INTRODUCTION

As a mental process, Creativity has an abstract nature, meaning that no empiric perception is directly involved, not even words, which bring semantic ballast and slow down the thinking process. However, the relationship between the level of abstraction and the creative outcome has been largely neglected, as well as her quality as a really universal platform of synergy, overcoming language, cultural and time frontiers.

The empiric perception and the associated terms and icons build together a solid roadblock of certitude, which the people generally are inclined to believe, it were the absolute truth.

That is more than a roadblock, it is a huge wall, obstructing any look beyond, hindering any creative attempt, reducing the effort to a cosmetic, epidermal intervention.

Before engaging the creative power, the wall of empiric impact must be penetrated, meaning in practice: the need to explore successively the paradigmatic, the pragmatic, the etiologic and the axiological levels of abstraction, aiming toward the apex understanding of archetypal perspective. The quest for the Archetypal Perspective is inducing a deep understanding of the addressed topic and the unexpected aspects of the context, defining in this way a larger and more complex reflection space.

In the paper we are describing the dedicated methodology, which is facilitating the abstraction pathway to Archetypal Perspective and illustrate the relationship between Abstraction levels, the Speculation methods and the ways for evaluating the resulted quality and quantity of original outcome.

Another aspect of our research is the universality of abstractly handling topics and the related effect of reticular synergy, that is emerging within multicultural creative teams.

This paper is reporting our practice with Master students' classes with multicultural backgrounds and different Bachelor majors.

II. METHOD

Abstraction is not an amorphous matter, but a structured entity. This structure is revealed by maieutic fathoming, interrogating repeatedly for the subsequent meaning, by climbing the abstraction's levels.

Our research considers five sublimation levels of abstraction: Paradigmatic, Pragmatic, Etiologic, Axiological and Archetypal and links them to the corresponding hierarchy of originated ideas: new Approaches, new Concepts, new Paradigms and new epidermal Expressions (designs).

Our method reveals the intimate relationship between awareness and creativity, as these stages are actually Levels of Awareness.

Paradigmatic Level –
Question: what is that?

The first layer behind the empirically perceived reality is the paradigm, the abstract solution, the semantic label, the term, stripped off all specific shape and material design, like the relationship sign-object by Peirce. (ref. 1) This is a quite intuitive step, but a key one, for it is taking off the burden of the physical presence of existing. As an illustrative example we can consider the relationship between *This Pen*, as a real object and *The Pen*, as a paradigmatic term. (fig 1)

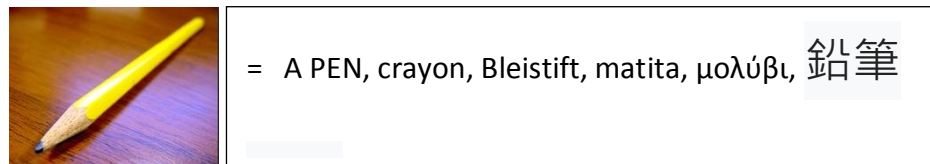


Fig 1. Ikon and language related terms

On this abstraction level, the icons take the place of words and allow a communication without words, overcoming the language gap, but only within a multilingual, but just within a paradigm-coherent civilization; by heterogeneous civilizations a symbol might have different significations or even none.

The abstraction on this basic level enables diversification by esthetics, aka: graphics and styling but no deeper creative achievement (Fig 2)



Fig.2 Superficial diversification on Empiric Level

This kind of creative intervention is superficial, but a low risk-low cost one and therefore preferred in the consume oriented mentality, as it is dissimulating visually some diversity, a colorful cozenage, for stimulating the shopper' instinct. (ref 3)

The creative challenge on is a dead-end street: *a pen is a pen*.

Pragmatic Level

Question: what is that for?

Even if the determinative question: "what is that?" liberates the terms from the material load of the related objects, the Paradigmatic level remains a para-abstract one. The paradigm is still a shadow of the material item. Creative processes don't handle terms, ikons and even less their material projection.

Climbing higher, to pragmatic level, implies a real abstraction effort, fathoming the solution for discovering the driving need behind it. This might be and often is, much more than a material need, as a driving chain lays generally underneath: desires, longing, passion and even evergreen aspirations.

It is important to understand this complexity for avoiding a usual confusion, this is not about goals.

This interrogation step must be consistent with the pragmatism only: what could be done with a given paradigm?

Coming back to our pilot-example "pen", the question "what is for?" gives rise to an array of answers, all of them converging into: *Making Signs*.

There is a highly inspiring question arising here: How can you make signs?

The answers are displaying a large array of solutions, far beyond the initially addressed term: "pen".

Larger the multiculturalism of the team is, wider the spectrum of proposals and the level of novelty.

(fig 3)



Fig. 3 Making signs – Diversity on Pragmatic Level

The real abstraction is seminal, therefore the challenge of a topic, that is free of substantive-terms, opens a highway to imagination and divergent thinking. An antithesis to (ref 8)

Etiologic Level

Question: why?

“Why?” the classic Socratic question of maieutic method ignites a deeper reflection about meaning and brings the reasons, which stay behind a concept, into clear consciousness. This etiologic quest makes transparent the causality of the addressed topic and reveals on the other hand the reach of analytic thinking and the mentality of participants. This higher level of abstraction relieves the load of materiality, technicalities and pragmatism from the thinking process and is ending up always in a colorful diversity of apparent reasons, which might be rich sources of inspiration, drifting the creativity process divergently into unexpected directions, a good start for heuristics.

These disparate opinions must be scrutinized one by one, which is an inspiring team experience and eventually integrated into a coherent answer, that is corresponding to the ultimate etiologic level. This integration and the previous moderation might be done by a moderator with high abstraction aptitudes.

In our pilot-example, the sought-after reason for Making Signs is: *Recording Thoughts and Experiences*.

The speculation triggering question “How to record thoughts and experiences?” is opening a new realm of imagination far beyond trivial *Pens* and *Making Signs*, projecting the mental focus into the Conceptual Sphere, where human skills and handling procedures for “recording thoughts and experiences” display a large diversity of historical precedents, new technologic solutions, old, existing or potential ones. (Fig.4)

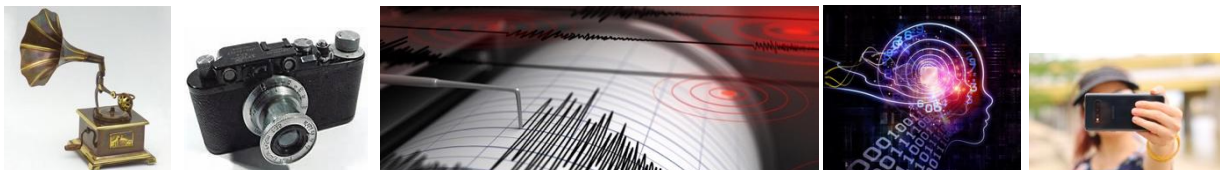


Fig.4 Recording Thoughts and Experiences – Conceptual Creativity on Etiologic Level

The original outcome on Etiologic Level is exponentially richer, than the previous pragmatic options.

The Etiologic Level is *the first disruptive threshold*, the Conceptual one, as such the first one able to generate new content and therefore inspiring several divergent bundles of pragmatic solutions able to deliver substance for original start-ups, or even new industries.

There is a strong correlation between the addressed abstraction level and the entrepreneurship potential of the outcome. If *designs*, resulting from a paradigmatic start might improve the competitiveness as well as the *new solutions*, bred on the pragmatic one can do, new concepts bolster up a real, sustainable leadership, creating a hard to match handicap for the competitors.

Disruptive creativity is a matter of unexpected conceptual content, or fresh approaches therefore there is a nonsense to expect disruptive ideas, without reaching the Etiologic Level of Awareness.

Under the *Etiologic Level of Awareness*, the creative effort might deliver new solutions and new designs, but they are just expected outcome of consequent creativity, around extant items and solutions. (see fig 5)

Axiological Level

Question: Which aim, which way?

Bringing the reason to light on Etiologic Level rises the consequent question: which is the aim behind the reason? As in our example: if the reason for *Making Signs* is *Recording thoughts and experiences*, what is the aim for Recording?

Staying consistent with our example: the aim for Recording Thoughts and Experience is Defeating Time, an evergreen Aspiration of mankind.

The Axiological Level invites to a deeper reflection upon aims behind reasons, addressing potential attitudes and ethic aspects of the topic. This step nourishes inspiring discussions about different points of view, eventually outlining new Approaches, the highest level of Creativity.

The AL is *the second disruptive threshold*, the Approach one and delivers a cascade of seminal power, as Approaches generate bundles of Concepts, who initiate clusters of Solutions and eventually fascicles of designs. There is a generic subsequence there between Approaches, Concepts, Solutions and Designs, with the Approaches at the peak of this descending order. (fig 5)

They are three relevant aspects here to notice:

- The level of abstraction generates the potential of the creative outcome
- The hierarchy of: Approaches, Concepts, Solutions and Designs is a backbone of a Taxonomy of Ideas.
- The Approaches are not just the peak of creative outcome, but generate an own world of subsequent Concepts, Solutions and Designs, making obsolete the trail of the previous approach, which is taking place of. In terms of entrepreneurship, new Approaches might mean an industrial revolution, like the digital approach made obsolete the analog one.

In terms of mankind, a new Approach might induce a new culture, a new understanding of life and even a new civilization, like agriculture brought about sedentary life, after the nomadism of hunter-gatherer.

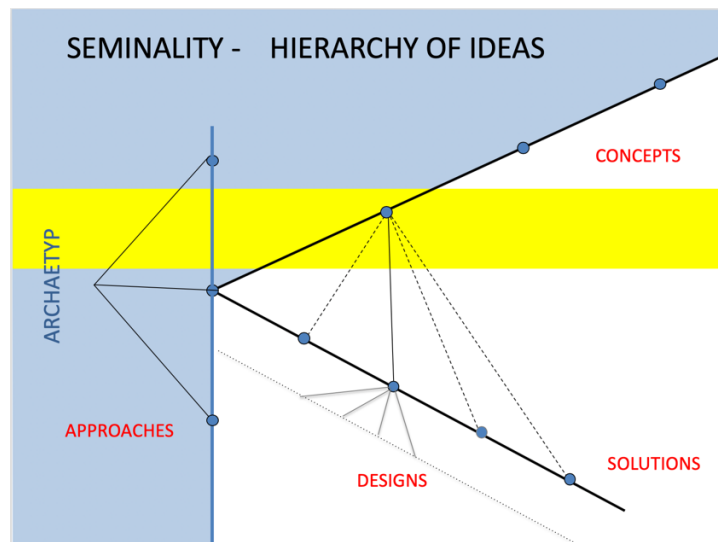


Fig 5 Hierarchy of Creative Outcome: Approaches, Concepts, Solutions, Designs

In order to illustrate the disruptive potential on Axiological level, enclosed we show an example of unexpected analogy related to our example:

Paradigmatic: pen - Pragmatic: making signs -Etiologic: recording thoughts- Axiological: defeating time (fig 6)

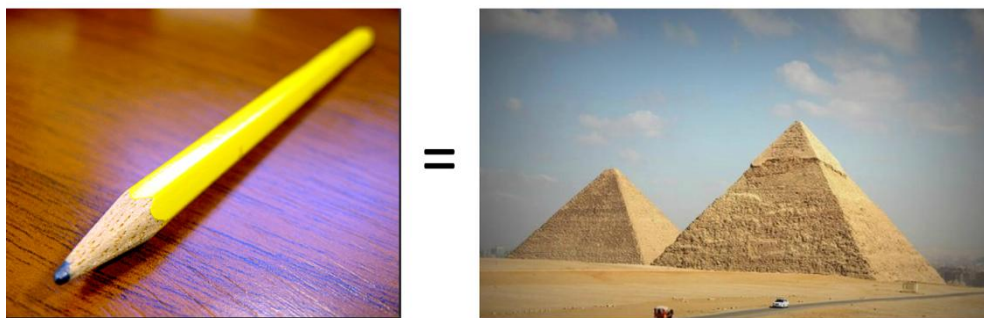


Fig. 6 Defeating Time – Approaches on Axiological Level

Archetypal Level

Question: which is the aspiration?

Arrived on the ultimate level of abstraction, the quest for the corresponding aspiration, that is laying behind an already defined aim, requires assessing it across the array of the seven Archetypes.

There is a generous cognitive experience there, discovering that the manifoldness is just an appearance, due to the empirical myopia, and that all the heterogeneity is converging in an apex of just seven terms.

Humanity developed for eons corresponding aspirations and projected them as attributes of super- human beings: Omnipotence, Omniscience (pansophy), Ubiquity, Eternity, Autarchy, Uniqueness and Creation.

n.b. We understand here Creation as the *generative force of steady Change*, related to Aristoteles' entelechy (εντελεχεια).

After investigating thousands of topics with this Kenotomic methodology we found out, that behind any Aspiration there is one of the seven keystones, where the apparent multiformity is converging into:

Mind, Freedom, Time, Space, Energy, Diversity and not least Change.

We have named them Archetypes, more in the spirit of the Greek etymology, that in the sense of CG Jung. (ref 10) (fig.7)

Archetypes, because they are the primordial (αρχικός) terms and fundamental building blocks of world awareness and because they are addressed since ever by the ultimate aspirations of humanity:

Mind-Omniscience, Autarchy-Freedom, Eternity-Time, Ubiquity-Space, Omnipotence-Energy, Uniqueness-Diversity and first of all, the Creativity-Change of the Universe.

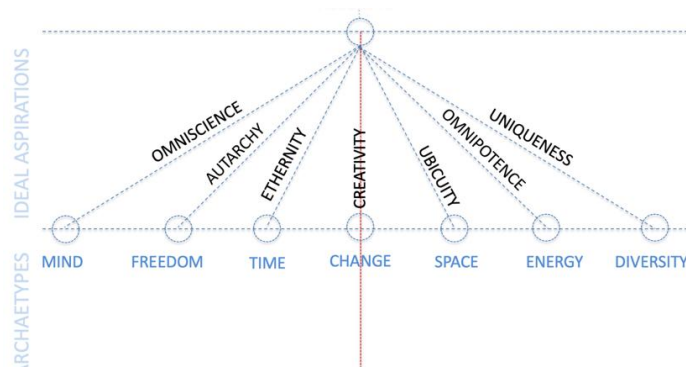


Fig 7. Dyads of Archetypes/Aspirations

The Archetypal level is invariable and offers the apex view, the *Archetypal Perspective*, which is facilitating the deep Awareness along the subsequent steps of investigation and stimulating generously both levels of disruptive creativity, the etiologic and axiological ones.

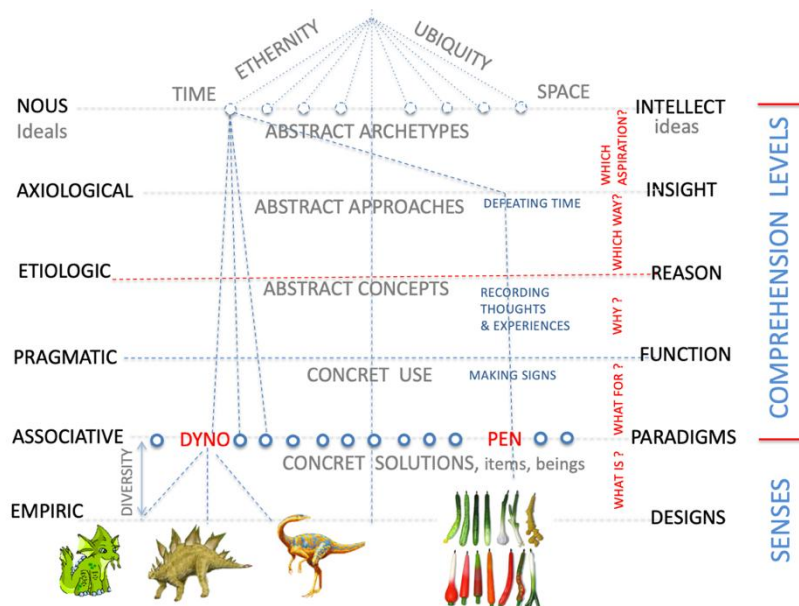


Fig 8. Archetypal Perspective, abstraction and creativity

It is a different creative deal, if you are getting, fully aware, downstream from the plateau Defeating Time to that of Recording Thoughts and Experiences and breeding there unexpected, disruptive concepts, as would be trying to imagine new ways of recording Thoughts and Experiences by climbing blindfolded from Making Signs plateau up. (Fig 8)

III. RESULTS

The results show that rising the abstraction level the number and the quality of ideas increase in steps, winning a stronger originality and seminal power as the topic is getting sublimated from one abstraction level to the higher next.

We've found out, that the Axiological level of abstraction and the Etiologic one are the *thresholds of disruptive creativity*, plateaus suitable for generating respectively new Approaches and Concepts.

In order to find out the corresponding archetype to the addressed topic, a prerequisite is to reach the Archetypal Perspective. From this apex one might select the appropriate working plateau and to follow deliberately the creative process. As the result, the entire creativity process becomes more comprehensible and manageable and the outcome matches the set goal; this means: (fig 9 a)

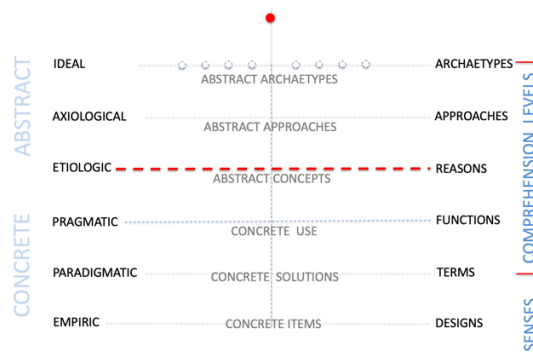


Fig 9 a Abstraction Levels and Outcome

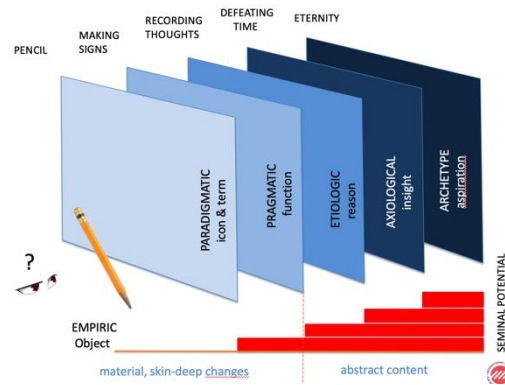


Fig. 9 b Abstraction Levels and Seminality

- For a refreshment of looks, a redesign, the initiation plateau might be either the extant item, or the corresponding paradigm. The result is a firework of shapes and colors, a sensorial experience, due to artistic creativity, but lacking any content novelty.

- A functional upgrade, or even a new solution requires the Pragmatic Level of abstraction.

However, the upgrades belong, as the previous redesigns too, to the modest competitiveness strategy for surviving in a crowded market, by avoiding the veritable, laborious and risky creative effort.

- A real creative Content, meaning a disruptive, new Concept, can't be expected under the Etiologic Level. This kind of seminal ideas are the substance for reaching the leadership and for starting up new enterprises.

A new Concept generates a large cone of follow up solutions, from its seminal apex.

- A new Approach is a radical, staggering point of view or an attitude, able to shift the way of understanding and dealing with an aspect, a larger segment of a civilization or an entire culture.

The sedentary, agriculture-based civilization was an approach-shifting from the previous nomadic, hunting-gathering one.

Home working and automatization are shifting the approach of a company as a hub for employees.

Shared automated vehicles as urban, street equipment instead of ownership of cars would be another example in this respect.

In our pilot-example the Cloud and the life-monitoring by social media provide an all-over recording coverage of every moment of life for everyone, even if it happens often involuntarily, all the other recording devices are redundant and obsolete.

Creativity results in ideas of many kinds and relevance, this outcome can be measured by:

-the *number* of generated ideas, the volume of generated ideas,

-by *disruptivity*, the degree of originality of an idea, compared to extant ones. This type of ideas might be expected by the thresholds of Etiologic and Axiological levels of abstraction and

-by *seminality*- the aptitude of an idea for inspiring a bundle of subsequent ideas. This is mainly a feature of Concepts and Approaches (Fig. 10)

These three criteria allow a sensible evaluation of creativity outcome, facilitating the creativity management.

The described kenotomical method of fathoming the abstract content on several levels of abstraction provides the ground for a spectacular increase of creative outcome and facilitates the management of ideas and the own navigation of those involved in creativity, in the fluid and heuristic mental process of ideation.

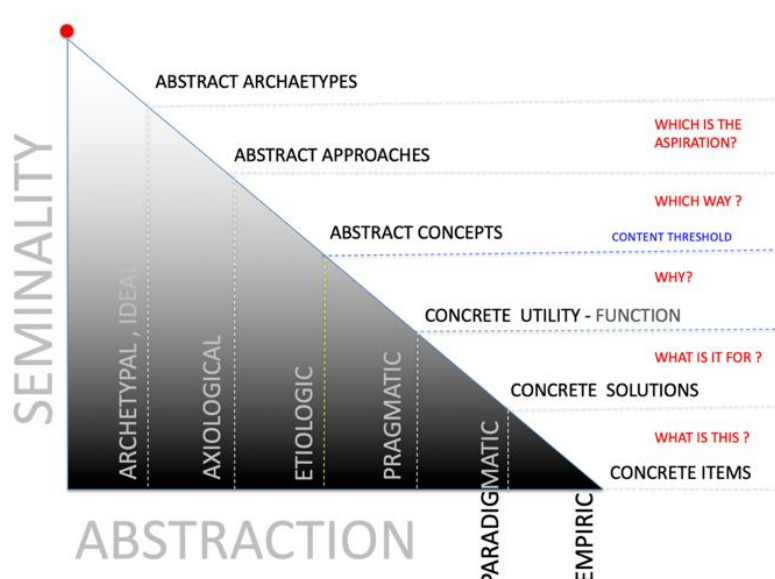


Fig.10 Seminality degrees and Abstraction Levels

IV. DISCUSSION

It is salient, that immaterial and even term-free questions are much more inspiring, than empiric and paradigmatic ones:

- How to make signs? vs. Make a “new” PEN!
- How to record thoughts and experiences? vs. How to make signs?
- How to defeat time? vs. Recording thoughts and Experiences.

Inputs related to senses, like visuals and even terms, are inhibitors of imagination and the related semantic is confusing and sluggish for the fathoming of a reality beyond the actual one.

The highest sequence of abstraction opens the *Archetypal Perspective*, the apex, where all possible Ideas, which are related to an *archetypal domain*, are converging into. (Fig.11) (ref 5)

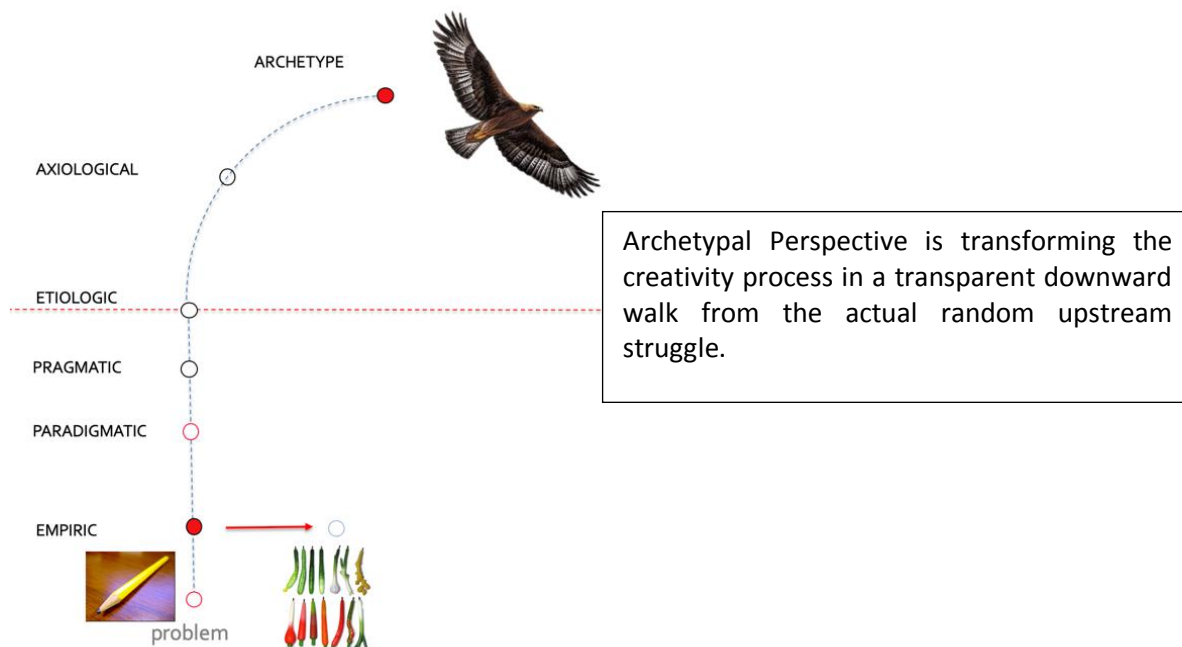


Fig.11 Abstracting to Archetypal Perspective

This method, which links creativity and abstraction, challenges the adopter's abstraction skills, but is rewarding him with a full awareness along the creative process and with a generous outcrop of ideas.

Furthermore, the method allows a fine planning in creativity management and delivers a procedure for evaluating the original mental outcome, by using the Taxonomy of Ideas and both criteria: seminality and disruptivity, additionally to the usual volume counting.

For the final, we need to mention a field observation by team working:

-Starting a team work on an empiric, paradigmatic and even on the pragmatic level requires a semantical harmonizing of participants, especially if the attending people belong to dissimilar specialties and even more elaborate, if they have different cultural backgrounds. (ref.2)

If such a heterogenous team works on the Etiologic level or higher, they reach intuitively a common understanding, in a dialogue beyond words and ikons, like sharing a universal language of thoughts, a case of reticular synergy. Creativity and higher abstraction bridge minds together.

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