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Abstract

The process of designing a project begins at the preliminary stage of searching for a core idea that defines it. This paper turns its attention to the oscillation between reality and imagination, order and chaos, the narration, the wish, the time and the diachronic or a-chronic placement of the creator, which are central in this preliminary stage of formulating the core idea of the designing process.

As Plotinus suggested "With its introduction, form composes and arranges the various parts that constitute the whole. By coordinating these various parts, form creates unity. This is because the idea (that is to say, the form) is one and because what it shapes also must be one, at least as much as the multiplicity of the parts permits."

An enquiry on the processes that lead to the materialization of a project basically aims at an attempt to comprehend the process of the design of this project. There exist actions performed in different levels relating to the operation of the project, its material and technical decisions, to the history of form, to aesthetics, culture, ethics, and the representation of socio-economic conditions.

At the heart of this enquiry, the most indeterminate or contingent of those actions is probably the core concept of design or, in other words, the process by which an idea surfaces from the mind of the designer to become the core idea of a design process. This is not to propose that an idea can be detached from its dialectic relationship to culture, its function, or the technical part of the materialization of a project; but rather to highlight the enquiry to this preliminary part of the process of design. An enquiry of the sort would be vain if it tried to offer definitive answers. Hence the object of this study is not to provide answers to questions but rather to submit some initial ruminations regarding a process that is fair to describe as esoteric. In order to present those ruminations we will use, as narrative companions, a novel written by Lewis Carrol «Through the Looking-Glass», a game- a kaleidoscope, and a set of assumptions and paradoxes derived from chaos theory. The main idea is that through the looking glass, Alice may be searching the very same thing that the designer searches during the designing process: the mirror-image of reality and its description, not in an enslaving manner, but productively, in the world of his imagination; the relationship between that mirror-image and its archetype, its founding idea.

1. Introduction

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The classic work of Lewis Carroll (Charles Dodgson), «Through the Looking-Glass», written on 1887, begins with a game of chess and a Foreword referring to this game of chess in a rather weird and seemingly inexplicable manner. This sequel to “Alice in Wonderland” is a narration that, perhaps more than any other fairy tale, draws its content from imaginary situations. While, however, the structure of other tales is directly connected to mysterious, super-natural or superstitious beliefs, the work at hand precariously balances between logic and fantasy without any trace of demons, fear or terror in the narration; nor does it engage the primordial struggle between good and evil, entropy (disorder, that is to say) and cybernetics (order). Maybe this is the first western fiction that approaches scientific concepts on space and time with a purely fictional content. It describes a course of exploration of the imaginary in a way that could be paralleled with the process of birth of a designing idea.

Through the looking glass, Alice may be searching the very same thing that the designer searches during the designing process: the mirror-image of reality and its description, not in an enslaving manner, but productively, in the world of his imagination; the relationship between that mirror-image and its archetype, its founding idea.

2. The Looking Glass

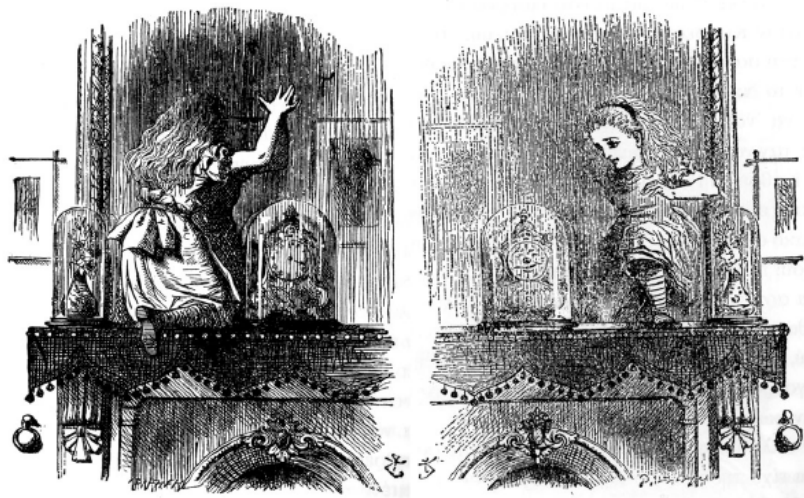


Figure 1

Original drawing by Sir John Tenniel for Lewis Carroll's Through the Looking Glass

In the beginning of the story, Alice wonders whether the house that she sees in the looking-glass of her living room has fire in the fireplace during winter. While she observes the house and talks to her kitten, she imagines that she passes through the looking-glass, which has become as soft as linen and dissolves like a luminous silver mist – and this is what happens. Her imaginary room appears to be exactly identical with their living room, only that all objects are upside down. When she passes through to the other side, she comes to realize *“that what could be seen from the old room was quite common and uninteresting, but that all the rest was as different as possible. For instance, the pictures on the wall next the fire seemed to be all alive, and the very clock on the chimney-piece (you know you can only see the back of it in the Looking-glass) had got the face of a little old man, and grinned at her.”*

In classical antiquity there were thinkers who claimed that an artist's task is to represent nature through a looking-glass. By this process they did not refer to an enslaving mimesis of the represented forms. The initial idea of the reproducing an image of reality, which functions as an inverted mirror-image when it crosses to the side of the imaginary world, acquires attributes and details that describe and depict a new differentiated reality. So, while the idea begins at natural reality, by means of the processes of thinking, it acquires different qualitative attributes through its imaginary description.

Mimesis as an intellectual process constitutes a large category of “arts” in the ancient sense described in Aristotle's Poetics (Jaeger W, Aristotle: Fundamentals of the history of his development, Robinson R., trans (London: Oxford University press,1948) . The general meaning of the word mimesis is described as “I do something that someone else has done, with shape, color or voice” (Bywater I. trans., Aristotle on the Art of Poetry, (London: Oxford University press, 1909) 100). In his Sophist, Plato, with the method of logical division, distinguishes between pictorial and imaginary mimesis, the latter of which is condemned by the philosopher. The mirror-image in the looking glass, the exact mirror reflection that is placed on the level of the fictional creation, could be compared to bi-directional reading. There, the element of chance is removed and phrases are structured in such as way as to be able to read the same way in either direction. But pictorial mimesis can not be trapped in the mere reflection of reality. It evolves into a new reality which differs with regard to its objective existence. Indeed, the representation of reality is lesser than reality itself, because if the reflection was to be perfect “representing by all means the whole of reality, then it would no longer be a reflection” Kratilus 432. So the reflection that is being produced is real and at the same time unreal, having and not having an existence at the same time.

In another part of the book, Alice is in the garden of the Live Flowers:



Figure 2

Original drawing by Sir John Tenniel for Lewis Carroll's Through the Looking Glass

'How is it you can all talk so nicely?' Alice said, hoping to get it into a better temper by a compliment. 'I've been in many gardens before, but none of the flowers could talk.' 'Put your hand down, and feel the ground,' said the Tiger-lily. 'Then you'll know why.' Alice did so. 'It's very hard,' she said, 'but I don't see what that has to do with it.' 'In most gardens,' the Tiger-lily said, 'they make the beds too soft--so that the flowers are always asleep.'

The problem of the 'four corners' of the quest for a new idea may indeed be pursued within the framework of the interpretation of the content of the design. The dogmatic determination of the content of the designing process can, on the one hand, constrain the limits of a creation and lead to imitations. These either are unable to complement the misty shape of the first notion, or to reproduce and repeat a stereotyped or common form – an enslaved reflection, of ideas that have already been verbalized. On the other hand, the process of creation seems to be justified only by means of the creation and seems to be a novelty only when it reveals an aspect of reality in a manner which is somehow differentiated. Maybe this is what is represented by the logical explanation as to why flowers talk, in *Through the Looking Glass*: the fictional construction of the other side – the new idea-creation becomes the new reality that is based, however, in the logical postulates of the existing world, interpreted and perceived through a different angle. New ideas are not necessarily ideas, which have no precedent, but ideas that are approached by means of the re-shaping of other ideas, already existing and perhaps functioning in a stereotypical manner. All it takes is to have those latter ideas incorporated within a process where the designer judges and redefines them, interpreting them in a subversive or novel manner, or even looking at them in a non-deterministic fashion.

3. From order to chaos

When Alice meets with the red queen, the view of the ground divided into squares makes Alice say: *'I declare it's marked out just like a large chessboard!' Alice said at last. 'There ought to be some men moving about somewhere -and so there are!' .. 'It's a great huge game of chess that's being played -all over the world- if this IS the world at all, you know. Oh, what fun it is! How I WISH I was one of them! I wouldn't mind being a Pawn, if only I might join--though of course I should LIKE to be a Queen, best.'*

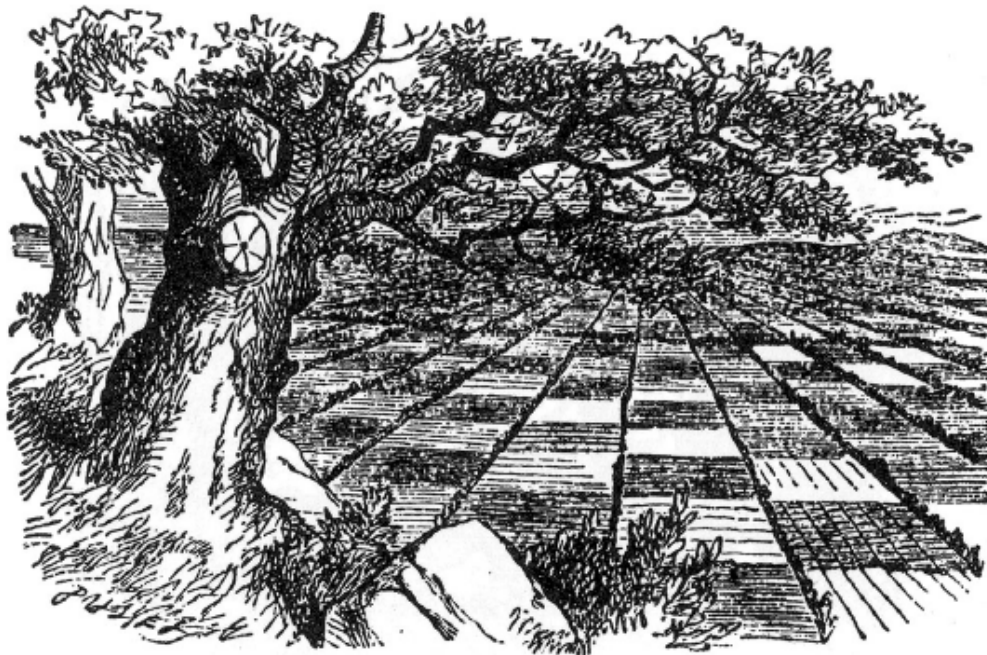


Figure 3

Original drawing by Sir John Tenniel for Lewis Carroll's Through the Looking Glass

At this point, Lewis Carroll returns to his initial Preface of the book, which refers to a game of chess. The game of chess has always been (and still is) a game of strategy. As such, it requires an overall view of the moves to be made and it may require the sacrifice of some pieces in order to win a battle. Additionally, there are rules that define the game, a system of arrangements and alternative endings. Therefore, a definite requirement is the assigning of the strategic goals but also of the tactics to be followed. The interesting element in this description by Carroll is Alice's

alienation from space itself, by considering herself as an element that does not belong to this world. She already seems to be in the seat of the creator, reminding us of Albert Einstein's words, when he said that in order one to be creative, one needs to be secluded. In Carroll's description, the chessboard acquires the dimensions of the whole world. The reading of the space where the game takes place resounds of the reading of a map, with its different scales – the small, the big, and the whole. The creator's alienated viewing shows his disposition to realise his goals before he "loses himself" in the quest, or vice versa. The holistic view in designing (the constant transference from the part to the whole, and from the whole to the part) probably constitutes a critical reading of perennial questions, which link the forces of chaos and order in one harmonious co-existence.

The ideas are brought forth in a non-regular manner, non-predictable and complex, and this is a given fact. The method of reduction cannot be used in qualitative systems such as designing because it focuses on the manner in which one aspect of the designing idea affects the final product of the composition. On the contrary, the qualitative approach focuses on the designing as a whole. The attitude of a designer towards an idea and its visual representation resembles to the point where the idea goes through the looking glass, where boundaries between order and chaos are defined; or, as Stevens Wallace points out, where the greatest disorder is order and where these two things are one. Hence we can conclude that the evolution of complex processes cannot be analysed with a deductive manner, because these specific processes are holistic.

Lets stay at the point where Alice tries to reach the garden where the chessboard is and supposes that the corkscrew path that she sees is leading there. *'Well, THIS turn goes to the hill, I suppose -no, it doesn't! This goes straight back to the house! Well then, I'll try it the other way.'* And so she did: *wandering up and down, and trying turn after turn, but always coming back to the house, do what she would. Indeed, once, when she turned a corner rather more quickly than usual, she ran against it before she could stop herself. 'It's no use talking about it,' Alice said, looking up at the house and pretending it was arguing with her. 'I'm NOT going in again yet. I know I should have to get through the Looking-glass again -back into the old room -and there'd be an end of all my adventures!' So, resolutely turning her back upon the house, she set out once more down the path, determined to keep straight on till she got to the hill. For a few minutes all went on well, and she was just saying, 'I really SHALL do it this time -' when the path gave a sudden twist and shook itself (as she described it afterwards), and the next moment she found herself actually walking in at the door.* The creator-Alice seeks the path that brings her to the core of the game – the world, the creation.

The truth be said the first stage of thinking out an idea includes a painful process in which the idea is ossified into the mimesis of the image of reality. This ossification prevents the designer from wandering in routes and landscapes that are not connected to his archetype. The realization that the "return" to the starting point is identical with the mirror-image, with the mimesis (an enslaving one?) and the temporal end of the quest, seems to be one of the practical consequences of our bonds with the things that surround us. Similar to the way in which the aesthetic relationship needs a distance from the object of observation, the quest of an idea seems to need a distance from the object or the images it originates from, in order to be able to acquire its new qualitative attributes.

Anaximenes is considered to be the father of science because he was probably the first Greek philosopher to claim that the different quality attributes of objects are derived from the different quantities of their elements. This admission, however, is refuted by the holistic approach. Everything affects everything, but the study of lateral characteristics, of diversity and complexity, give us a sense of the qualitative characteristics in the evolution of an idea.

In Platonic thinking, where the idea of colours and shapes occupies a prominent position, quantity is non-consequential for aesthetic appreciation. The only criterion is qualitative: the clarity of the colours and shapes, their residing within their own being, their total identity with their essence, or minimal deviation from the actuality of the image they represent. (Andronikos M., Plato and Art, (Athens: Nefeli, 1986) 45)

'In another point later, she thought she would try the plan, this time, of walking in the opposite direction. It succeeded beautifully' This excerpt, once more, highlights the process of creation

through bi-directional movement. Indeed the choice of a specific action, which in our case is in rupture with stereotypical and predictable actions, seems to lead the designer to a new stage of engagement with the idea. In this where from the abstract route of the quest begins to define the content and its characteristics and the misty reflection tends via thinking and envision transforming into a form, with the specific content.

4. And back again: From chaos to order

What gives shape?

Let us consider a kaleidoscope.

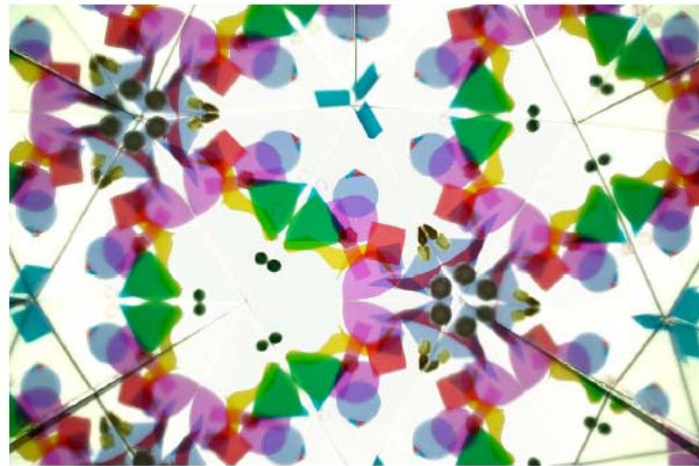


Figure 4
Kaleidoscope

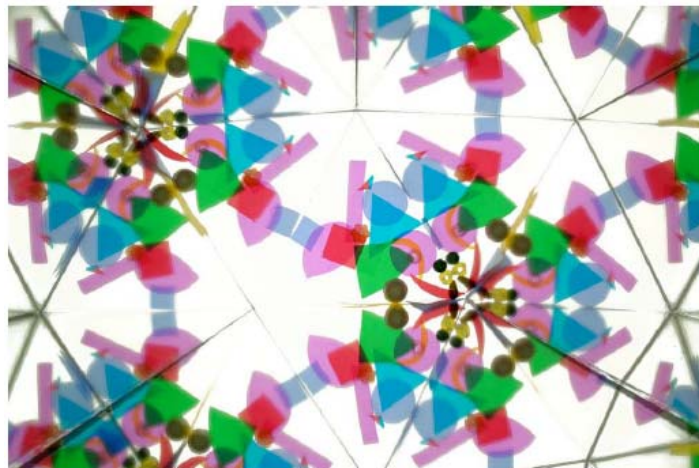


Figure 5
Kaleidoscope

The elements that are inside a kaleidoscope function as un-connected ideas which without the mediation of the organ can not form a totality. The flat mirrors inside and their angles are those that compose chaotic elements into a total image – that of order and of symmetrical organization. The kaleidoscope constitutes a palpable experience, albeit on a different scale, of the way in which a fractal is born, that is to say through the repetitive application of the generator onto the sides of an initial shape. The random motion pushes the parts to other positions and leads them to other synthetic totals, within which interesting decorating motifs appear, based on the symmetrical configuration of repetition.¹

The use of mirror symmetry is familiar to us as a way of designing, being the mainstream approach in different historical periods. In Plato's *Filivos*, Socrates, evaluates the order of goods and places the beautiful in the first class, saying "that which is symmetrical and beautiful and that which is perfect and satisfactory". Plotinos also accepts the beauty that the eye sees as "the symmetry that all parts have among them and as a whole". This familiarity and recognition relates to a sense of balance, derived from that mirror reproduction: the coexistence of the real image and its reflection in a whole, undivided, designing form that repeats with order and rhythm, with simple but also complex multidimensional ways.

Is, however, what we named 'random' in the function of the kaleidoscope, random indeed? Could it be instead something derived from a process, which we are unable to know? How can we progress to order and create a controlled field of form from the disorder of the kaleidoscope (which when we open it is characterized by a non-normality and most of all an unpredictability – since the random moves could not possibly produce a motif that attracted us)?² And should we ask ourselves if we can do that by controlling it? The indeterminacy that characterizes these repetitions may be their most fascinating feature. Moreover, the ability to discern the indeterminacy of our beliefs and choices, that is, the ability to follow bidirectional routes and refute ourselves, is the basis of our creative energy. Enslaving mimesis, let us not forget, is based in the funding and the acceptance of the determinacy of the faithful representation.

In the kaleidoscope, as in nature, the "random" transformation leads to morphogenesis and the charm of the game is immediate. We can easily assert the afore-mentioned repetition of the simplest elements leads to complex geometrical compositions derived from this great simplicity, a reflection of the infinite. Peitgen and Richter (1986)³ point out that fractal images represent processes, which are simplified idealizations of reality.

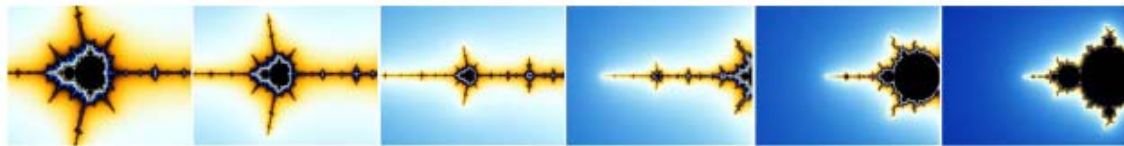


Figure 6
Fractal

A second element that may be the product of the "random" repetitive morphogenesis in the kaleidoscope is the production of variants. Motifs are re-shaped through motion. The less intense the motion, the more the modifications can be thought as variants of the initial theme – in color or in form. At this point we must point out again the indeterminacy of these repetitions.

The return to the game of chess would add to this enquiry the planning of possible moves which would allow Alice-as-creator to become the white queen: to move within the world in a manner that will secure her victory (the creation) and to return to the real world with a formulated idea.

This process (analytic and later synthetic) must not be seen as based in a cause-and-effect worldview. This process rather follows the evolving course of a complex designing process, without waiving its holistic character. This course may remind us of the symbolism in Alice, who chooses the way to reach her goal and chooses to go back. But what that "back" represent? Does it represent time, her initial will, the predetermined goal?

5. The desire and the time

'That's the effect of living backwards,' the Queen said kindly: 'it always makes one a little giddy at first'... '-but there's one great advantage in it, that one's memory works both ways.'

Schopenhauer⁴ observes that when someone reaches a certain age and looks back at his life, it may seem as it had order, as it was a part of a cohesive plan, as it was composed by a storyteller.

Schopenhauer claims that, same with his dreams that are shaped by a side of his self-impervious to his consciousness, his entire life is determined by his inner will. And Campbell notes: All parts connected to one another just like a big symphony and everything unconsciously composes all the rest, just like a big dream of only one dreamer, in which the dream characters are also dreaming.

The way in which each creator perceives the other side of the looking glass, even in fragments, wandering in the place of his own dream, where he draws his own notion of reality, his own idea, as we already pointed out, defines this totality. And this happens, even if we place it within the conventional time⁵ as it represents the creator's wish to formulate his ideal concept, his own reflection of natural reality, at the specific time.

Schopenhauer, while thinking out the "Platonic idea", considers that that the latter is a stable form because it is located outside space and time. He also claims that the ideas are related with their respective prints, "*as the prototypes with their copies*" (book III, p. 219). Hence he urges the creator to "*seek the where, the when, the way, and the which way, but to focus on what... To forget about his individuality and will, and to continue existing as a pure subject, a clear mirror of the object, ...both of them (the preceptor and the perception) to become one, because the whole of the conscious is captured and is full from only one image. If in that way the object has surpassed every relationship with everything, that is outside of it, so what is recognized is not the member object as a member object. But it is the idea, the eternal form, the immediate objectivity of the will in this point. Consequently, whoever lapses in this concept, is no longer an individual, because in this concept the individual is lost. But it is the pure, without will, painless and timeless subject of knowledge*". (Book I, p.231).

One of the concepts that emerge in Schopenhauer's thinking is essentially the focus on the new object that constitutes the idea which frees itself from the conscious, the place and time, even free from the direction, the goal and its achievement. This level of freedom contains a very complex creative dynamic. The subjective reconstruction of the idea corresponds to the complex map of intellect, its objectification, which is no other than the formulization and the new movement towards reality and towards the designing rules.

The course of this return moves suddenly towards one direction. The conjuncture of its discovery, like with Alice, is nothing more than the conscious idea to revisit our own assertions in the light of the other side of the looking glass. And back again? After all this who can claim that the chaotic state of ideas is located "back in time" while the arrangement of the ideas "ahead"? Has Alice traced the path of her return by reversing the transitional process, or is it the other way around?

The timeless idea of creation, the composition of the invisible shapes of the mental wandering to the nonobjective (but not with the meaning of non-real) concept seems to constitute a valid assertion. "*Our consciousness comprises a much smaller part of our mental life than we are conscious of because we cannot be conscious of what we are not conscious of*" De Landa, 2002.

So the creative process cannot but move forward through antitheses and repetitions, negations and balances, through symmetries and non symmetries. It seems to wander in a dual field, which is not known how it has been formulated. The quest in the looking glass reminds us of Morianna, the dual imaginary city of Calvino, where chaos and order are embodied in the same landscape. The quest is fleeting and elusive like this city that has no bulk and dimensions but thin as a sheet of paper. It consists only of one front and one back -side with one figure on each side, which can not be separated nor look at one another (Calvino I 2004, 132).

Hence we come back to where we started. Can the representation of random be random indeed? Does the notion of the random feature in the creative process? The construction, the form, the designing object, they all have volume, they can be visible, they make up objects, and as such they are ephemera, finite, dated. But what about the invisible idea?

The colors and the shapes dynamically alternate, they chatter, sing, dance, and come to life. Such vivid forms, spring from the unexpected dawn of a creator's idea, with a leap from the other side of

the looking glass. Here, the construction of an idea as a perception is replaced by its representation, as the materialization replaces the reflection in the primordial unity of creation.

6. Synopsis

When a designer refers to the designing process, he usually describes it as an activity during which work is being produced: forms of specific utility content and aesthetic perception to be constructed using specific material in future time. While the designing process is described, as an action intertwined with the means that will realize it, the starting point is less determined and clear. Maybe the starting point is imaginary with subversive, narrative and dramatic elements, as explained above. The comprehension of this first stage is related to the comprehension of the same idea of the creative quest, the way in which a new designing language is formulated.

As in fiction, where an idea needs structure, a story-line, a culmination, a closure, for it to become a book, similarly in the designing process, for an idea to be formulated, it needs to exist as its creator's wandering to another world, where the chaotic structure of ideas and their arrangement are in perfect balance. The creator needs to face his idea without the burden of certainty, with the lightness of self-refutation that cleanses one's gaze. The author must draw strength from the desire to revive it, to unite with the eternal a-chronic or diachronic consciousness, to fill with aesthetic colors from the synthesis of its imaginary components, to play with the reflection of its totality in the looking glass of creation. And then, the creator shall stand for a while in front of the looking glass, like Carroll's Alice, before he goes through to the fluid other side, like the Yellow Emperor of the Ancient Chinese Myth⁶ mentioned by Briggs and Peat. Balancing in between one and the other side of the looking glass, he will realize the beauty and the wholeness of all the things spoken about since a long time ago – from Plato, Aristotle, Plotinus... And maybe the light that flows will help him re-evaluate them in the contemporary reality.

Notes

- 1 The repetition while it creates confusion in other technical systems, it seems to produce a creative euphoria in the human mind. The philosophical repetition "the phenomenon of self-reference" has taken its position in philosophical systems as in Zen Buddhism, where it is believed that the teachers are in the position of stepping out of the looking glass, confirming which of the self- recycling assertions – choan is real. Briggs J, Peat F.D., *Turbulent Mirror*, Constantopoulos N., trans. (Athens: Katoptro, 1991) 69.BR>
- 2 Ilya Prigogine, in his book "La fin des Certitudes", refers to the sudden appearance of order within chaotic circumstances and claims that this process is the norm and not the exemption
- 3 Peitgen, H.O., Richter P.H., *The beauty of Fractals*, (Berlin:Springer- Verlag, 1986)
- 4 A. Schopenhauer's philosophy is presented in his third book "Die Welt als Wille und Vorstellung" (1819, 1844), that is the World as will and idea. The whole concept is deployed based in the antithesis of the two views of the world, which is a sum of things.
- 5 The concept of time as a moving arrow has been for many years the basis of positive sciences, beginning from early philosophical quests. And here we can refer to the circular time of ancient times. However, Prigogine when referring to the reverse process, points out "No one has ever thought, and no teaching has ever considered, that the process of composition is equal to the reverse process of decomposition: that is, because a plant grows, blooms and dies, then it can be resurrected, revived, and return back to its original seed, or that, because humans mature and learn, then they can "de-learn" in reverse, to become a child, an embryo and a cell" Prigogine I, Stengers I, *Entre le Temps et l' Eternite*, (Paris:Fayard, 1988), 26.
- 6 The myth of the yellow emperor is about matters of order and chaos. In ancient times the human beings and the beings of the looking glass were not separated but lived in harmony having only differences in color and form. One night the creatures of the looking glass invaded the earth end created chaos, thus making the yellow emperor to put a spell on them to keep them behind it and make them mechanically repeat people's movements. The myth ends up to the assumption that these spells will not last forever, but when fade they will allow to the enraged creatures to invade our world again.

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