

Generative Art

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“Cognitio indefinita, et quia indefinita, nomine digna est”

Giovan Battista Vico, Diritto Universale

Abstract

Generative Art is the Art of process and not only of result. GA works using the rules of the alive world, as a mirror of Nature. In line with the motto by Jean Vignot, 1392, *Ars sine scientia nihil est*, the process is performed as a chaotic not linear system, in order of a methodological procedure structured following T. S. Kuhn, Ilya Prigogine and R.Thom. This structure, defined as a math problem, individualizes an hypothesis, able to define a code, that performs generative results , running in AI sites. The results are all unique ad continuum. These are variations of the same hidden codeness, as a transforming vision of an interpreted “reality”. For the first time the word generative was used by Bauhaus, defining very well their organic vision. The cultural power of that time recalled it degenerative. The same happened when we start in 1990 calling our creative approach generative! GA marks the passage of the last 30 years from *homo faber* to *homo creator*. Overcoming the artefacts characters of the last century, industrial, serial, component, standardized, quantified, optimised, anonymous, obsolete etc, synonymous of generative are unique, digital, organic, complex, meta-poetical, recognizable, endless, experimental, morphogenetic, variable, mirroring, imaginary etc. Precedents of GA are Michelangelo Leonardo, Piero della Francesca, Pacioli, Mantegna, Borromini, Piranesi, Gaudì, Caldano, Mozart , Schubert, Wordsworth, Coleridge, Rembrandt, Bruguel, Swift, Bach, Goethe, Leopardi, Flaubert, Florenskij, Van Gogh. Melville, Baudelaire, Poe, Seurat , Cézanne., Matisse, I Futuristi, Pìcasso, Klee, Kandinskij, Eisenstein, Pollock, Mondrian, Pound, Auden, Bacon, Borges, etc. The list is long and open. Here it will be investigate: the codes of Harmony; the proportions; industrial era and Le Modulor; Generativism, startind from the Chomsky structure; Bacon; "Il non finito"; my tale "The child, father of man"; the GA structure. Dedication and wish.

1. Generative Art philosophy

This paper tries to outline *how walks* Generative Art. This kind of Art is a philosophy, a way of thinking able to produce a set of variations of a performed idea/code related to a defined problem. It walks using at the best in Art the tools of our time ascomputers, robotics, rapid prototyping machines, AI software etc. An enough necessary condition of GA philosophy is knowledge in understanding. This is a double dynamic system, that works in resonance with our ability for memorizing our impressions. It is something very closed to our knowledge process that each of us peculiarly activated in his childhood, trying to discover the world running around our touching vision. Through this cognitive process we learn to interpret “reality” as a

mirror of our own code, structuring “our heart rudder, able to guide our memory, our intellect, our will”. (S: Agostino). G. A. walks generating an unicum ad continuum, as a mirror of Nature. We can use in evolutionary way the verbal substantive generativism, coined by Chomsky in 1953 in his great systematic work about the semiotic rules of language. For the reason that the G.A. process is strongly connected in similarity to a generative process of language in: 1. It is similar to a sound, that we memorize in connections of sequences, outlining differences in a not linear schema. 2. It is linear, adapting the memorized sequences to the linear schema of writing, in different versus up/down, right/left and viceversa. This represent the most adaptable tool for our eyes, used in all culture. Now in a evolutionary step of Chomsky significance, the word generativism can describe the process for gaining the result of complexity. In our time we are over the Hegel dialectical vision of the world. After last studies about, we can affirm that the relation between the opposite black/white, far/near etc. are not in one dimension system, but they generate a dynamic asymmetry. So this explained generative process is not necessary for activating a creative process, but it is a good methodology that works in experimental way by gaining complex results, the main question of our time.

2. The codes of Harmony



A tale from the past time,” The child, father of man”.

“L'eau claire:comme le sel des larmes d'enfance” Rimbaud,Memoire

At the entrance of two Maestri, the rustling of their dresses generated a murmur on the child's face, fast ended on his astonished eyes. For an instant the pars triangularis resounded with the opercularis part in the area of Broca on the brain of the child: mirror neurons were activated. The empathy was perfected, just at the beginning of the lesson. After a fast but so deep discussion they agreed to use as mental memory image for their lesson their own room in which they died.

Leonardo, proud walking toward the room in which the child was waiting, reminded the softness of his bed, the color of the candle, that he asked always on for lighting the corners darkness, the mirror just covered with a pitying veil. The books, on the wall, very closed to his bed Dante, La Divina Commedia, Ficino, Lucrezio,Pico, De hominis dignitate, Pacioli, De Divina Proporzione, his last drawings on “The end of the world”. His casket with the secret, opened from a week, on the table with his last will and with his love letters, that he asked in his will to put into the fire after his death. And, finally the unique great grace comfort of his life: la Gioconda. At once he decided to start from her. Michelangelo, in the meantime, was singing in his mind his preferred Madrigale, the same that was singing in his heart when he died. His closed eyes, in his last room in veiled dim light, were able to figure the smell of Roma, in that evening.

Leonardo, sitting fast as an eagle just back to his nest.” I will start from my last thoughts in my death room”. An immediate blush went down the child eyes as for a pitying act of love.

“For many years I take with me, in my bed room wherever I went, my painting “La Gioconda”. I was not able to dream without given to her my last looking of the night. After my death she was pilgrim until she resides now in the dark, submerged in an unrelated vacuum odorless and

without any radiation of the sunlight. But how did raise the idea of this so wonderful painting? I was really depressed after my big mistake of too much water in material color for the fresco for the battle of Anghiari. My mind was fixed at the night spent with fire trying to preserve paintings, that inexorably disappeared. So I felt myself nothing after seeing also his David *walking* and in pause in the same time! He was able to put the infinite inside the space of the statue feet. I worked in silence for a long time, walking in the woods of the mountains, hearing the mute sound of Nature and crying for discovering the right street of my life. I took conscience that tools are precarious, the main real alchemic process is to transform alive nature music in a mirrored sound of heart. So I designed in my heart La Gioconda. I gained the infinite in her smiling. The code idea rises as a mute music, kindly heavy of significance, that suddenly performs a *sgomento*, able to leave you without any breath. With *hastinato rigore* you must pass through darkness if you want to see the splendor of Beauty. La Gioconda is the smiling side of my melancholy. She is the lightness on my darkness. With her veiled colored light she is the maternal code of my heart”.

Expert in variations, Michelangelo started: ”Dear child, you represent double a terrific vection of my time and of my eternal hope. Image a blind man, until he moves inside his home he feel free inside his space, but if he moves outside in an unknown space he needs an helping tool. This can be a dog, a stick, a friend. This tools can leave him free to recognize with his other senses, touch, smell and most of all hearing, the discovering space. The same happens in our creative process. We need a tool. Each one of us chooses his more peculiar tool, belonging to his own attitude.

How can we be sure that is the right one for us? There is only a way, by trying, more and more in an experimental process. Until it happens that we recognize a familiarity with this tool, like an artificial hand of our mind. The most complex simple one is the pencil for writer. If you are a good writer you need a pencil as a part alive of your hand. Life is not a game. And also if it is, we all are loser, for the simple reason that we all die. I got it in my soul three times, surrendering for rising again with indelible signs. So I tried to remember each days of my last alive time the imperfection of our human condition. I worked every day until I died, but I lived with strong intention and pain not finished “La Pietà Rondanini”, et alia opera, but this only one I take in my bed room until my death. As in the most of all my works I looked for discover a mirror of my screaming vision hidden inside the stone. I tried to perform harmonic proportions, structured in dynamic relations, following a anthropomorphic concept, that was the main center of my poetic. In this work I tried to perform a mirror of my own condition. There is evident the code ready to generating endless variations. The act of reader becomes the being born, an alive embryo, that represents inside the dying action. The inseparable figures of Maria that embraces Her dead son Christ seems to rise from a water mirror. They tale a soul condition, a tension of mind, that is possible to understand only with emotions. This my maternal code is the representation of my humble mood and of my melancholy as artist.

“Per fido esempio alla mia vocazione

Nel parto mi fu data la bellezza

Che d’ambo l’arti né lucerna e specchio”

You, child, must walk hearing your own music that indicates your street of life. If you want to discover your identity, silence and attention are the basic tools for focusing clearness in your emotions. Don’t trust yourself to people that give you fast explained solutions, especially if they looks so much sophisticated”.

”Any questions?” asked Leonardo, known very well that the child had spoken all the time with his eyes, also a kind tear, with his mouth, with his hands, also with his feet, emulating a passage walking. The child said:” I am real very curious, Maestro Leonardo, to know the reason why you wrote every script of yours in reverted way”.

“Oh, a good question. So you give me the opportunity to talk about the veiled mirror in my death bed room. So if you see in a mirror my written words you can discover the good side of their




significance. They are the results of the same generative process of La Gioconda. She is the other side, the good one, of my soul. My reverted scripts represent the process that reader must active for reading them. After the process, the raider of a noble investigation street can follow the enchanted, discovering the words sound. I can give you a very simple example. You learn numbering on the fingers of your hands. You can use the right or the left one, naturaliter. But if you start in numbering until ten starting for example from the left hand and you restart for twenty starting by the right hand, in your mind you will see the numbering until twenty as a mirror of the precedent ten. Following nature, that is figurative and also abstract, you wrote also in reverted way *,indigitatio* in the illusion of time”

“Oh, it is so deeply wandering!” exclaimed the child in a fast murmur.

“Good lesson” thought in his heart Leonardo.

Michelangelo:” So, sweet child, now you are the only skipper of our visionary ship. Take care of us, child forever.....Please where is my hat?”

“Sitss.. Be silent !”said Leonardo, speaking with a low voice” I hid it into the coat pocket of the child, I knew that you would just appointed him the only skipper”. While a suddenly amused astonishment was designing on the face of Michelangelo, a strong wind opened wide the door, banged back with a terrible noise. A moment later a nice girl, with a kind of cheeks red for the mountain cold, entered into the room, slight as flying with the wings of a white butterfly. Smiling she asked:” Are you the skipper of the ship of dreams?” *ad continuum*

		
C. Chaplin, The kid, 1921	J. Tati, Mon oncle, 1958	A.Tarkovskij, A.Rublev,1966

3 great examples of “child, father of man.” In Tati the uncle is the child too.

3. The GA methodology

In past Art had a deep configuration of ambiguity, so our imagination in front of artworks were strongly activated. Now we are object of a total sequence of media visual information that all time represents our reality. For this reason our mind is full. For activating an actual process of imagination we need two basic things: 1.Poetic dimension 2. Complex reading of reality. So our Generative Design Lab, founded by Celestino Soddu and me in 1992 defined a generative methodology for gaining complexity. Complexity, *a poetical vision of the complex reality*, becomes a new area of investigation, performed on several multidisciplinary sectors of science, mathematics, physics, A.I., chemistry, cognitive sciences, etc. All can start from Renaissance, Leonardo, Michelangelo, Raffaello, Mantegna, Luca Pacioli, Bramante, Brunelleschi, Pico della Mirandola, Alberti, Palladio, going ahead Borromini, Piranesi, Gaudì, Van Gogh, Picasso, Bacon, and so on. A new scientific approach was founded by the mathematical discovery on the continuum hypothesis on the set theory, activated by Paul Cohen at the middle of the last century. There are following: the theories about the paradigm of Kuhn, the morphogenesis of Thom, the theory of

catastrophe by Prigogine. The discovery of fractals, the colors of infinity by Mandelbrot. The research about attractor by J. Crutchfield. All these new approaches were investigated by us relating them also to the concept of measure in Lagrange, to the last thinking about hypothesis in Poincaré, to the concept of topology in On growth and form by D'Arcy W. Thompson, and to the reverted perspective by Florenskij.

As in Nature GA works looking for a figurative expression in abstract way. This is the main character of complexity. In our time, if you are looking only for an abstract result, doubling in abstract the process, you are realizing a simplification.

A voice of complexity: to use dynamical time for gaining future connected to past, i.e. to discover the smile of your grandmother in a mirroring unknown face, or in an artwork, feeling a déjà vu. The consciousness of an instant, just lost.

The knowledge is the distance between subject and object. In Japanese is called *wakaru*, that means to be divided in the 2 parts of a whole. A GA process is like a man that for walking gives a deep importance to his *conscious* breath for his steps.

GA process is expressed in the mood of the oral tradition of philosophy, that we can resume in a singular image of a poet more aedo, as a singer of a poetry in performing, traced in the heart memory. The experience of the process performs a codeness, able to generate endless variations, as in Nature. Codeness is a poetic measure of results, in imitation of alive structures. The quality of measure is a possible relation that we define between reality and our imaginative vision of a possible scenario. The main question is to gain ability in defining a problem, as a performing order, that follows a possible idea, working in a chaotic system.

4. The formal logic

"It is necessary to start from the mistake and to convince it of the truth. It is needed, that is, to discover the source of the mistake; otherwise don't aid anything to hear the truth. This cannot get in if something else takes up its space".

4. 1. Tools and aims of a GA process

there is from me and the over side neither space nor time, only song

1th aim: performing attitude: GNOTI SEAUTON. *From impression to expressions* In this first step it is necessary to discover each one his own tool, as Michelangelo docet. – Exercises: translations, these need an interpretation.

2th aim: defining a problem; tool: interpretation performs idea/hypothesis. Interpretation is an our delineating knowledge of a mirrored reality, cfr. Coleridge.

3th aim: generativism as basic studio process from impression to expressions. The process is in the first step in discovering and later in structuring matrices/codes. Tools: the geometric/arithmetical/harmonic codes of proportions: Vitruvius Leonardo,

Chinese code, Le Modulor. Words as attributes. 3 attributes define a not linear character as a measure of quality. Performing algorithms as transforming rules.

4th aim: improving imagination – Tools: memory, silence/ music. Abduction as a interpretation of precedents. Good feelings . The rediscover of our childhood.

5th aim: conscience. Tool: the “non finito” (unfinished) in Leonardo e Michelangelo, in Schubert, in Turandot by Puccini, in The Art of fugue by Bach. Keats more books!

Plinio, the elder wrote” We are sad when we see an unfinished work, Inferring that the sculptor has died, and are then stimulated to imagine it completed in a perfect way as a masterpiece. “

Vasari: ”Michelangelo’s various passage, about different works, tend to have in common a defensive quality, to assure that the unfinished factor should not make us view the works as without value, as we otherwise might be likely to do...He finds that the imperfezione of the rough we can see the perfezione of the complete work. We probably must combine the two overtones of the world perfezione, as completeness and perfection”.

5. About imagination

Eternal singular/collective codes, are the expression of our imagination. They are able to perform various evolutionary styles, following historical times. As in Nature.

The four verba *moueds, endues, abstracts, combines*, used by Wordsworth for defining how is and how works Nature/Imagination, are very closed to the Gian Battista Vico definition of the rule of memory, called “the mother of Muses” in his *Degnità* 819 «è memoria mentre rimembra le cose; fantasia, mentre l’altera e contrafà; ingegno mentre le contorna e pone in acconcezza ed assettamento». (“ She is memory, while she is remembering things; fantasy, while she changes them or disguises them; intelligence while she surrounds them and put them in character and in system style”)

Coleridge focused mainly on imagination as the key to poetry. He divided imagination into two main components: primary and secondary imagination. In *Biographia Literaria*, one of his significant theoretical works, he writes:

The primary imagination I hold to be the living power and prime agent of all human perception, and as a repetition in the finite of the eternal act of creation of the infinite I AM. The secondary I consider as an echo of the former, coexisting with the conscious will, yet still identical with the primary in the *kind* of its agency, and differing only in *degree*, and in the *mode* of its operation.

It is the imagination involved in the poetry that produces a higher quality verse.

The primary imagination is a spontaneous creation of new ideas, and they are expressed perfectly. The secondary imagination is mitigated by the conscious act of imagination; therefore, it is hindered by not only imperfect creation, but also by imperfect expression. Secondary imagination dissolves, diffuses, dissipates order to recreate a new one.

To further subdivide the act of imagination, Coleridge introduces his concept of fancy. Fancy is the lowest form of imagination because it "has no other counters to play with but fixities and definite" . With fancy there is no creation involved; it is simply a reconfiguration of existing ideas. Rather than composing a completely original concept or description, the fanciful poet simply reorders concepts, putting them in a new and, possibly, fresh relationship to each other. Coleridge also writes that poetry "reveals itself in the balance or reconciliation of opposite or discordant qualities" . Through juxtaposition ideas, concepts, and descriptions are made clear. The more imaginative the juxtaposition is, the more exciting the poem becomes.

5.1. A teaching exercise about imagination

In many other papers of GA conference, I investigated about tools and aims of a GA process (see GA 2000,2005,2006). Here I want to show an experimented generative exercise made by me in a workshop at HK PolyU last summer. The aim was a generative students experience about imagination. I focused it on the concept of mirroring in the natural world. Starting from the famous allegory by Coleridge on Time, Real and Imaginary, a basic poetry of my investigation in generative process, I structured the exercise in this steps:

1. I selected by signing 8 words inside the text.

2. I defined a system connecting the character of the site, *the mountain head*; the aim of acting, *endless race*; the people, *a sister and a brother*; the female character, *reverted*; the acting, *behind*; the discovering of male character, *blind*; the indefinable result, *first*, or, *last*.

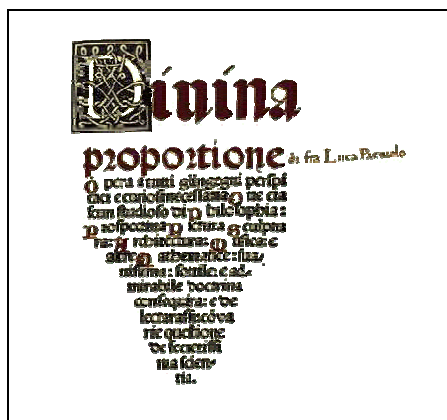
ON the wide level of a mountain's head
(I knew not where, but 'twas some faery place),
Their pinions, ostrich-like, for sails outspread,
Two lovely children run an endless race,
 A sister and a brother!
 This far outstripp'd the other;
Yet ever runs she with reverted face,
And looks and listens for the boy behind:
 For he, alas! is blind!
O'er rough and smooth with even step he pass'd,
And knows not whether he be first or last.

3. After this first crossing from the text to the description of the generated system, I asked students to remind in singular mood this performed site.

4. Going ahead in this knowledge process of discovering, I designed the structure of the Brunelleschi perspective, with a line of horizon, with a second ground line and a point a view, representing the sister behind, and another point for the brother, on the ground line. So I asked student a singular answer to my question: " Between sister and brother, who is real and who is imaginary?". The collective answer for addition (only 3 guys on 19 students) was the sister is imaginary. This is not my opinion.

5. So, I said, you selected the sister imaginary, but if I put a mirror inside the ground line, she imaginary becomes real in mirroring, so who is at last the winner? Good question. An answer: mirroring in reality, sister and brother are the two parts of a whole, that is our mind, in resonance with our heart,

5.2. Words for forms: generating *dynamic asymmetry*



“Vivo autem iam non ego” S. Paolo

The expanse in 3D space of the spiral is an helical line. The ordinary curve of life is an example of helical structure. The movement from the beginning to the end inside every process follows the line of the spiral from periphery to center. Egg crystallizes growing according to a spiral movement, of energy, of matter, of conscience. These words don't indicate not related realities, but coincided combinations of being. The movements and the macro order cycles in the universal continuum are not different from those that interact with the conscience continuum, but they are their mirrored image in us. Every circular movement translated in 4 dimension becomes spiral. Also the earth's orbit around the sun is a spiral of time, of which every year is different from precedent. On the spherical vortex *“the hidden”* is the point of the origin. (see C.Soddu *“Gencities and visionary worlds”* 2005 GA paper)

The same happens in a GA process. For performing an idea a good tool is to focus the character of the sound in our mind, how it is talking, with the *ondulante imprecisione* of an imaginary line. So we need to discover a friend port, where we can find a not linear DISTONIC system of similarity. *“...the question is that each writer creates his precedents. His opera modifies the our concept of the past, as it will modify the future” Borges, “Kafka y sus precursors”. Otras inquisiciones*

5.3. Plausibility of similarity , diversity in equality. To translate himself in another.

The imaginary time of art

In *“The garden of paths that fork”* in Finzioni Borges said *“In all the fiction works, each time that we are in front of different alternatives we decide for one and we take off the others; in that of the perhaps insoluble Ts'ui Pen it is decided, in simultaneous way for all.”*

This is a great example of a performing GA structure of our system totally open. We work in a imaginative campus of relations, following the boundaries, just described more than one century ago by Wordsworth. Chomsky grammar and syntax outlined in a deep semantic structure are strongly necessary for our investigation about a

generative process, but in the same time they are not enough for the reason that the results of complexity that we can gain with a G. A. process are very fast obsolete for the new requests just performed in the meantime. We work now in a aleatory system in generative process. The main request of Art is to give a possible answer to the unshaped questions of our time. Starting from Futurism Art time is Achille' time.

When we define an order following a possible idea inside a chaotic system, we are working in Generative Art. Conditions are to know how works a chaotic system and how our order is performing rules inside. An easy way to gain fast results is to use transformation rules. These can be organized in an open system as a set of algorithms able to generate not linearity in our process. A first result of this process is some (numbers are not significant for the reason that results are expressions of a performing quality, so the quantity is at least not significant) generated variations/results identified by our idea/hypothesis. Some considerations: 1. For gaining complexity we need to start from a precedent, able to configure our knowledge about or also only a real expression of our fascinating impression. This becomes our theme of investigation. Our idea of performing a generative process can start also in a very simple way, like a first embryo of explorations rules to organize.

6. Tools for order

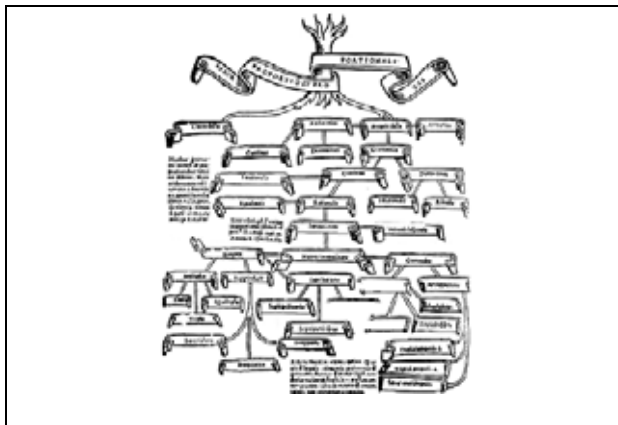
*"The gyres! The gyres! Old Rocky Face, look forth;
....and all things run*

On that unfashionable gyre again."

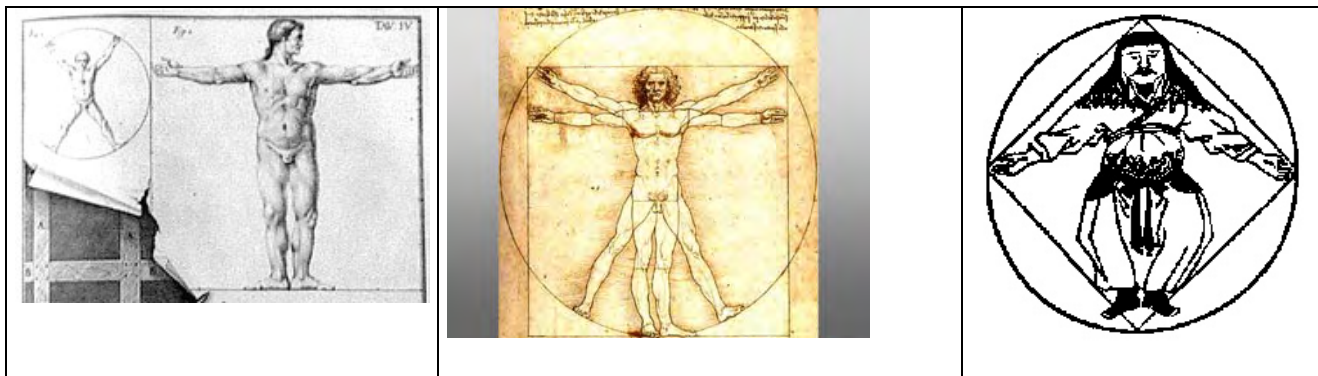
William B. Yeats, Last Poems, 1937

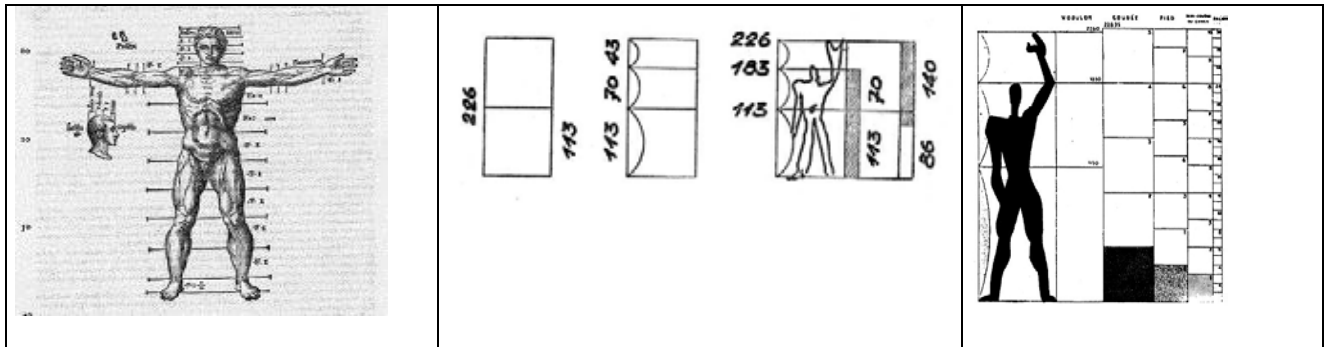
The concept of order and in species of mathematical order is on the base of our psycho physical conformation. Our interpretation of Nature is mainly mathematical: we express the rules that steer all phenomena, from those more closed to the other ones universal in mathematical terms. Wittwoker identifies in Athens the rising of a rational theory able of transforming mathematics in a theoretical science. Greeks were the first in defining a systematic mathematical interpretation of Nature. Pitagora discovered extraordinary numerical relations with music, both of ratio arithmetical relations and geometrical proportions. Ratio is a relation between two quantity, instead proportion is a ratio equality between two couple of quantity, that needs a medium. So there were generated 3 proportions: geometrical (1:2:4) that defines octave in music; arithmetical (2:3:4) octave performed in fifth and quarter; harmonic (6:8:12) the inverted of precedent, octave divided in quarter and fifth. Following the harmonic vision expressed by Plato in Timeo, Alberti in his "Ten books of Architecture" said "*Those same certain numbers, able to perform the voices concert as very appreciable, those are the same able to fill yet both eyes and soul in wandering pleasure*". Also the measures written by Palladio for the plan of Villa Thiene are proportioned following the harmonic series 12-18-36, that contains inside the ratio 1:2, 1:3, 2:3. The musical harmonic proportions were the fundamental theory for designing height, length, depth in Architecture. "The right measure" by Durer. The arithmetical proportions are all expressed in rational numbers, instead the geometrical proportions are, in a lot of cases, expressed in irrational numbers. In Renaissance the principle of measure was the main aesthetic aim. Leonardo worked a lot about proportions defining in a dynamic process relations between frames and whole between rational numbers, as 1:2 and 1:3. Different from this organic metric vision was the medieval pre delineated structure not connected with the generated

shapes of figure and of building. The opposite between Villard de Honnecourt and Leonardo was in the first the projection of a pre defined geometrical rule on his forms, in the second the abduction from natural ware of a metric rule, by using rational numbers and by applying the Vitruvio rational system for building. The tree structure Arbor proportio et proportionalitas performed by Luca Pacioli defines in a systematic picture the complex relations between proportion and proportional parts.



“Nissuna umana investigazione si pò dimandare vera scienza s'essa non passa per le matematiche dimostrazioni, e se tu dirai che le scienze, che principiano e finiscono nella mente, abbiano verità questo non si concede, ma si nega, per molte ragioni, e prima, che in tali discorsi mentali non accade esperienza, senza la quale nulla dà di sé certezza”Leonardo da Vinci (“No one human investigation is possible to call true science is it doesn’t walk through the mathematical demonstrations, and if you will affirm that sciences, that rise and finish in mind, belong to true, this is not admitted, but it is refused, for many reasons, and, first of all, that in such mental talks don’t happen experience, without which nothing generates of itself certainty”). Starting from XVIII century subjectivity performed the process of Art. The philosophical research about origins of Beauty and Sublime by Burke is theoretical emotional subjective vision of Art. Mathematical tools were lost. Survived crossing the new century the work of A. Zeising about The Golden Section, The Dynamic Symmetry by Hambidge and Le Modulor by Le Corusier. This was a very important tool used by architects after the second part of '900. But it represents only the arithmetic part of tradition. Also Chinese Vitruvio man is structured by geometrical devices. May be it was connected by Marco Polo in his incredible cultural interchange between China and Italy.





On the left, 2 drawings of proportions by Vitruvio, L'Uomo di Leonardo, Chinese man proportions, 2 drawings of arithmetic proportions for Le Modulor by Le Corbusier.

7. GA in Evolutionary Time process



GA marks the soft passage of our time from homo faber to homo creator, able to rediscover the broken historical line with the tradition, following a digital revolution and performing a deep innovation in Art. With the use of technological devices GA artists are rediscovering a poetical approach toward complex results. This is a new not linear process overcoming the dialectical position of Modern and Postmodern. The homo faber is strongly connected to a mass anonymous vision around man consumer of industrial products from the house to objects, all equal, built in series. This strong idea of industrialization performed the globalization time. In my impression one of most beautiful art expression of this industrial passage is the movie "Mon oncle" by J. Tati.

In modern the main focus seems to be the concept of time. For Le Curbusier, a very skilful watchmaker, time means only exactness, that it is possible to gain only by quantity measure of arithmetical systems. Le Modulor was the best tool for gaining an analytical detailed and optimized solution for the Modular City. In this way were lost harmonic and geometrical proportions, with the concept of imitation of nature. The dominant rule is abstract versus figurative. This conflict is in reality only an academic question. It is enough remember the incredible movies of the same time, that overcome the question, for the simple reason that in imitation of real life are the representation figurative of a poetic vision. The Lady from Shanghai by O. Welles, in the sequence of mirrors, is a deep example of an abstract figuration. Paul Klee said "The question is not to represent the visible, but the rendering visible". The concept of time in GA is continuum, following alive world. It is in the same time imaginary, connecting an interpretation of reality, following a visionary impression. May be also random, connected in running software to real representation of day time.

8. Precedents of the GA philosophical structure

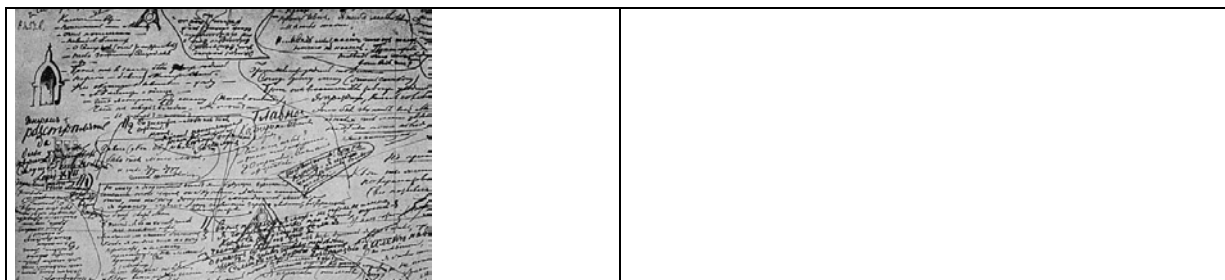
*What thou lovest well remains,
the rest is dross
What thou lov'st well shall not be reft from thee
What thou lov'st well is thy true heritage
Whose world, or mine or theirs
or is it of none?
First came the seen, then thus the palpable
Elysium, though it were in the halls of hell,
What thou lovest well is thy true heritage
What thou lov'st well shall not be reft from thee*

EZRA POUND, *PISAN CANTOS*, LXXXI

8. 1. A Dostoevskij note

I selected this notes by F.Dostoevskij as proof of his deep performing process in writing *The brothers Karamazoff*. In contrast Benjamin tales to us, in his book *Angelus Novus*, that Goethe putted into the fire all his performing material for writing *Elected affinities*.

Chaos for order. Chaos in order.



*First of all we need to see texts,
Things that are seen, don't forget anymore*

In Rome, at Piazza di Spagna, when Keats was ill and unable in writing and reading, he asked his friend Shelley to put closed to his bed more books, so he could see them.

8.2 In the depths of a figurative actions, Bacon, a metaphor of natural continuum

The great revolutionary people in Art had always studied deeply the tradition. Rembrandt, Picasso, Van Gogh designed again precedent painters following their own impression and performing a new personal imprinting. In the time of a rigorous abstractism, Bacon following Picasso designed Velasquez. The impression is totally coherent with the continuum of artworks, for the natural human exercise of rediscovering similarity. But the evident new is the depths of a metamorphic dynamic vision, as a nude body in the act of soul losing. A mute shot over the time. For more than ten years Bacon made deep intense variations of this painting theme. Bacon loved Valery book "*Introduction à la méthode de Léonard de Vinci.*" dedicated a "Les

vies imaginaires “ by Marcel Schwob. By denying the concept of progressive time of relating, Bacon affirmed ”*I want strongly do what Valery spoke: to give the sensation, without the bore of the its transmission*”.



The portrait of Pope Innocent X by Velasquez. 5 portraits by Bacon following Velasquez.

8.2. About our time

The color of our time are variations of gray in anonymous sites

We are conscious that as human beings we are going in a new page of our history. This is not a revolution, something connected to our social political organization. But it is something related to our hidden essence, our own peculiarity. The door of our mystery that was opened without any respect of our natural idiom is broken without any conscience. People of power works in the mirror of their vanity. Going ahead on the street of success and money, that you know is never enough. No time for responsibility. If sometimes panic is rising, take yellow and blue pill and every thing will be under control. The main diffuse problem for young generation is to have a good connection with power people. Of every type of power. More connections = more money. The spectrum is aloud spent, for vanishing.

*With usura hath no man a house of good stone
 each block cut smooth and well fitting
 that design might cover their face...
 Usura rusteth the chisel
 It rusteth the craft and the craftsman
 It gnaweth the thread in the loom
 None learneth to weave gold in her pattern;
 Azure hath a canker by usura; cramoisi is unbroidered
 Emerald findeth no Memling
 Ezra Pound*

8.3 Human gregarious character, collective codes

*Quando il velo cade/ when the veil shot down
 Siamo nudi, indifesi, senza scampo/We are nude,helpless, without any escape.
 Una vertigine separa l'insieme,/A vertigo divides the whole,
 Manifesta il possibile indefinito tra i capelli /It discloses the possibile undefined in the hair.*

Mirror neurons of human mind perform one of the most our topic character: gregarious. The concept that I should like to perform is represented by the hendiadys heretical gregarious. The literal significance of heretical derives from greek airesic-airesis that means scelta (choise), from the verb airew= I choose, I prefer, I approve of an opinion, I pass a political candidate. Forrest Gump is a Ga Artist! Our human gregarious ability can transform the actual global mass in collective respective people



Anonymous people meeting. Squared people in a photo by king Vidor1928. A photo of Olympic Games in Beijing 2008. A photo of Campesinos by Tina Modotti. People at an election meeting in Lucera, my small town in east south of Italia. Forrest Gump running with gregarious people.

8.4.The GA community

Over all the world now a lot of people are working using the generative design approach. In architecture C. Soddu, John Frazer, Robert J. Krawczyk, Paul Coates, Manuel Baez, Renato Saleri Lunazzi, Nicolas Reeves, Chris Ceccato, Antony Viscardi, Bauke de Vries, Aant Van der Zee, in mathematics Philip Van Loocke, Marie-Pascale Corcuff, Carla Farsi, in art Harold Cohen, Celestino Soddu and Hans Dehlinger are following an abstract/figurative vision, with Alain Lioret, Bogdan

Soban, Yoshiyuki Abe, KevinMcGuire, Justine Marshall. There is too the group of Evonet, Adrian Ward and his group eu-gene with the theoretical collaborations of Philippe Galanter, the theoretic study by Daniela Sirbu. In robotics Leonel Moura, Greg Hornby, Daniel Bisig and Tatsu Unemi, Thomas Fisher, in music John A. Biles, Gabriel Maldonado, Brigit Burke, John Eacott, Gordon Monro,... The list is long and open. These are only a brief list, there are a lot of people that are working deeply and with enthusiasm in GA. You can find more than 400 papers in www.generativeart.com.

Finishing: 3words: breath, mood, smell. A conscious breath of unstable mood in spring smell.

This paper is dedicated to all children. My wish is that also Somalia and USA will sign asap the international agreement for the respect of the children rights.

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