

Enrica Colabella	Imaginative constrains for generative chain
	<p>Abstract:</p> <p style="text-align: center;"><i>Quidquid recipitur ad modum recipientis recipitur</i> <i>Anything perceived is perceived according to the way of who perceives</i> <i>Aristotele / S.Agostino</i></p>  <p style="text-align: right;"><i>Giovanni Pascoli and Seamus Heaney</i></p> <p>The first words of “Human chain” by Seamus Heaney are: “After ‘L’Aquilone’ by Giovanni Pascoli (1855-1912)”. In this book Heaney dedicated to his granddaughter his last poem “<i>A Kite for Aibhín</i>”:</p> <p style="padding-left: 40px;">Air from another life and time and place, Pale blue heavenly air is supporting A white wing beating high against the breeze...</p> <p>Pascoli wrote::</p> <p style="padding-left: 40px;">un’aria d’altro luogo e d’altro mese e d’altra vita: un’aria celestina che regga molte bianche ali sospese...</p> <p>In art a creative process works performing imaginative constrains able to generate chain. But how constrains can generate chain? With imagination, crossing times and spaces and connecting extraneous distant elements in a new generative vision. The main tool is the performing of an interpretation on the significance, able to delineate a new double resonant measure as generative chain. As soon as the core of the new poem is structured as a rhythm in our mind, so we are able to follow the sound of our mother tongue generating a new poem in resonance with the precedent poem. This becomes as a catalyst able to generate a new imaginative chain. Following the concept of comprehensiveness delineated by Eliot we can discover imaginary constrains as connection from different times generating chain. Heaney:<i>Alphabets. Beowulf</i>; so... The same process happens in all fields of art. Piero della Francesca, <i>De Prospectiva pingendi</i>, <i>I Trionfi</i> where are connected pictures and words following the Roman epigraphs. Duality, Goethe <i>Poliritat</i>, 1805. The contemporary use of random and data base in Markov chain. Unfinished: Michelangelo, <i>Giants</i>, <i>Pietà Rondanini</i> M. Twain, <i>The Mysterious Stranger</i>; Dickens, <i>The Mystery of Edwin Drood</i></p>
<p>Topic: Generative Chain</p> <p>Author: Enrica Colabella</p> <p>Generative Design Lab, Politecnico di Milano University, Italy www.generativeadesig.com</p> <p>References:</p> <p>[1] Seamus Heaney “<i>Human Chain</i>” 2011 Faber&Faber</p> <p>[2]Giovanni Pascoli “<i>Tutte le Poesie</i>”, 2009, Newton&Compton</p> <p>[3] Piero della Francesca, De prospectiva pingendi, a cura di G. Nicco Fasola, Firenze 1942.</p>	
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Imaginative constraints for generative chain

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Starting point:

This paper talks about the first result gained on the generative design approach for art configurations. The structure of this research is performed in a dual/double sound, following the concept of *Polarität*, performed by Goethe [1]. The dual conjugation was in the structure of the Greek grammar. The dualism works in imitation of a natural code, performed in a double helical. *Image* to have a tetrahedron at whose basis we connect to each vertex the words: *imagination, thinking, memory* and on the top *intuition*. In a generative process we can cross from the significance from one word to another performing an helical double direction, one toward up, the other toward down. A great example of this process was designed by Leonardo at *Chambord* for the staircase of the castle. This is a building with a double helical staircase, where as in a theatrical space, if two people start in climbing each one walking on one different part of the staircase, suddenly each one disappears to the vision of the other one. This is deeply in imitation of an art process by connecting the invisible to visible. The same happens also in St. Patrick well in *Orvieto* by Sangallo. But in this case the second staircase is dedicated to animals for bringing water.

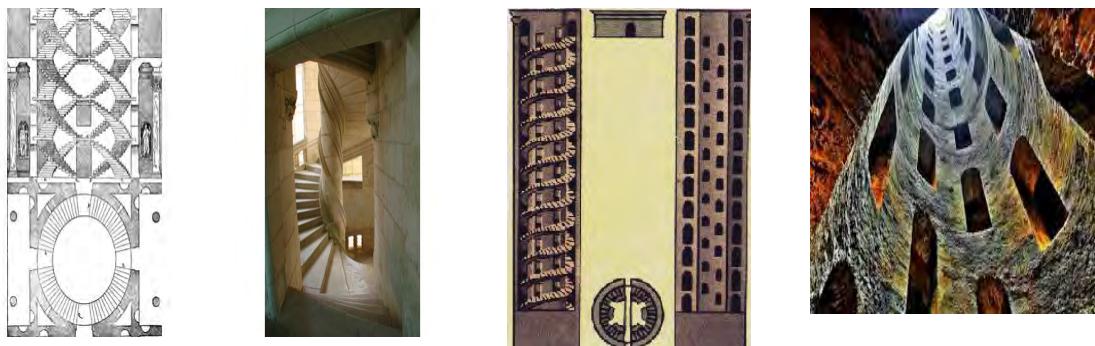


fig.1-2 Leonardo, Chambord castle – Fig. 3-4 Sangallo, St. Patrick well in Orvieto

So the direction is *double* managed by intuition in performing appearance and suddenly disappearance between thinking, memory and imagination.

This process is performed also following the sentence by Aristotele, pursued by S. Agostino too :

"Quidquid recipitur ad modum recipientis recipitur"

"Anything is perceived according to the way who perceives".

So the *intuition/perception* can manage these two structures that we can schematize

in: 1 . imaginative constraints - 2 . generative chain.

1- Imaginative constraints for generative chain



Homage to Giovanni Pascoli and Seamus Heaney

In his last book “Human Chain” [2] Seamus Heaney dedicated to his granddaughter his last poem ” A Kite for Aibhín” [3]. The first line of this poem is: “**After 'L'Aquilone' by Giovanni Pascoli (1855-1912)**”.

“...Air from another life and time and place,
Pale blue heavenly air is supporting
A white wing beating high against the breeze...”

Pascoli wrote:

“...un’aria d’altro luogo e d’altro mese
e d’altra vita: un’aria celestina
che regga molte bianche ali sospese...”

In art a creative process works performing imaginative constraints able to generate chain. But how constraints can generate chain? With imagination, crossing times and spaces and connecting extraneous distant elements in **a new generative vision**. The main tool is the performing of an interpretation on the significance, able to delineate **a new double resonant measure** as generative chain. As soon as the core of the new poem is structured as **a rhythm** in our mind, so we are able to follow the sound of **our mother tongue** generating a new poem in resonance with the precedent poem. This becomes as a **catalyst** able to perform a new generative chain. In his talk for the Nobel prize in 1995 “*Crediting Poetry*”, Heaney said: “As poet I am inclined toward the search of a rhythm, in the sense that my effort is to submit me to the stability conferred by an order of musically satisfying sounds”

Heaney defined his poem ” A Kite for Aibhín”:

“A nice poem in the art of flying a kite. I remember that special activity on a clear blue day and not so windy. Still the calm is disturbed by an unforeseen gust of wind that causes the kite to spiral upward and flutter down to get lodged in a tree. Unable to dislodge the kite the string is cut and the kite is rising to heights unknown”

Human chain is written in groups of 3 verses, **terzine** not rhymed, but still connected by assonances and rhythms in a meta-structure of metrics as an imaginative constraint [4].

Heaney said: "For a poet the poetry is a way of putting himself in the world. My origins have been important because the emotional power transfers itself in the language and to me the world is always introduced in the form of **memory**. The artifice, the secret is in making it **to resurface** from the fund of the river".

Heaney rediscovers in Pascoli a breath of his own language. In his mind resounds the common voices of English poets as "*Imaginist*". Pound defined this word and described his activity for poets as an effort "to keep alive a certain group of advancing poets, to set the arts in their rightful place as a acknowledged guide and lamp of civilization". In Heaney mind resounds the Pascoli voice as **the direct talk**, in Pound definition. The *direct talk* we can discover especially in Heneay translation of the ending verses of *L'ultima passeggiata* and of *Myricae* for: "**a momentary feeling of a conscience aperture toward a rebirth sense of time and place**", "a steering" toward "an unexpected conclusion. " But above all Heaney rendered Pascoli English with his translation of his some poems. A translation intimately lived: "**I have assumed the voice of another poet, I have spoken for intermediate person**".

Heaney talks in an interview about a meeting been randomly born, at Urbino in 2001, with the verses of *The kite* recited by Gabriella Morisco, "first to reveal the name of Pascoli known to me". He hears **an affinity**: "also I had written a poetry in which a kite appeared, located in a field of the rural Ulster", a family picture with his brothers, a Sunday in the years '40, with his father that launches "*in the air of the county of Derry a great kite manufactured in the house*": "*A Kite for Michael and Christopher*". A poetry "..... with the awareness that we have to be ready to run into the suffering in our life."

The kite strikes Heaney. He asks a literal translation to Morisco"....and while I was trying to render it in verses and I entered into the takings with the third rhyme, I have gradually entered in a family world, because the landscape remembered me a lot of the home ground of my same infancy", so "my composition was born from a depth personal involvement."

Morisco and Tony Oldcorn translate other poems for him, from *La cavallina storna* to *Digitale purpurea*. Heaney studies the biography and the work of Pascoli, fascinated from "a persistent emotional tangle that confers in a big part of what he has written a surplus of urgency and an underground energy", avoiding "the abstractness" and privileging "**the things**".

Oldcorn asked in an interview Heaney if it was easy for him to translate Pascoli. He answered that: "Among all, I have found easy to translate "*La cavallina storna*", beloved for the content and for the verses"..... "they have a quality "enchanting.... the obsessive charm of a popular ballad" and "a sense of fatality and inevitability..... But it is always not easy to translate Pascoli."

"Do you believe to have made justice to the original texts? ", Oldcorn asks him, in a conversation. "It depends. I don't believe to have made justice to *Digitale purpurea*, because it is difficult to translate in terzine dantesche. Neither to *Gelsomino notturno*, for the difficulty to translate the 800 melodious Italian language in the thin modern English. In others, especially in *L'ultima passeggiata*, it seems me of yes because I have rendered the tone pascoliano with my tone. With the long poems as *La cavallina storna*, has helped me the fact that they imitate the popular poetry, that is the classical form of the Irish ballad."

These are the verses of *La cavallina storna*, that ends in this way:

*The horses now no longer munched their feed.
They slept and dreamt the whiteness of the road.
They didn't stomp the straw with heavy hooves.
They slept and dreamt of turning wheels in grooves.
In that deep silence my mother raised a finger.
She spoke a name... A great neigh rang in answer.*

Pascoli wrote:

*Ora, i cavalli non frangean la biada:
dormian sognando il bianco della strada.
La paglia non battean con l'unghie vuote:
dormian sognando il rullo delle ruote.*

*Mia madre alzò nel gran silenzio un dito:
disse un nome... Sonò alto un nitrito.*

It is repeated in the experience of Heaney translation with Pascoli the involvement among distant elements read on his friend table, his own table of job and peace.

2- Performing aims as characters

In a **generative art process** the main procedure is to identify a performing aim as a character. This character is able to delineate an unstable system between imaginary and real constraints. This moment is the starting up of an imaginary configuration as a possible iter of the process. As in real world we have more than one possibility in going ahead toward our aim for gaining the expression of our just default character. We have to put on our imaginative table the possibility that our memory for an association process is performing like the embryo of a possible configuration. In this moment we must choose and we have to configure the possibilities as categories. That means to fix the resonant evocations as a system with hierarchy. [5]

In poetry, it is not relevant the objective significant, the number of words and the punctuation of the first model of imitation.

"I need of something that arouses or stimulates again a **memory for the inspiration** - said Heaney, guest in Rome at the American Academy - but my images inventory of my infancy is very far from my life as adult".

May be, it is my interpretation, that Heaney attraction toward Pascoli poems was also generate following Pascoli imaginative sounds. In fact Pascoli is considered the most important *onomatopoeic* Italian poet. So in the translation of the sound from Italian to English the figurative words were a kind good help for *generative* chain.

The Pascoli poems are in the Heaney experience like a **constraint** able to generate an imaginative imitation at all original by following **significance and sound** as a natural code chain.

Imaginative constraints are able to delineate a process by discovering our own *codeness* as a paradigm of organization of our own ability in giving answers in art procedures. This is an open endless system. More we discover *connections and*

distances, more we are able to delineate the complexity to gain. **Sound after sounds.**

3- “Comprehensiveness”

Following the concept of **comprehensiveness** delineated by Eliot we can discover imaginary constraints as connection from different times generating chain.

“Every author that embodies such characteristics and is able to maintain a sort of equilibrium between tradition and personal expression, and, above all, each work that expresses in complex way the thematic and the feelings of each own epoch (that possesses, that is, “comprehensiveness”) and that is remarkable in the same way in all the literatures, these could be defined classical”.

Words by Seamus Heaney in “The meeting with the classical Greek and Latin”.

And more in 'Alphabets' Heaney is found again as a child, reserved to associate the form of the letters of the Greek alphabet to the familiar objects of his rural world.

4- The point of view: Piero della Francesca [6], "I Trionfi" when imaginative constraints meet generative chain

“Quelli che s’innamorano della pratica senza scienza sono come quei nocchieri che entrano in naviglio senza timone e senza bussola, che mai hanno certezza di dove si vadano. Sempre la pratica deve essere edificata sopra la buona teoria, della quale la prospettiva è guida e porta, “e senza questa nulla si va bene”

Leonardo da Vinci, Trattato della Pittura

“Those that fall in love themselves with some practice without science are as those helmsmen that enter shipping without rudder and without compass, so they ever have certainty of where are going. Always the practice must be built on the good theory, of which the perspective is guide and door, “and without this nothing is going right”

Leonardo da Vinci, Tractatus de Pictura



The two painted scenes are the *recto* of the portraits of Federico da Montefeltro and of his wife Battista Sforza.

At the first scene we see the Angel crown the commander Federico.

The four figures sat on the wagon represent:

the Justice, the Prudence, the Fortitude and the Temperance.

The inscription of the parapet in low is a Latin writing as on the base of the Roman epigraphs, that wants to exalt the glory of the Duke:

"It is brought in famous triumph that illustrious that the perennial fame of his virtues worthily celebrates as bearer of scepter equal to the greatest commanders."

In the second scene the Duchess sits on the wagon, hauled by unicorns as sign of chastity, while she is reading a book of prayers.

The two figures close to her, are the Chastity and the Temperance, while the others two represent the Charity and the Faith.

Always in Latin, the writing celebrates her fame:

"Who that maintained the moderation in the favorable circumstances flies on all the mouths of men being she decorated with the praise for the deeds of her great husband."

The sentence is perhaps conjugated to the past for the fact of the death of Battista after the delivery, at 26 aged.

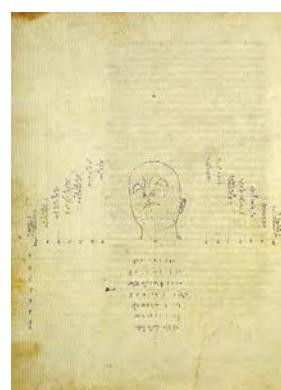
In this case, the writings have a commemorative value, for the reason that they want to exalt the qualities of *the two characters*.

They take back the tradition of the ancient Latin writings (epigraphs).

The words accompany therefore **the figurative text, but to the border**.

This 2 painters are a dual mirrored vision connected by an *unicum ad continuum* landscape. This is an incredible polarity representation, following imaginative constraints, that are painted as an Angel, figures, horses etc. The landscape is the generative chain, working *in an unicum ad continuum* in the 2 pictures.

Piero was the father of all artists from Renaissance until our days for generative artists. He was obsessed from his first age from *numbering*. Piero wrote *De prospectiva pingendi*, and aged, totally blind, he decided to dictate all his knowledge, as his last testament, to Luca Pacioli. But broking apparently *the chain* (truth is always winner) Pacioli decided to became a monk (they preserved all the ancient oral tradition about numbering) and to publish with his name *De Divina Proportione*, basic tool for the whole opera by Leonardo from *Codices to Gioconda* [7].



Orthographic projection of a tilted head (left), from Piero della Francesca's *De Prospectiva Pingendi*, Book 3, folio 76v:
Seen beside detail from 'Resurrection' circa 1460, by Piero della Francesca, Fresco, Museo Civico, Sansepolcro

Try to image yourself swimming in a calm sea of imagination. Your pleasure is in connecting several distant moments of your life full of soft odors and melodic sounds. Suddenly the weather changes. The wind become cold and strong, dissipating all your soft sweet remembering. In a just fast moment you became conscious of the distance for coming back to the sea edge. And as a lamp of a sudden storm, your legs become heavy and painful. It's panic. Fast, too fast for your conditions, you try to swim for coming back. As a river without bank, vain words are following down from your mouth. You leave your face in the cold water for darkening the panic and the pain of the body toward your mind. You are alone in the sea full of coldness and of darkness. Tears. A screeching of gull calls you back toward the light. Lightnings of light. In front of you, on the horizon toward the edge, there is a boat and a man, a back friendly, familiar. You feel yourself to be called strongly by name. *Your father's voice*. He turns toward your direction, his face: he is your father: his hand extend toward you, he picks up you with tenderness, he covers you and he embraces you as in your childhood. Suddenly it is produced a natural chain of blood and love.

"A song with art in jubilation"

So far from the global broken song of our waste land. But you can smile and look to the sky, *still today*. That's all.

5- Performing an idea

When we perform an idea in the design of a generative art process we image an indefinite space in which we are defining the boundary. For activating this operative moment we can use words, geometries, algorithms, etc, in completely interchanging. Once we trace an embryo of limits for translating the abstract vision in a performing logical configuration, immediately we discover that our boundary constraints get an unlimited new near borders invisible from our mind until the new discovering.

So the fist site became the memory of our next discovering and so on.

This process between **memory and new discovering** we can call a generative chain process, able to work for connecting singularity to complexity as natural world. In the case that our imagination is down and we are not able to perform any *idea /hypothesis* as staring up of our generative art process, another way of working is to use a *catalyst* as detonator of the process able to connect difference generating new assets. This is a very creative moment of *abduction (Pierce)*. For great poets this invisible tool was able to configure their own time in their opera following the tradition of their culture, as a generative chain. As already said, Eliot called this process "*comprehensiveness*".

Main condition for a poet and for all artists is to hear their art tradition voices, as chorus line of their singular voice. Especially if they are innovators. Tradition toward innovation.

There are a lot of people working in art in our time that use the definition of generative art for referring to processes that refer to Markov chain [8]. The structure of these processes is to predefine a set with algorithms of definitions of chance and not transformations in a memory process. By running in computers the program is able in performing randomly the sequence of the results by working directly on a prefixed database without any structure/paradigm of organization. We know that the

random is only configured for the numbering of the list of the results, being each result memory less. As Markov docet. In reality we know that each definition of change in the set configured is in solitude (we are alone when we are memory less) and it attends only its turn in the running process without any rules of harmony and symmetry following the Renaissance tradition. This because it is performed in an analytic way, in a very distant way (Markov defines his chains in 1906) from the complexity gained in our times in a lot of disciplines, *in mathematics and especially in logics, i.e. morphology, topology, fractals, hypothesis ad continuum, etc.*

6- Beowulf- Precedents and imaginary constraints: “So”

A poet is born into allegiances to particular areas of places and people, which he loves, sometimes against his will. But then he also happens to belong to an increasingly accessible world.
James J. Montague

Heaney achieved no small measure of literary stardom with his translation of the Old English epic **Beowulf**. The poem begins as ambiguously as some great modernist works end: **So**. This is as "an audacious swing at *in medias res*". The epic tradition of beginning a tale in the middle of an action. Heaney's so is a hard invocation to a reader; it begins the poem almost as though it were in the story core.

Heaney's translation took a widely under-read story and made it accessible again. The thousand-year-old saga appeared on many best-seller lists, on countless assigned reading curricula, and could be seen just as easily on public transport as **in a classroom**. It tells the story of a Beowulf, the future king who is called on by a neighboring ruler for help when a monster terrorizes his domain.

Heaney's translation has been so successful perhaps because, more than anything else, it reminds readers that literature does not necessarily exist in a vacuum, and is not **for few readers**. A poem survives 1000 years not by being unreadable, but maybe instead by finding an opportunity to present itself again every so often before a new audience. Perhaps **the art of translation** comes in proving that works of literature are not plastic, and there are translations that have been able to do this much, and **resuscitate a text altogether**. [9]

7- Ending: *unfinished*

The list of *unfinished artworks* by great poets, painters, artists in several fields is really open. Always we discover a new one. Michelangelo, *Giants*, *Pietà Rondanini*; M. Twain, *The Mysterious Stranger*; Dickens, *The Mystery of Edwin Drood*; Guido Reni, Turner, Camille Claudel and so on. There are a lot of different interpretation on the real deep motivation about this impressive act of paralysis in ending. But the most part of them is defined following an analytical vision. It might be that the significance was lived pure, in an embryo configuration, for reminding the infancy voices on the evidence of the not perfectible skin or page, as a mirroring of the human precariousness as unveiled ash. That is really more impressive, at all. An evident hidden will of *some imaginative constraints for generative chain*.

8- Giovanni Pascoli, “Il fanciullino” [10]

In verità la poesia è tal maraviglia che se voi fate ora una vera poesia, ella sarà della stessa qualità che una vera poesia di quattromila anni orsono. Come mai? Così: l'uomo impara a parlare tanto diverso o tanto meglio, di anno in anno, di secolo in secolo, di millennio in millennio; ma comincia con far gli stessi vagiti e guaiti in tutti i

tempi e luoghi. La sostanza psichica è uguale nei fanciulli di tutti i popoli. Un fanciullo è fanciullo allo stesso modo da per tutto. E quindi, né c'è poesia arcadica, romantica, classica, né poesia italiana, greca, sanscrita; ma poesia soltanto, soltanto poesia, e...non poesia....Eccola in due parole. Un poeta emette un dolce canto. Per un secolo, o giù di lì, mille altri lo ripetono fioretandolo e guastandolo; finché viene a noia. E allora un altro poeta fa risonare un altro bel canto. E per un secolo, o più o meno, mille altri ci fanno su *le loro variazioni*.

In truth, poetry is such a magnificence that if you now make a true poetry, it will be with the same quality of a true poetry of four thousand years ago. How does it happen? in this way: man learns to talk in so much different or so much better way, by year in year, by century in century, by millennium in millennium; but he starts with making the same wails and yelps in every times and places. The psychic substance is equal in the little boys of all the people. And therefore, there is not poetry arcadic, romantic, classical, neither Italian, Greek , Sanskritic poetry; but poetry only, only poetry, and... not poetry..... here it is in two words. A poet expresses a sweet song. For one century, or down of there, thousand others repeat it flowering and spoiling it; until it comes to boredom. And then another poet makes to re-sing another beautiful song. And for one century, or more or less, thousand others do on it *their variations*.

8-1 An ending consideration

In a generative art process, after this investigation, we can affirm that the main condition for a *chain* for being defined *generative* is to be dual/**double**, in one direction and in a double verse.

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