



Fractal Flowers: a finished containing the infinity Cemren Altan, 2009

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Great works of art communicate simultaneously on four levels: sensory, emotional, mental and spiritual. It is this synchronicity of body, heart and mind that helps define our complex reactions to art, as well as to the everyday world.

Bruce Wands, 2006.

AN AESTHETIC OF LIGHT AND NUMERIC ART

Creations in collaboration with high-level scientists, researchers, programmers and artists (architects, musicians, designers, urban designers etc...) has shaped the artistic path of Miguel Chevalier for over 25 years. His research constitutes itself through the hybridization of the knowledge and skills of different partners in the conception of a project, he, himself making use of his versatile education at École Nationale Supérieure des Beaux-Arts (Section of Painting), and l'École Nationale Supérieure des Arts Décoratifs (Section of Industrial Design).

Our relation to the world constitutes the main axis of his artistic argument, in the double sense: by referring to our experience in this society of the XXIst century in all its dimensions; and by experiencing the art itself, as a specific dimension of our epoch. In other words, he is interested in reality through its social, cultural, economic, plastic and technological aspects, as well as their juxtaposition and their internal dialogue. His artwork software which has been constructed by calculations, complex mathematical models, translates these systems into a very simple and accessible manner; they establish a direct and immediate dialogue with the spectator (inter-actor), who thus becomes active in the production of meaning and is the conductor of the creative process.

Miguel's work pursues a constant dialogue with the history of art and some artists, perpetuating and transforming vocabulary, in order to explore unknown fields. While analyzing the artworks of the 1960's, notably those of Roy Lichtenstein, Pop artist, or the Nouveaux Réalistes (New Realists) as Alain Jacquet, who were interested in enlarging the points stemming from the offset frame, Miguel proposes a new type of frame characteristic of the numeric image called pixels, this-"DNA" of data processing which allows him to develop a full-fledged script. His references are neither a mimetic nor a linear logic, but instead a virtual logic, non-linear, of a non-Euclidian geometry, breaking with the notions of Cartesian space, linear time and space.

According to Anne Sauvageot, the evolution of the perceptive and cognitive patterns contributes in setting up a new visual order with the arrival of the digital technology. If artists from the Renaissance period contributed, by inventing the rules of perspective to the rationalization of our vision of the western world, digital images and algorithms that have become sensitive forms, are markers of a domination of calculation over language. They allow us to see spatial and visual combinations and oblige our eyes to leave the objectifying distance of the perspective to become an exploratory "topo-dynamic".

The exhibition *Fractal Flowers* is based on the life cycles, and uses an analogy to the cycles of nature. Others of his previous artworks, such as *Les Sur-Natures*, have been founded on a similar approach. Created in 2000, *Les Sur-Natures* are composed of eighteen varieties of virtual seeds that generate plants, which are formed from stems, leaves and flowers. This herbarium allows Miguel to create different gardens that constitute a display of lights and colors. The re-interpretation of the nature in its 'ideal state', without odors or bacteria, is visually communicated, in a perpetual generative renewal. Rather simplified, light and fragile shapes wave mildly, as if they were endowed with such a natural strength of a wind that rises in response to our movements and constructs a poetic and meditative sensation. The experience acquired by the imaginary *Sur-Natures* flowers continues and multiplies with the *Fractal Flowers* (2008/2009) which give birth to figures of flowers on axial stems, that remain 'deeply rooted' by a gravitational stability; these shapes in constant mutation evolving around the boundaries of the plant, the mineral or even the animal nature. Their structure in strata is composed of multiple openings and geometric juxtapositions, which intensify their complexity during their whole evolution. Using the process of auto-generation, they are individualized and almost personified; according to a certain number of growth parameters; they possess a 'life' for the programmed length of time, based on the cycles of nature. While doing that, they project an image, the finite containing the infinite. Hybridized algorithms (not only fractals but also turning to other elements, composed from items in a library of forms), are translated, in this sense, into a real aesthetic experience. In his own way, Miguel transposes in his *Fractal Flowers*, Cézanne's questioning of the organization of space and making it geometrical; when Cézanne arrived at the summit of his artistic production, he said that he especially tried to restore the founding structure of the world. Indeed, one of the aspects often underlined in Cézanne's process was that he endeavored to release through the represented objects, elementary shapes like spheres, the cubes and the cylinders, thus leading the way to cubism that would radicalize this reflection on space. In *Fractal Flowers*, however, the reference of the starting point is not mimesis: while dialoguing with nature, Miguel exploits the evolution of basic geometrical shapes, as well as colors in order to experiment the universe of the virtual. From that point onwards, his work has essentially been based on 'sculpturality' and the 'pictoriality' through an atmosphere of very vivid colors thanks to the current evolution of the video-projectors and plasma screens. The ultimate horizon of such research is the perception and interconnection between the images and the visitor's moving body, in the logic of interactivity addressing itself simultaneously to the intellect, to emotions and to pure sensitivity.

Alice in Wonderland is about a 'young' girl who is driven by both logic and fantasy and who is always too big or too small in her relation to space. The character's creator, Lewis Carroll, who had a paradoxical and 'beyond-norm' mind, translated mathematical knowledge into writing or even into psychology, behind the appearances of fairy tale characters developing in a marvelous universe. And what if Alice were a flower? And if we were in the world, which was a "numeric wonderland", circulating in impossible situations, but with a feeling of comfort, rather than a feeling of not being able to adapt? Because these 'flowers' which proliferate 'under the light of numeric photosynthesis', through the gracefulness and transparency of their metamorphoses, integrate us delicately into their universe while moving all around us, echoing our presence, while revealing to us their different facets. Our vision fluctuates between two and three dimensions, when the flowers bend toward us with a skilled

and soft 'reverence' that their huge size surprises us even more. During this confrontation, we are urged to move because they react to our movement. The relationship to the image is therefore via the act of motion. The work refers to the spectator or actor and his/her own movements. However, from there, the process put into place by the artist pursues an autonomous movement which is dependent on to the reflected image of the inter-actor: by its generative structure when there is no movement or an individual visitor, the evolution of this imaginary garden perpetuates, similar to the image of a collective life.

Since its creation in June 2008, Miguel's *Fractal Flowers*, like his *Les Sur-Natures*, has been organized into various installations, inside or outside spaces, on an urban scale. Varying according to the place of exhibition, the distance of the projection and the moment of the cycle of the plants' growth, their size goes beyond the limits of the screen or the space of the projection, before disappearing into the atmosphere or space. During the exhibition of this artwork, the artist experiments with the effects that the images have on different media, by projecting images, for example, onto architectural elements, furniture, sculptures, etc. Each of his models modifies the normal relation one has to these structures and it redefines its own appearance and our relation in this 'new presence'...

Among the examples of the exhibitions of *Fractal Flowers*, which integrate it into public space, one especially remembers *Fractal-Flowers in Vitro* (2008) at a place where it is projected on the place/ architecture of the Town Hall in the fourth arrondissement of Paris. It provides a re-reading of the meeting between nature and architecture through an emblematic space: the greenhouse. During an interview, Miguel explains that, as with computers, greenhouses are spaces of light. This convergence motivated him to work on the botanical greenhouses, as architecture of light. A greenhouse is an artificial space, associating two opposite systems. On the one hand, it is a classical system because of the metallic structure of the greenhouse with a constructed environment, which is rational, symmetrical and functional. On the other hand, it is a baroque system (in the general sense) due to the plant and organic elements, where the unpredictable character of the tree trunks and leaves evoke a chaotic universe. The work re-actualizes the theme of the greenhouse, as the projection space of his last 'architected' flowers, which were originating from his series of virtual gardens. Today, debates on genetically modified organisms, artificial spaces and our relation to the world of plants with a better mastery of nature and a better life with the nature, give a singular sense to this work that questions the artificiality by the means of aesthetics.

Fractal Flowers can also be found within other urban spaces. For example, they have been on permanent display since 2008 on the embankment walls of the Cheonggyecheonno River in Seoul, South Korea, where these flowers become 'night-water lilies', inviting passersby to enter the universe that these lilies construct, covering the stone wall with a 'skin' of pixels. *Fractal Flowers* were also carried in 2008 to an architectural scale on the facade of the church of Enghien Les Bains in France, where the colors in moving geometrical forms respond to the gestures of passersby thanks to infrared sensors, creating a strong dialogue within the urban space, redefined by this multicolored envelope and the presence of individual and collective bodies.

In parallel, in the interior space of the Suzanne Tarasiève Gallery in Paris (2008), as in the Imal Art Center in Brussels (2009), the flowers can find on-going 'life' while benefitting from a semi obscurity and in this way, they establish an intimate relation with their inter-actor. The diversity of the places (where Miguel performs an *in situ* work each time) defy the challenge of trans-contextuality: his artworks travel all over the world, constantly meeting new receptors/inter-actors and in this way, his creation becomes richer with every new meeting: new places, a new public...

According to Mario Costa, the aesthetics of communication is founded on the idea of an event. It is not a mobilization of "concepts" but, above all, a whole mobilization of energy consisting of an indiscernible combination of vital energy (mental, muscular, emotional and organic) and of artificial energy (electricity, electronics, the energy of machines). Miguel's

creations provide us with examples of exploring these "energies", their oppositions or their complementarities (nature and artifices, fluxes and networks, components of the numerical art as materials, etc.) and while trying to use and impose virtual aesthetics for creative ends, he not only creates art for the present but also art of the future.

B.Wands, *Art of the Digital Age*, Thames&Hudson, N.Y., 2006.

The word "Pixel" designates the smallest homogeneous constituent surface of a recorded picture, defined by the measurements of the sampling stitch. *Pix* (-graphic variant of "pics", usual abbreviation for *pictures*, "images" movies, plural of picture, picture, image (painting) and of *-el*, of el-ement, as in French " *element*." Therefore, the word means " *picture elements*". In computer language, it received the approval of the French Official Journal on December 11, 1980. *Historical Dictionary of the French Language*, under the supervision of Alain Ray, The Robert, volume 2, 2006. Officially, in France, the word has only just been recognized at this date. The 1980's also marks the beginning of Miguel's career.

Anne Sauvageot, *From Digital Images to Virtual Reality: the Adventure of Seeing*, Academic Presses of Rennes, 1997.

Miguel Chevalier, interview with Monique Sicard, 'The Race to Machines', in *Chercheurs ou artistes?*, coll. Mutations, n° 158, ed. Autrement, Paris, 1995.

Mario Costa, *Principles of "Aesthetic of Communication"*, 1986, translation in French by A. P. Pioggiosi, in *Connections, Art, Networks, Media*, Texts collected and presented by A. Bureau and N. Magnan, ENSBA, Paris, 2002.