

Nanoart: First Steps Beyond the Columns of Hercules

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ABSTRACT

As in the last century, with all the “-isms” and other nouns and adjectives with which various artistic movements were described, both contemporaneously by the participants, and later by historians and critics, the term *Nanoart* signifies, in its iconic essence, a new way of “making art”. Nanoart is a creative, aesthetic process, which makes use, in its research and its realisation, of nanotechnology. Nanoart can be compared to a journey Beyond the Pillars of Hercules, to a far-away universe going beyond the limits of our world, where everything is already known, classified and photographed. Artists like Giuliana Cunéaz, Loris Gréaud, Mikael Metthey, Alessandro Scali & Robin Goode, Grit Ruhland, Paul Thomas, Victoria Vesna, Chris Wobken, James King and Michael Burton create a debate around our state of being contemporary. Nanotechnology strongly introduces the notion of Art 2.0. Artworks are the result of a collective creation process that implies synergies between scientist, artist and public. Nanotechnology transforms the imaginary of our bodies from crippled to mutant and modifies our point of view. Imagination prevails over image, desires are already memories.

KEYWORDS

Nanoart, Art 2.0, Imagination, Infinity, Body.

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The first artwork created in 2006 by Alessandro Scali (Turin, Italy, 1972) & Robin Goode (Cape Town, South Africa, 1978) was a nanosculpture titled *Beyond the Columns of Hercules*. It was created by the collaboration of the Polytechnic of Turin Physics Department. The artwork is not directly perceptible by the human eye but it needs both a microscope and imagination to be seen. Looking through microscope lenses, we see footmarks in black-surrounded environment. There is something of mysterious and uncertain: we do not know where those steps begin and where they finish, who makes them, when and why some footmarks are smaller than others. More over we also do not know why footsteps don't draw a linear walking but they are so confused. Exactly like Nanoart the artwork is only a rough sketch, and further developments are coming.

In the same year Loris Gréaud (Eaubonne, French, 1979) at London Frieze Art Fair presented the show *Why is a Raven Like a Writing Desk (FIGURE 2)*. It consists of a series of nanosculptures realized together with the French National Centre of Scientific Research. The title refers to an unresolved riddle from the book *Alice in Wonderland* by Lewis Carroll. Quoting the artist: “This was a show where believing is more important than seeing”. In 2007 Grit Ruhland (Gera, Germany, 1979) created with the collaboration of the Technische Universität Dresden, another nanosculpture titled *Slipper for slipper animalcules (FIGURE 3)*. Grit Ruhland follows a different path: the nanoworld, like all possible worlds, potentially already contains its paradoxes and provocations. The artist should bring them to light.

So those artists begin a profitable research on the concept of infinitely small space 30 years after the short

documentary film *Powers of Ten* written and directed in 1977 by Ray and Charles Eames and 40 years after the science fiction film *Fantastic Voyage*.

The infinitely small leads us to another theme: the relationship between the visible and what escapes the control and the dominance of the eyes. The sight in Europe and West societies has a privileged position compared to the other senses, either as an instrument of knowledge or as a way of interpreting meaning. However at the end of 20th Century the sight supremacy has been questioned. The cinema has been the first medium to bring out clearly the deficiencies of vision, reflecting upon the sequence of images shot sequentially many times per second and putting together artificially to mime action. I am thinking of a film like Zemekis' *Contact* (1997), where the camera, substituting for the eye, is incapable of offering a different world from our own; or of the famous opening of Bunuel's surrealist film *Un Chien Andalou* (1929), where the eyeball is cut open, as if it warn us that it is with other senses, or rather with other faculties, that we must deal with vision. I am also thinking of the more recent Christopher Nolan film *The Prestige* (2006), where sight produces illusions which merge with the imagination. Nowadays, through television, computers etc. we have got the creation of digital images, whose basic characteristic is that they can be altered in real time: we can change their form and content through a simple act of human intervention.

The artworks of Alessandro Scali & Robin Goode, Loris Gréaud and Grit Ruhland go a step further: they remove the direct view of the image, and cancel the acquired superiority of sight. This is both a paradox and a provocation, as in every revolutionary artistic movement. The paradox, of course, is that for a visual art we are offered a "nonvision". With nanotechnology the work is inscribed on a silicon wafer, but even with the help of a microscope, which is essentially a substitute for the eye, it cannot be seen completely, but it is only suggested. And here lies the radical nature of the idea: the spectator is expected to contribute personally to the creation of the work. With the help of a title, to establish a context, he finally has to use his "interior eye" and to reawake his imagination, hitherto blocked and handicapped by so many, too many invasive external images.

In the course of the XX century, however, we must admit that this need is becoming more and more a desperate urge to see everything. Literally speaking, it is the loss of hope that the invisible will continue to keep us company. As if we were dealing with one of the natural resources of which we will be hopelessly deprived because of unceasing exploitation; as if the invisible was really the opposite of the visible, and the increase of one could not correspond to the diminution of the other; also as if the invisible was not a promises of other things to see, which the visible itself always holds.

Moving forward the juxtaposition of visible and invisible, we find artists like Victoria Vesna (Washington D.C., U.S.A., 1959). In 2007, with the collaboration of James Gimzewski she realized *Blue Morph* (**FIGURE 4**). The project changes our way of relating to silence and makes the in-audible audible. Blue Morph is an interactive installation that uses nanoscale images and sounds derived from the metamorphosis of a caterpillar into a butterfly and it is strictly connected with the John Cage artistic research. Like his 1952 composition *4'33"*, we discover that there is no such thing as silence. Something is always happening that makes a sound and inside the silence we can discover worlds of rumor.

We have seen how those artists work together both with scientists and research centers in order to create their artworks. While in contemporary art the outsourcing is a common practice where artists detain all the "creative power" and collaborators are merely executors, with nanotechnology artists establish a collective creation process. Loris Gréaud affirms: "The process is much more important than the result – the intermediate process is always the most exciting, and resolution is always deceptive". This assumption, together with nanosculptures' innate ability to stimulate the imagination, creates a cooperative art, an art 2.0.

Bodies and their epitaphs. Another key point is the creation of a context where the human body loses its human nature. In less than one century art passed from the representation of crippled body to mutant body. In the German painting, especially through the Dadaism artists Otto Dix, George Grosz and Rudolf Schlichter, (**FIGURE 5**) soon after the first world war represented a wide repertory of prostheses – crutches, wheelchairs and so on – documenting the crippled and the "collage body", the Nanoartists document the mutant Body. For example the Michael Burton *Nanotopia* (**FIGURE 6**) refers how people currently use

their bodies as a last resort, to sell their hair, blood and kidneys. Nanotopia then envisions a future where the poorest men utilize new possibilities of fusing nanotechnology and the body as real-estate. In reaction to this use of the body, the film also visualizes the changes in bodily aesthetics within the upper classes.

To conclude, should Nanoart also represent a sort of reverse trend in contemporary art? In an age of artistic *grandeur* – based on the star system, with imposing works and enormous exhibitions and fairs – perhaps there is a need for a healthy and decisive *downsizing*. Nanoart is an art that makes itself small, that plays itself down to the point where it makes itself invisible.

Let's put it this way: Nanoart is an art which is not too eye-catching.