

MUNARI'S MACHINES di Miroslava Hajek

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The present exhibition is probably the first opportunity in Italy for retracing a part of Bruno Munari's aesthetic and artistic studies, so often confused and combined with his work as a designer, as a theoretician of book graphics and design and as a teacher. Exhibiting Munari's works in parallel with those of Jean Tinguely clearly accentuates the singularity and coherence of his creative process and aids us to discern the connective tissue between these two artists, bound by friendship and mutual esteem.

Munari had obtained Tinguely's first show in Milan in an architect's firm and they immediately became friends. He often recalled Tinguely arriving in a floorless car which amused him as it made the pedals and various mechanisms visible.

Pontus Hulten thus describes the encounter of the two artists: «Tinguely presented his *Automates, sculptures et reliefs mécaniques*, all executed on the spot, in an architecture gallery, the Studio d'Architettura B24, in December 1954. He went to collect them some ten years later and found them all in perfect condition. In Milan, Tinguely met Bruno Munari, a fascinating European postwar artist called “the new Leonardo” by Picasso and one of the most influential figures in the Italian art world. Two years earlier, he had published an entire series of manifestos, among which: *Machine-Art, Machinism, Organic Art, Disintegrism, Total Art...* Munari's sharp and anti-conformist concept of art strongly stimulated Tinguely in his studies. The latter looked him up and declared that he intended to “put his ideas of machinism into practice”. Munari offered him the gift of two of the most beautiful “useless machines” he had created in the early Thirties».¹

Munari has often been accused of discontinuity, of irregularity and dispersion, but I think that it is the opinion of those who only know part of his art. In fact, over his long life as an artist, Munari was strongly attached to certain themes which he repeatedly proposed and examined from a variety of possible perspectives.

The main thread of his lifelong career was that of his search for essential, his attempt to simplify problems and to obtain the greatest result from the fewest means. With this criterion he expressed a new perception of space and of movement in space and time. Movement, continual transformation, dynamism, evanescence, represent the most easily discernable themes in his work (Frank Popper included Munari among the precursor of kinetic art²). Drawings and paintings of motorcycles, machines and figures in motion from the Thirties are contemporaries of his mobile object.

Despite the fact that he sometimes used electric motors for his works, Munari was dissatisfied because he felt that the repetition and predictability of that sort of movement removed mystery from the work by suffocating its emotional force. The force that random or spontaneous movement, that of a puff of air for instance, or of water running or dripping, or even one offered unexpectedly by a spectator, actually increased.

Munari deliberately used the inner mechanism of a gramophone only for his *Macchina inutile a movimento giostra* (1953) because its movement was so monotonous. He worked on that subject for nearly ten years, constantly changing the upper part (there are photographs of the variations) with the idea that he could modify it so that the machine could be made to work irregularly, but the only thing he succeeded in achieving was to insert an element of sound which he called, affectionately, “the old banger”. That was what inspired Tinguely and represented a significant point of encounter in the work of these two artists.

Munari solved the problem of turning regular into irregular movement with his *Macchine aritmiche* which he began to construct in 1950 with spring-driven clockworks. In a logical procession, he also addressed the subject of light along with movement and, already in the early hanging useless

1 P. Hulten, J. Tinguely, *Una magia più forte della morte*, Bompiani, Milano, 1987, p. 17.

2 F. Popper, *L'arte cinetica*, Einaudi, Torino, 1970.

machines, shadows also played a role.

Munari succeeded in creating a complex, alluring work by projecting shadows. He perfected that idea in 1947 when he executed *Concavo-convesso*, perhaps the very first environmental work. He had hung a simple curved industrial grid in a dark room and cast light against it. This caused a weave of shadows which changed with currents of air to be projected on the walls.

The next step after the shadow projections was that of projecting a work of art. While the most widely diffused tendency in painting during the Fifties was to focus on the physical aspect of the artist's materials for overcoming the limits of two-dimensional space and using thick impastos of paint and adding other materials to create an illusion of depth, in 1950 Munari executed a series of works in miniature also using a mixture of techniques: collages of various, even organic, material such as onion skins, wire grids with other bits and pieces of things, paint and transparent color film. He inserted these material compositions into 35mm slide covers which then disappeared into the projector where they were dematerialized and then, with the use of light, reconstructed the work which was finally projected in monumental dimensions. Munari used to say that "you can fresco a dome by using a tiny glass slide" and that "you can carry an entire exhibition in your pocket", as he did for a show at MoMA in New York in 1954. As he studied the matter of projections to a deeper degree, he tried to dynamize the results with movement, which he originally obtained by projecting multi-focus slides and, later, by projecting various slides in temporal sequences. Finally, in 1953, he executed his *Proiezioni a luce polarizzata* in which the movement of the color decompositions was obtained by rotating a Polaroid filter applied in front of the slide projector's lens.

From 1953 on, he also became interested in abstract filmmaking and, even in that field, succeeded in accomplishing works which laid the bases for exploring the artistic-aesthetic capacities of this new medium. In 1963, together with Marcello Piccardo, Munari shot an experimental film, *I colori della luce*, using slides with polarized light. Munari reinvented the role of the artist. Recognizing the increasing numbers of people interested in culture, he abandoned the idea of the creator as a protagonist. He tried to make viewers participate in the creative process, involving them directly in the functioning of a work and, thereby, succeeded in establishing a certain complicity with them. In any case, he demanded a commitment from the viewer, which he implied when he declared "Art is by everyone but not for everyone". In order to simplify the approach to problems of contemporary culture and to motivate people to learn artistic linguistics, Munari employed various devices, among which games, perhaps the most attractive of all, meditation, the insertion of the spectator within the work and the destruction of stereotyped mass communications in a non-destabilizing way. Art, for Munari, was above all communication. Communication takes place by activating all the senses and, to stimulate these, he used even words in visual, audio and aesthetic ways.

In order to enjoy his *Macchine aritmiche*, the viewer is obliged to wind up the clockworks whose implacable motion is shattered by the flexibility of the object's various elements.

The *Flexies*, bent by the viewer, change their shapes without changing their dimensions, becoming, by means of their elasticity, almost anthropomorphic beings with whom one can grapple or can dance.

Munari found the fundamental basis for his work in an instrument like mathematics which he constantly applied in the execution of his works. He relentlessly verified his conceptions with the laws of nature and we can see that he followed them from the beginning of his work. The number three was fundamentally important to Munari. From the outset in 1934, many of his stable *Macchine inutili* are supported by three legs. Three flexible tubes emerge from the metal joints in his *Flexies* and the grid of the *Concavo-convesso* is attached at three points. We can also find a possible artistic solution to the mathematical representation of the infinite in *Concavo-convesso*, designed by the curve of the square links of the grid.

Munari's idea of the machine as a work of art originated in his experience of Futurism, as did all his efforts for first representing, then expressing, movement by contemporaneously activating all the viewer's senses as he interacts with the artist. However, Munari immediately became aware of the danger lurking in an adoration and a fetishization of technology and, for this reason treated the

Futurist concept of celebrating industrialization with irony as of the early Thirties. In fact, he called his first machines *useless*, just as art may seem useless to some of us (Munari recounted how Marinetti became angry when learning this title and how he countered by saying that a machine can never be useless). We find the same subtle irony in his *Fossili del 2000* (1959). We are allowed to perceive the future remnants of our era, transistor parts, valves, electrical conductor wires, all haped as organisms and trapped in a brick of transparent synthetic resin.

When attacking the stereotype of the Deus Ex Machina machine, Munari was already trying to turn technical means into a poetic medium of art. Like Malevich, who departed from a white square on a black background to reconstruct painting, Munari departed from the most primitive machine, the lever. He explored that principle in his construction of hanging useless machines, in the expression of movement in his *Tavola tattile* (1938), and realized that even the vibrations of *Sensitive* exploit the use of levers.

Expressive minimalism led him to analyzing a new spirituality of technology close to Zen philosophy. How can one ignore the affinity between his useless machine and an Oriental talisma? Such exploration, although it was to accompany him throughout his creative life, was a point of departure for him which branched off into an exploration of the various machinery used in his work. It led him to shatter tradictional schemes of conceiving art limited to painting and sculpture. He was searching for new forms of expression by using unconventional materials, such as plastic or fur, and often poor materials like. For example, the shell of a dried squash, in his 1934 useless machine. From the Fifties on, Munari abandoned traditional media of artistic expression to the point of even turning them into object of irony, as he did at the 1986 Venice Biennale where he exhibited an installation with various kinds of oil on various kind of canvas as *Olio su tela*.

The work which probably best illustrates and emphasizes his artistic convictions is *ABC Dadà* from 1944. we encounter vestiges of all the problematic elements of his work on each panel representing a letter of the alphabet, as if it were a compendium or memorandum. We can see the tactile qualities of the objects he applied next to the musicality of the play on words, the superimpositions of grids which create *moire* silk effects, collages of vegetable leftovers, lace, strings, furs. We see frames of photographs, handprints, gear-parts and an emblematic clock. This work also demonstrates how well aware Munari was of the thin demarcation line between art and design. He often told me about how he had been commissioned to do a book project and how, once he had executed it, he realized that he had created a work of art. Therefore, he felt he should do another one with more specifically graphic criteria.

Although Munari was among the first of those using technology and machinery as a mediun, he was never able to conceive art without the participation of mankind and almost as if were cross-breed with nature. His machines often seemed like happy, tamable, living beings.