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STATEMENTS BY MUNARI introductory notes by Caroline Tisdall

Munari has come to be regarded as one of the grand old masters of kinetics, the creator of some of the major stepping stones of its development. In fact kinetics as such have never been his main concern, though he has often used movement to achieve the effects he wanted.

Born in 1907, his earliest work was done in Milan in 1930, where he started by drawing animated cartoons and exhibiting futurist paintings with the second-stage Futurists, Depero, Prampolini, Dottori, etc. All these works have gone astray. When making these animated films he tried, inspired as always by experimental curiosity and laziness, to obtain the maximum effect with a minimum of effort, in this case using pliable lead wire to get as many animated sequences out of a single drawing as possible, just by bending the wire-supported drawing. Only recently did he realize that it was this experimentation born of laziness that led him in 1963 to the realization of his films with polarized light, in which effects of pure colour in movement were obtained with remarkable ease (as also in "The Yellow Submarine").

The evolution of Munari's work from abstract painting to the appearance of the *Useless Machines* can be traced through the jotting of contemporary critics:

1931 "Munari's paintings are abstract interpretations revealing plastic equilibrium."

1931 "Munari's works quit reality to liberate themselves in space. The material is annulled: only an ideal evanescent atmosphere exists, in which float abstract forms, rendering pure emotions with pure elements."

1932 "a Japanese juggler"

1933 "in going beyond painting Munari has invented a machine for contemplation, exhibited at the Futurist exhibition in the Galleria Pesaro, Milan."

1934 "With his work entitled *Useless Machines*, Munari has created an "Art Machine" as opposed to a "Science Machine"."

Amidst the severe art of Fascism, and the heaviness of Carrà, Sironi, and De Chirico, Munari's works either caused confusion, or were seen as nothing more than toys, and relegated to the nursery. The *Useless Machines* were conceived as an attempt to liberate abstract forms from their static position in the abstract painting of the thirties, by suspending them in such a way that they came alive in human environments and were sensitive to the atmosphere of reality. They were light, made of matte-painted cardboard shapes, the odd piece of blown glass, held together by fragile wood rods and suspended on silk thread in harmonic and precise mathematical relationships. Since no two sides of any shape were identical, the compositional range was considerable. Whereas Calder's mobiles, also evolved at this time, derive from natural forms (trees, etc.), Munari's depart from wholly abstract principles, and it is their suspended movement that animates them. Being of much lighter material than Calder's metal shapes they were more responsive to the human movements and currents of air around them, thus creating a poetic relationship with the inhabited environment. They were in no way to be confused with his earlier humorous machines - machines for wagging the tails of lazy dogs, for making hiccups musical, etc., which were inspired by Rube Goldberg.

Though the belligerence of Futurism was quite contrary to Munari's temperament, it was at that time the only lively movement in Italy that could provide an outlet for his own brand of quizzically punning humane humour. This, coupled with his native ingenuity, characterizes all his subsequent work. *Ora X* of 1945, for example, was constructed from an alarm clock - the mechanism of its hands being used to rotate the celluloid elements, thus preserving time-space associations whilst transforming and questioning them. The same ingenuity converted an 80 cm. square of wire net into a mobile that can be assembled in a number of ways by joining its sides or corners in different positions, mathematically or by chance. This was the *Concave Convex* of 1947, in which the moiré effect thrown in shadow on the wall by the contorted net became as important as the object itself.

Another constant feature of Munari's work has been his distinctive interpretation of the Gestalt theory, which is apparent in his concern with formal purity and clear design. Thus the idea behind

the *Negative-Positive* series, evolved over the years from 1949, is the elimination of the confusion latent in the concept of the static background with superimposed abstract areas. In the *Negative-Positives* all colour areas are projected as equally important, like the squares of a chessboard, setting up an optical effect of floating chromatic movement between the object and the spectator. In the children's books, to which he has devoted much time since 1944, this formal simplicity, combined with visual punning, is designed to spark off a questioning of reality. Those for adults – the illegible books – are rendered unusable as books. Built up of paper borders round a hole, or pages bound together by a thread, they question the validity both of the concept of the book and of the printed word.

In 1952 (the same year as Tinguely's *Metamechanism*) Munari constructed the *Arhythmic Proof*. This was to obtain an irregular effect from the regular movement of a spring mechanism. The spring is explicable in terms of Munari's tendency to make use of materials to hand, rather than seeking them out. This irregularity is caused by two steel wires on which two discs vibrate, leaving after-images in space. Perhaps this resolved the problem as far as he was concerned, for he never followed it up. Instead, in 1954, he started on a series of fountains, first for the Venice Biennale, then in 1961 for the Milan Fair, and in 1965 for the one-man exhibition in Tokyo. Each of these was a completely different concept of the fountain, conditioned by the three different environments. (This refusal to continue a successful formula is typical, and is one of the most admirable things about Munari.)

The Venice fountain was a complex of inclined metal and glass planes arranged so that the water flowed down to finish its circuit through the bushes beneath, exploiting both the play of water reflected on glass, and the sound of it falling from one level to another. Through a small hole in the longest plane falls a separate small trickle of water that sets off on its own private run, is reflected in a window, and returns to the basin. The 1961 Milan Fair fountain (4 metres in diameter) was constructed of steel and transparent coloured plastic in three separate cylinders. The exterior cylinder consists of panels of neutral colours, pale and dark. Powered by an electric motor, it completes one revolution a minute. One of the smaller interior cylinders in warm colours (reds, yellows, etc.) revolves by chance with the wind, whilst the other, in cold blues and greens, is moved by a jet of water. The combined chromatic effect is projected by the sun on the white sand that surrounds the fountain. The Tokyo fountain of 1965 was acclaimed by the Japanese as a profound embodiment of the spirit of Zen, with a simplicity, calmness and spiritual power rare in Western artists. The basin is of white metal, with a layer of white sand covered by 10 cm. of still water. From above fall five drops, the rhythm of which can be regulated, so that on the calm surface of the water optical effects of concentric circles induced by the falling drops are continually formed and dissolved. These circles are emphasized by a projector that throws their shadows on the sand beneath. Three different concepts for three different situations.

“They are neither paintings nor colour photos” - in 1950 Munari started experimenting with the possibilities of direct projection of plastics for aesthetic ends. Using a normal projector and placing fragments of various opaque and transparent materials between the glass, he gave a first performance in the B24 studio in Milan. In about 1954 he began to use polarized light, obtaining lenses built up of colourless plastics, which, through the use of polarized light, gave an effect of fixed colour compositions. This developed with the incorporation of a motor to achieve variable compositions, and was then used for films. In 1963 the first of these, lasting 20 minutes, was realized with Piccardi, and with electronic music by Berio. This was the only Italian experimental film presented at the 1964 Knokke festival. The aim of these experiments is the penetration of the chromatic laws of nature, avoiding the intervention of individual taste.

Munari's search for new techniques of visual communication and the non-passive participation of a wider public led to his first experiments with Rank Xerox machines in 1964. one of these was installed in his Tokyo exhibition, and again in this year's Venice Biennale, as part of project for a reformed biennale, the idea being that everyone, given a basic explanation of the machine's possibilities, can produce and edit his own work. This basically is the crux of his activity, and of his

projects for the future: the breaking down of barriers not only between disciplines, but also between public and “artist”.

For forty years Munari has been quietly chuckling at the sanctity of the artist. He himself, though, for example, one of the first to realize and exploit the compositional and kinetic powers of the mobile, has always been comfortably straddled over a wide variety of activities, taking as much delight in the design of a pea pod as in the realization of a piece of sculpture. The following is an illustration of his approach to some of these various activities.