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BRUNO MUNARI: LABYRINTH OF GLASS by Marco Meneguzzo

The method of lightness is not lightness. Where Bruno Munari gets mentioned, as for example in critical circles, he is nearly always spoken about in terms of the latter and not the former, as if the reasoning and above all the maintenance of a perfect naivety about things were not the outcome of an iron discipline, possibly innate in Munari, but nonetheless always rigorous.

Method, in western culture, uses doubt as its premise to shatter the myth of every model of prior knowledge, and in doubt has the stated base on which to construct a new model: but as soon as this *pars construens* has replaced the confutation of the previous system, doubt becomes in turn myth and loses its connotation of intellectual kinetism to become dogma. (Munari might say: "But who doubts doubt?"). Munari doesn't undergo this conceptual sclerosis. His is the method of permanent doubt, which inevitably becomes the rule, but remains, nevertheless, an intentional and propulsive norm and not an axiom. Drawing from this attitude towards the real (the referred to is always reality, even when Munari, with concrete art, doesn't refer to a natural reality, but a mental one) he obtains an apparent unself-consciousness towards creation and its abandonment when creating would risk to restrict him to a univocal research: as if consistency were apanage of a solely deductive, and not inductive, approach to things; Munari has always been reproached for treading on the surface of things and problems, as opposed to serious "in depth" research. Munari's example, however, spreads out within the activity of an entire lifetime: this is reason why it is so difficult to abstract moments, to attempt subdivisions, to divide period.

Contemporaneity with other artists of the century can be found in every single aspect of his activity, his ideas, his projects, and his realizations, if a critical inquiry that only allows for the possibility of monotonous (in the etymological sense) and vertical research is desired, but the global and synchronous sense of Munari's conceiving and fulfilling versatility goes beyond the proper conceptual specifications, be they programmed or chronological (which, of course, have interesting surprises) and should be the object of a critical analysis that tries to be in fact such.

Munari's conceptive versatility or *polyhedricity* has an essential unity of method as a base, which is verified or matched by the figures of other artists as a founding problem of contemporary art even though, from the point of view of their realizations, they lack any formal analogy with Munari. Ulterior reasons, thus, for looking there for analogies that are mental, projectual – intended in the broadest sense of the term, even as a projection of life itself – and conceptual: Marcel Duchamp comes to mind. Critics have already associated his figure with Munari, even though Munari has never cited Duchamp since they are objectively – and not objectively – at the antipodes. Nevertheless, both artists have pursued the problem of this century, the conjugation, in positive and negative, of art and life. Together with many, many others, it can be said, and so why use Duchamp in particular to analyse Munari, rather than Klee, or Marinetti, or Gropius, who have objectively a relation with Munari? Because at the base of Munari's and Duchamp's lives there is a looking at things, the identification of a reality composed of objects that wait only to be manipulated. Objects which for Duchamp become linguistic objects and pretexts, a strictly mental and conceptual manipulation that reduces them to a pure language; for Munari, however, the object is pliable, but offert the manipulator a resistance dictated by its intrinsic quality. The poles of the question are therefore the real as linguistic system or the real as a system of multiple object relation; the common point is the revelation of these systems through conceptual displacement, a *spiazzamento* that alters the rules and perspectives of how things are seen.

Duchamp's case is linguistic (but the French artist, in our case, represents the outcome of another globality, of another possible model), while Munari's work has a displacement "of use". From Duchamp's pole, there is the cancellation of the object itself in favour of its naming, from Munari's, a putting into evidence the possibilities of the object, starting from the object itself and not from its linguistic definition. One of Munari's constants is the immersion in things, and not insings (an indication: the titles that the Milanese artist gives to his works are ironic and amusing, but though

amusing, they are not absolutely essential for the enjoyment of the work); this permits Munari an activity of “construction” more than of de codification.

Conceptual displacement as the rule, and at the same time trust in the possibility of enriching reality with interpretations has moved Munari from the beginning of his publically stated activity. From the age of twenty, from 1926-27, he is among the futurists: part of the second less shattering wave of the Boccionian years which should be seen either within the context of the monumentalism of the return to order (fascism), or, even more, within the context of an interior “status” which for the more talented – Prampolini, the same Marinetti, Depero, besides the very young Munari – becomes more worn out with every issue of the manifesto¹ and increasingly academic at each show or “revolutionary” demonstration.

The more “mechanical” side of that anxiety of movement and speed which ran through the group was prevalent: the airpicture, even among the most intelligent – Dottori at the head – was the most reduced version imaginable of the romantic future which neither Boccioni nor Sant’Elia could have foreseen. The movement was reduced to velocity, a mechanical velocity whose representation was left to fast machines, in those years – near the thirties – to the airplane, the pride, among other things, of the regime. The conceptual reduction is total. Munari is among the perpetrators, but in a marginal position (it would be an error to say critical: the real position of the Milanese artist never emerges from polemical statements, always rather from attitude and from works): twentieth century monumentalism is difficult for him, he has trouble with either a general idea of granite-like eternity, or the idea of art as myth, or the still existent aulic and haughty concept that sees art as ostentatiously aristocratic, while the futurism of the nineteen thirties is not simply the heir of that salutary shock of the nineteen tens, but is also the only group which does not distinguish between art and its application in everyday life, instituting a continuous thread between creation and production. Nevertheless Munari upturned everything and everyone, even his occasional associates of the street, when he exposed the first *Macchine*, immediately defined by himself as *Macchine inutili*². It surprise evidently lies, to the point of negating every other element, in the ironical and antirhetorical intent of the work and its operation against the solid everlasting pretense of art. But Munari is never “against” something, he lets the subtle force that emanates a action and an object to induce within the onlooker (Munari might say, the person with curiosity) the reasoning and confrontation necessary for rejecting a faulty preconception: thus the *Macchine inutili*, the useless machines, “the garage of the spirit”, as written in 1934³, don’t possess the ironic and sensual ferocity of the gears of Picabia nor the strong symbolic and ideological print marks of Berlin dadaists. The useless machines are simply kind shocks for a possible future, not a ruthless analysis of the present. In this way Munari is absolutely “modern”, faithful to the possibility of understanding, in a poetic rationality – I add the adjective to keep the term “rationality” from being confused *tout court* with

1 Deposit the already ancalculable number of futurist manifestos drafted from 1909, in 1932 the Milanese futurist group – signers Andreoni, Duse, Mazon, Gambini, Bot and Munari – published the millionth one in the magazine “Artecrazie” (July 1932): some interesting elements in “chromatic plastic and perspectives” and in the recognizing of “colors that live within us in our time” make one think of Munari’s later abstract work. The artist, in these years, participated in numerous futurist shows: in 1927 and 1929 at the famous Galleria Pesaro – “Exhibition of 33 futurist artists (1929), in 1930 he is in the Biennale, always in the futurist group, the next year at the Quadriennale; in 1933, at Milan, he participated in the show organized by Marinetti in homage to Boccioni; still in the Biennale in the shows from 1934 to 1936. From that year, his relations with futurism, never too direct, became less frequent to the point of vanishing: the abstract mosaic for the VI Milan Triennale (1936) practically sanctioned his exit from the group.

2 The precursor of the useless machines is in 1930: a “Macchina aerea”, reconstructed today from photographs of the lost original, hangs from a string and is moved by the air. Built with white sticks with red spheres on the ends, it can be practically considered a “Macchina inutile”. Of these, the most notable are the hanging ones, but land examples also exist of them, whose forms are reminiscent of the functional and functioning machines, also projects of the same Munari: individual analogies are found among the “macchina” of 1933 and a project of a portable weather station of 1943.

3 Cf. L. Pralavorio, “Delle macchine inutili e di altro”, in “Cronaca Prealpina”, May 28, 1934. It is interesting to show how criticism, even journalistic, was more aware of the abstract experimentation in the 1930’s than in the 1950’s: in the last decade, in fact, the polemic between abstractions and figurative was explosive – comprising on one hand even the political ideology that saw social realism as the only progressive way, and on the other hand, the thousandths auspicious return to the Italian tradition – and imposed rigid polarization of group. Examples of this can be found in the articles of ferocious mockery against the concretist experience of the MAC (Movimento Arte Concreta) on the part of critics siding with realist of various titles – Raffaele De Grada and Leonardo Borgele above all – and the ironic response of the less authoritative pages of the issues of “Arte Concreta”.

codified logic – free of prejudices, or where they can be easily refuted by the evidence of a better proposed solution. Undoubtedly this attitude stems from the utopia of good form which has characterized the “constructive” part of art of this century, and of which Munari is one of the most convinced standard bearers, as is also demonstrated by his evolution during the post World War Two period. Returning to the *Macchine inutili*, be they those of the earth or those hanging in suspension, moved by air, momentarily putting aside the ironic aspect, there still remains the most strictly distainful and interesting component to be analysed: the idea of useless construction, on one hand, as an end in itself, and on the other hand, as the excitement of what I would define as “future memory” (singular, in this matter, the operative analogy with the *Ricostruzioni teoriche di oggetti immaginari*, executed from 1956). If the machine is, or was, in the thirties, the idea of progress, and that is tied to the concept of utility and of velocity, Munari counterpoises not the opposite concept of entropy or stasis, but the far more subtle homopathic idea of the projecting of progress, from the functional awareness of the reality in which one lives: a machine, a manufactured item perfectly inserted in the environment, so as to find its own motor – air – there and to modify the perception of it through the constantly shifting shade of the machine. On the other hand, machines are treated to excite fantasy, since they are machines which await a role and a function, objects that reveal their arcane utility in the future, which probably is not their “symbolic function”, but their “fantastic function”⁴. The problem of an enlarged space of an aesthetic spread beyond the codified limits of art is already apparent, in the thirties, in abstract works, among which the most unique is the painting *Anche la cornice* (1935), which destroys the limits between the work and the world engulfing in one and in the other the territory of confinement which until then had been the frame⁵: Balla, it can be said, had already painted the frames of some of his canvases following the expression of the canvas itself, but Munari programatically tends to untie each knot, to reassemble each break and every aporia in a totality without trauma, as his concept of reality carries him not to favor solely the sense of sight but to invite all the senses of perception to the thing. The *Tavola tattile* (1943) is a precocious example, composed as it is of a board of wood covered by various materials – felt, fiberglass, rope, fur, polished wood – so as to be able to be “seen” even by a non-seeing person⁶. Exiting from the space assigned to art was such a pressing problem, for the most attentive spirits of the thirties, that the magniloquent muralism in the style of Sironi can be considered the measure of one of these attempts. Lombard abstraction is another, where scenographic rhetoric – be it said without particular mockery – is opposed by the aesthetically motivated refutation of large-scale work (the small format of abstract work in the thirties, besides a necessity, is also a choice) and a type of hermitage in the studio, waiting for a more “modern” time. But Munari does not accept this logic because of a series of ideologically and emotionally profound motives: Munari opposed the rigours (or so believed) of pure research, terms that for an Italian abstractionist of the time coincide with the solitude of a groping towards the monastic force of geometric forms, – if the sublime example of Licini, Melotti and Fontana is excluded – with the pyrotechnical presence of the artist, through operative displacement; responding to the univocality of an incipient protoscientific analysis on the relations between abstract forms, he counterposes the indicating of a territory of freedom that enlargens the concept of artness. Thus Munari becomes the wandering erratic electron among diverse nuclei which are fundamentally closed and refractory to any contamination, while he is ready and open to fit his tactical and particular position, but deaf to the global term demands of concepts. Among the futurists, Munari is the least mechanicalist and the most ironic; among the

4 The practically contemporary work of Alexander Calder has often been related to Munari's “macchine”, but if the American artist insist on the formal analogy between his own forms and those of nature and Mirò's surrealism, the Milanese's accent is largely put on the ironic quality of the “macchine”, of the instrument that is, more than manufactured.

5 The matter at hand is a small painting (as of today, 1986, produced in ten copies) in which the frame is also painted, according to a chromatic partition that follows that of the painting, inspired by the experience of neo-plastic abstraction, filtered through the Paris of “Cercle et carré”. Moreover, either Munari, Soldati or the other Lombard abstractionists had, in those works of theirs that were not impregnated with metaphysical echos (present in the same years of the purest abstraction), obvious formal references to the works of Van Doesburg and Vantongerloo.

6 It is a strait table that is reminiscent of botched instruments and surrealist objects: the tactile sensuality of it is evident, an ubiquitous element in Munari's works, above all in those dedicated to childhood, an age in which the domination of the “noble” sense of sight over the others is not yet totally victorious.

abstractionists, he is the least disposed – with the already mentioned exception – to confuse purity with geometry, and the most open to even narrative manifestations and realizations that use technique – the photographic collage, for example – and the manicheistically loathed figuration; among the designers, who were still then called commercial artists, illustrators, architects of applied art, craftsmen, he is the elusive defender of an idea of ephemeral objects; he is a mirror of a concept of aesthetic action then difficult to accept, especially in a country whose traditions hindered any *dada* attitude.

Dadaist, in Munari, would not be the object – although certain of his collages record contemporary late-dada or proto-surrealist experiences⁷ – but the attitude: the demolition of the boundaries of art and disseminated aestheticism, the possibility of artistic creativity with extra-artistic material and means, the use of irony and self irony are the elements of his work which can be linked to graffiant *dada* experiences, but he escapes one more time – yes, in the best spirit of *dada* – from the definition of the dadaist non definition. The nihilistic version, even in words, is not to be found in Munari: his “constructive” vocation resembles more the excessive intents of Schwitters’ “Merzbau” than the discourses on non-art and on the disintegration of this concept. Certainly, Munari helps pose the problem of an art which is really only worked out in life – he is thus the only one, then in Italy – thanks to knowing how to look at and above all to manipulate images and objects, but the transition for him can and should be painless, a sliding that doesn’t necessitate being championed by *dada*’s ideological and operative violence (the same for surrealism: Munari, immune from any metaphysical influence, for the entire period of the thirties designs characters “in the manner” of the surrealists, but his interest already lies in an organic development of monstrous, yet possible, figures more than in a taking a stand on the rights of the unconscious⁸). It should be remembered that the concept of surrealism, as well as the term, had very unclear connotations in Italy in those years, being watered down by a art journalism poorly inclined and poorly attentive to these experiences, for the same reasons for which *dada* had not taken root.

Thus, extraneous to the existence of all groups, though being part of them, the Milanese artist lived in a conscious marginality, which contributed notably to the substantial incomprehension of his position on the part of the abstractionists – Munari’s anti spiritualist attitude, during the time of “Kn” should only be remembered⁹ a – but also a “borderline” self attachment, of indefinable confines. This is the paradoxical result of a willed inclusion, and not exclusion, on the part of Munari. Belonging to a tendency implies the negation of the other, descending from the vaguest and most general concepts to the smallest operativity: this even occurs, as can be seen, in the abstractionist’s group who should have constructed the maximum standard of freedom in that period; but if for many the abstract form was, above all a conceptual ending point, the negation of the possibility of rhetoric, of narration, of instrumentalization that was the subject of figurative art, for Munari it constituted to the contrary the possibility of constructing a visual universe finally released from closed spacial relationship and potentially infinite. The previously mentioned will to include thus becomes operative in front of a contemporaneous development of Italian abstract art that while playing its cards on a formally abstract narrative substantially filled in for figurative narrative (how many abstract paintings of the thirties, and even later, are not just updated versions of landscapes and portraits?): Munari’s operativity becomes concrete in the 1950 *Negattivi-positivi*, but already is *in nuce* more than a decade earlier, in this consistently “abstract” attitude – in its own

7 At the beginning of the 1930’s, Munari experimented with the photographic “collage”, thinking also its use in magazines; its characters look like those of Max Ernst, in the famous series “une semaine de bonté”: figures taken from “end of the century” magazines, displacements resulting in the grotesque, the out of scale, etc. But the Munarian composition does not have the narrative and literary aims as the surrealist Ernst; his are focused on the surface of the vision.

8 There exists many, many pencil and ink drawings, done during the 1930’s, that can be superficially defined as surrealist: faceless, empty, monstrous characterers whose grotesqueness in some ways suggest certain figures of Salvatore Dali. The matrix is different though: they are instead deriver from caricature – there exists a pretty, nearly abstract, drawing by Russolo, and a contemporary drawing by Tullio d’Albisola, drawn according to surrealist canons – and also certain graphic techniques, derived from “cadavres exquis”, undertaken by Munari more for the results that than for the vaguely “automatic” procedure.

9 Munari’s relation with Carlo Belli was sporadic, like his other, conceptually irregular relations with the entire Milanese abstract group: Munari’s first one man show at the abstract gallery, par excellence, il Milione, was in 1940, when the group was nearly dissolved and a metaphysical aura filled the paintings of the even the most rigorous abstractionists.

sense, and not the historical one of the term – in the confrontation with a work of art.

Negativi-positivi are the visualization of a conceptually open work: the line, the sign, the color separate but do not close the space, just as a strait line divides space into two infinite sectors¹⁰. It is not simply a matter of geometry, but of the idea of art, vision, and perception: it does not favor a sooner over a later, nor an over over an under, nor least of all a figure over a background; the sign that does not close the form, being well defined, chromatically decisive and opposed to the other likewise infinite field is both the hyperdecorative and conceptual dissolution of the traditional hierarchical relationship instituted between two levels of the composition: a first level with the narrative event, and the scenario of this event, the background. Ending point, it can be said, of a poetics already *in nuce*, a poetics that does not only involve the problem of doing art, but the vaster one of affronting the real with a breakless *continuum*... *Natura non facit saltus*, this a-traditional vision of painting and the work of art constitutes the starting point, one among the few, that pushes Munari to a kind of polemic which immediately involves Kandinsky's painting (the late period of the painter, which could be seen at the Galleria del Milione, at Milan, in 1934), accused of not renouncing the traditional relationship between figure and background¹¹. Clearly the example serves the Milanese artist not so much for devaluating Kandinsky's painting, as for affirming his own research beyond the field so as to say *the end* to painting, in order to attain something vaster, and of necessity vaguer, in the perception and formulation of new visual codes. Different would be the intellectual relationship to Klee and his works; however any affinity on Munari's part stems from his interest in Klee's attempt to create a pedagogy of vision and perception rather than in his works¹²: once more the Munarian concept of research draws closer to that of open work. Munari is more fascinated, in looking at Klee, by a suggestion sketched with rapid strokes, or by a sentence, that by the completion – and then by the “conclusion”, by the finality – of the major works.

The reason for the substantial incomprehension of Munari on the part of artists, abstractionists or not, is due to the Milanese artist's position within a behavioral and operative knot: on the one hand, a superficially restrained in affronting the questions posed by art (less superficial, in thinking of the artist's figure) and on the other hand, an avoiding of labels in order to probe a larger discourse on the perception of life.

For this reason, Munari, not wanting to turn himself into a kind of exiled martyr, found more receptibility – and intellectual response – in the environment of the so called applied arts, to which he first contributed intuitively, then with increasing awareness, to define the field of action. Defining is not circumscribing – the problem of *Negative-Positive* become a metaphor here of the global project of Munari – because otherwise we shall deny what has been said up to now: Munari's indefinability and ineffability can be found in his refusal to establish boundaries for his own actions, and conversely in his non installation of any of the disciplines that this action touches. Ambitious position, but inevitable if the goal is to annul the discrepancy between creativity (art is not spoken about anymore) and life. The position is not, however, a premonition of the post-modern definitive phrase for which “tutto va bene, everything is fine”: for Munari, instead, each discipline has its rule; the important thing is to possess the method in order to be able to unhinge and overturn it without

10 “The basic idea that generates these painting”, Munari writes in 1971, “is found in the fact that each element that composes the work, each form, each part of the surface, can be considered either in the foreground or in background. The effect that comes out of it, an effect defined today with the term OP (optical art), makes it look like every form that composes the work is moving, either backwards or forwards in the onlooker's perceptive optical space, creating a chromatic dynamic, an optical instability according to how the viewer considers each form.” (in “Codice ovvio”, Turin, 1971, p. 48). Interest in these works and in the underlying concept is vast: the bulletin “Arte Concreta 5” of March 1952 is a “Negativo-positivo”, “Art d'aujourd'hui” dedicated their cover (January 1952), the American magazine “Interiors” published on its August 1954 cover a “Concavo-convesso” in metallic wire and a “Negativo-positivo”. The painted works, in such, were displayed for the first time in 1950 at the Galleria dell'Elicottero in Milan. These are also the subject of a literary polemic with Victor Vasarely who in April 1955, in “Notes pour un manifeste” published by Galleria Denise Renè of Paris, made his assertions on Munari in relation to the new orientations of non-figurative painting: Munari's response was published in “Domus”, 310, p. 44.

11 Munari more than once affirms, with a certain taste for the paradoxal, that Kandinsky's painting is after all realism painting in disguise, given the importance that is still given to relationship between figure and background: this does not keep him from acquiring the single painting sold at the Milanese exhibition of the Russian artist, in 1934.

12 A nicely done examination of the relationship between Munari's ideas and Klee's “theory of forms and perception” can be found in A. Tanchis, “L'arte anomala di Bruno Munari”, Bari 1981, pp 30-55.

destroying it.

From the first trials destined for the press (magazine cover, posters) to the first children's books of 1945¹³, to real projects for industrial design, begun at the end of 1950's and continuing till today, Munari's problem has not been that of industrial design in a strict sense. It is part of the anomaly of his activities during these years, above all from the post world war two period, and the repeated conceptual "discarding" in respect to a increasingly consistent discipline. In fact, if in the heroic years – those from 1945 to 1960 – the projects for industry find both an open ear and willing hand lent to the producer, there is also during the quarter of a century a stabilization of the project to the needs of production, and then to the needs – the thing is nearly the same – of fashion. Once more, Munari manages to avoid the pitfalls these dangers, thanks to his very personal "serendipity" to the serenity which gives him a certainty generated by methodological doubt.

Thus, he struggles to create an output that is both esthetic and industrial, that is without the obstacle that ties so-called pure research to a purely individual and aristocratic discourse, but when – at the threshold of the 1960's – industrial design becomes a panacea for the solipsism of art and claims to be the only possible future for an esthetic society, Munari does not embrace (as others did) the new discipline with the enthusiasm of a neophyte, but starts a graceful and precise demystification of it. Munari as an industrial planner may have been born with his first work of 1926, but his theoretical activity begins with the foundation of MAC (Movimento Arte Concreta), in 1948, in collaboration with Gillo Dorfles, Gianni Monnet and Atanasio Soldati. The Milanese movement, foolish in its realizations but acute in its intuitions, produces "underground" pamphlets and shows, of which some Munari's whimsical geniality can be detected in such works as the drawings of the insane and of children, motorcycle bodyworks, the bulletins in offset (Munari's ideal square form), and finally the extraordinary *Arte Concreta 10*, formatted in transparent pages with ironic "manifestos" of hypothetical artistic movements¹⁴ inserted inside.

These are fertile years for Munari, for the projects that are realized and for the ideas that, thanks to these, become precise. The *Libri Illeggibili*¹⁵, the *Ora X*¹⁶, the previously cited *Negativi-Positivi*, the *Aritmie*¹⁷, the projection in polarized light¹⁸, the fountain and the water games¹⁹, the *Scrittura*

13 There are seven books, published by Mondadori in 1945, republished in English by The World Publishing Co. in 1957. They are, excluding the book "Le Macchine" of 1942, the first children's books planned by Munari; he would continue planning them until today: "Un fiore con amore" and "Nella nebbia di Milano" (issued in 1968), "Da lontano era un'isola" (1971), "Cappuccetto verde" (1972), "Rose nell'insalata" (1973), illustrating them (above all for Einaudi) and directing collections of didactic books (for Einaudi and Zanichelli).

14 The bulletin "Arte Concreta 5" has already been mentioned (Cr. footnote 10); "Arte Concreta 10" of December 1952 contains the manifestos of "Macchinismo, Arte totale, Arte organica, Disintegratisimo" in which Munari, in his words, had not done anything other than "describe what normally each artist does when painting". On the history of MAC, cr. P. Fossati, "Il Movimento Arte Concreta 1948-58", Turin 1980; M. Meneguzzo, "Il MAC (Movimento Arte Concreta)", Ascoli Piceno 1981; L. Caramel (editor), "MAC", Milan 1984. There also exist a re-issue (which however fails to respect the material and the different paper on which they were printed) of the squared bulletins of "Arte Concreta", edited by Galleria Spriano of Omegna.

15 The "Libri illeggibili", shown for the first time at Libreria Salto in Milan, are books without words, the pages have different material, colors, sizes, and at times are cut, sewn, or perforated. They make up an additional demonstration of Munari's substantial distrust of the "logos", for the written word; the idea of the book, on the contrary, has always fascinated him. Probably for the idea of sequence that skimming pages imply: the "Prelibri" (1980) are an example of this, "twelve little books of paper, cardboard, construction paper, wood, cloth, sponge cloth, see-through plastic", and all the other children's books previously cited (cr. footnote 13).

16 The "Ora X", whose prototype done in 1945 (today in the Danese collection), is a modified alarm clock: "In place of the clock's hands two transparent semi-disks, one red, one yellow, moved on the square and formed other combinations of color the yellow semi-disk superimposing on the red one". In 1962 Danese produced a series of fifty copies of it.

17 The "Aritmie", built from 1951, are objects endowed with a mechanical kinetism (with a spring) that produce irrational movements: "In my research on arrhythmy I tried to activate this accidental, by-product energy by favoring arrhythmic movements by means of elastic or flexible parts with weights that determined the disequilibrium, so as to make the functioning of the machine less regular, especially if its functioning is absolutely useless and non-productive. (in Bruno Munari, "Codice ovvio", cit. p. 50).

18 The projections of 1952-53 "are original works, done by the visual operators. These consist of small compositions directly done within the normal frame which contains photographic slides, but they are not photography. Instead of using colors in tubes as in painting, the operator uses colored plastic transparent, semi-transparent, or opaque material (...) the projections in polarized light obtained through polarized filters are an offshoot of the direct projections. (...) with this new technique (...) the colors of the compositions pass through the entire chromatic spectrum until their respective complements are found..." (in Bruno Munari, "Codice ovvio", cit. p. 52).

19 Munari projected numerous fountains, whose main principle was dictated by the quality of the water, movement, air, and color:

*illeggibili di popoli sconosciuti*²⁰, the *Ricostruzioni teoriche di oggetti immaginari*²¹ are above all signs of a project idea that goes beyond the standards imposed by a planning purely based on the production of economically profitable objects. The myth of production is undermined even before it can be translated into reality. And this is not because the 1950's witness the fertile years of projectual liberty, towards a deafness of the productive apparatus to the problems of form, while the successive decade sees production reduce the designer's creativity, subjecting it to economic-productive needs, but because Munari is directly consistent with his global cognitive project, whose instruments are again method, doubt, irony, and displacement. Munari's theoretical statements on design could almost make him a acritical, quasi utopist enthusiast of it, an upholder of the rational equivalence between functional form and beautiful form, if his objects were not invaded by some element of disturbance which kept them from an automatic use. The possibility of materials are carried to excess, their expressive eccentricity is researched at the expense of commonly accepted uses; Munari wonders if the intrinsic quality of a material or the real use of an object are not hidden behind both a qualitative appearance and an, up till then, codified use; he tries to set up new codes attached to those already existing, that do not substitute for the former precedents, and do not propose new dogmas, but indicate further and unforeseen possibilities.

This attempt had conceptually already appeared at the time of *Macchine inutili*; in the 1950's it appears with *Aritmie*, a precision mechanism that goes insane in syncopated hiccuping deprived of apparent sense, but with the advent of the *Xerografie originali*, the conceptual displacement and the displacement of use is complete. By moving the page while the photocopier is in use unique, non repeatable effects can occur: the triumph of reproducibility is immediately overturned by an ironic gesture that affirms the possibility of abnormal and contrary use. It is not always like this, because Munari does not set himself against things, but is flexible (we are slipping into Zen): he intends to make one think, and for this his objects always provide the possibility of manipulation and changeability: *Flexy*, a structure of steel thread obliges the user to manipulate it, a prelude to a taking of creative conscience, but also his lamps, from the first, cubelike and dismantable one, covered by a plastic sheet, to the famous mesh lamp, do the same; before being objects of use they are pragmatic demonstrations of a design concept that other than the simplicity and simplification of production (a lamp of a two meter height is folded into a box of two centimeters) looks for the maximal structural simplicity, the limiting point of each construction beyond which the structure ceases to exist²².

It is an even more organic concept than Mies famous aphorism, "less is more", because the structure that Munari searches is a "continuous structure"²³, similar to the cellular structures of growth, theoretically unlimited and so elastic in its deformation as to be nearly unrecognizable to its similars.

Thus, from the years of the *Concavo-convesso* (1947), in which the analogy with the contemporaneous research of Max Bill²⁴ seems too obvious, the Munarian intent had been instead

the most noteworthy were those of the book pavilion at the 1954 Venice Biennale and the much larger one for the 1964 Fiera di Milano (this last one has concentric colored cylinders some moved by motor, others by wind, others by water), both cases were destroyed at the end of the exhibits. There remains, in addition to the "ephemeral" fountains built for numerous shows by the artist, a small fountain in the house of the architect Ico Parisi at Como.

20 The "Scritture illeggibili di popoli sconosciuti" done from 1947, are ironic alphabets invented according to graphic structural rules.

21 The "Ricostruzioni teoriche di oggetti immaginari", conceived in 1956, are fantastic reconstructions of a found fragment: "I thought of these reconstructions as works that were not rigorously scientific but freely suggested by the same fragment and scrupulously filled in by fantasy, until finally making the entire imaginary object visible." (in Bruno Munari, "Codice ovvio", cit. p. 58).

22 The problem of maximum simplicity is, for Munari, also a problem of productive costs that, in the best intention of utopian design inherited from the historical avant-guard, should also become concrete in a low sale price. The problem of the cost of an object destined for a possible mass production is often taken up by Munari in his books specifically dedicated to design, and it is also the base of the discourses on the idea of "copies", meant as "production and non-production".

23 The "Strutture continue" of 1961 are object built with a modular in components which permits theoretically unlimited compositions of the number of modular parts and the size of the constructed object.

24 The "Concavo-convesso" of 1947-48 are handing tridimensional, metallic wire mesh structures illuminated by a light which projects a constantly changing shadow – thanks to infinite displacing of the structure by every current of air – in the surrounding area. Singular analogies can be found in contemporary research on the visualization of non-euclidian geometric object, like in

that to return diversity back to a substantial unity, recognizing in seemingly diverse forms the same simplicity of development, which furthermore eliminates the concept of natural deformity: the experiments with metallic wire netting that easily deforms but resists tearing, the series of designs on the “ancestors”, based on the recognizability of the human face, the already cited “continuous structures” and probably also the concepts and objects that go under the label of “programmed art” respond to the same demand of continuity. Munari's adherence to kinetic and programmed art can be read in this way: as an adherence to nearly a didactic instrument of examination on the chromatic and formal possibilities inside a substantial structural unity, and not as ideological adherence to the reasons of technological reproducibility or of a mistaken technological art, he does not, thus, need to affirm art by reputating the precedent. Movement and eternal changeability become the problem, and as the interest for this does not derive from his adherence to futurism, but really from the contrary, so another reason can be found to show that the programmability of the esthetic object is the consequence, and not the cause of his connection to the movement. In this, the idea of the microesthetic, advanced by Max Bense during his years of teaching at Ulm, can be found tangentially to the Munarian experience. Discovering the minimal code of esthetic excitement, in fact, for Munari practically corresponds to the individualization of some laws of perception that do not have – if it is well noted – only bases in pure mathematics and logic. Munari's logic is a logic that shows “the contrary”, it is not only deductive, but essentially inductive: the worth of an object, a material, an idea or even a global conception of the world is verified by straining to the limit the common conception of it, by playing on the unpredictability of the concept and on its use so as to postulate the opposite of the usual vision. A contrary that flanks the usual vision, revitalizing it and making it new again, because the eyes that now see it have become new. The analogy with the orient, and above all with Zen philosophy, so much bantered about in how it regards Munari – who is, effectively, one of the figures which the orientals, in particular the Japanese, recognize major affinity with – can be found in this rethinking the real through an initial conceptual displacement. Only that Zen seems substantially contemplative, while Munari's inevitable anagraphical and cultural westernization makes him manipulate the real, almost as if it can be only possessed after having been used, and that the glance by itself, contemplation by itself, can not demonstrate an understanding of the infinite possibilities held in the real. From here springs his anxiety and faith in a vast concept of education, of teaching: education projected into life, in the style of the Bauhaus, but without the systematic idea of school. Seeing, knowing how to see, for Munari takes on the meaning of an illumination, almost of a sudden mental leap that discovers the invisible. And the beauty of the umbrella and gloves on the operation table is not any longer metaphysical, but physical, since things are tied to relationship that are far more subtle than those visible, and that are recognizable without having to descend too far into depth, and without having to charge them with mysterious valence. Munari does not want to look at the world by calling upon myth: for him mythical knowledge, if one hand institutes different relationship among things, on the other hand vanifies and cancels a valid knowledge of the world since two antithetical ways of knowing cannot co-exist at the same time. Munari, finally, does not want this capacity to look to be a conquest conquered at a high cost or, better, a reconquest of naivety, according to the traditional, and in part true, notions about the child-like artist. To do this, the capacity of “ingenious” reception that children possess should not be neglected, and it is to children in the lowest grades that Munari turns, mainly, trying to excite all the senses, when these still do not show resistance of a cultural kind, and have yet to be overly subjugated to environmental conditions. Once again it is the method, or the suggestion of a method, and not the notion, that teaches: it is needed to discover “the rose in the salad”, and not to design it on a page²⁵.

Moebius' ring, which the Swiss artist Bill experimented with. It should be noted that 1947 was the year of the first large exhibition of international abstract art, in an Italy barely out of the war: “Concrete and abstract art”, held at the Palazzo Reale in Milan gathered together nearly all of the European experiences of abstract geometric nature.

25 “Rose nell'insalata” is the title of one of Munari's books dedicated to children (Turin 1973), in which a slice of some vegetable is used as a stamp, which generates in turn floral images (roses, precisely), etc. can be seen. “Many masters”, Munari said in an unpublished interview, “believe that this procedure is the same as the traditional one cutting a potato and using it as a stamp: Instead it is a completely different thing, because it is an authentic discovery not a technique”.

At the end, the capacity to astonish that is attributed to Munari transforms into its opposite: an object only amazes when it reveals unsuspected potentials, but when the revelation of other possibilities becomes method, the different object ceases to cause stupor. Methodological displacement, *spiazzamento*, does generate the extraordinary but the obvious²⁶.

Translation by Peter LaVerne

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26 Besides the already mentioned volume of A. Tanchis, for knowing about Munari's work and critical fortune there basically remains the catalogue “Bruno Munari”, edited by the University of Parma, Centro Studi e Archivio della Comunicazione, edited in 1979 for the show at the Scuderie del Pilotta, that practically assembled all the meaningful texts on the figure and work of the designer artist.