"A Calvinian character": Bruno Munari's Six Memos for this Millennium

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Among Italo Calvino's works, *Six Memos for the Next Millennium* (1985), occupies a particular place. It is his first posthumous, unfinished book, and as such it was left without that rigorous control that was typical of Calvino's attitude towards his writing. For its unintentional testamentary dimension, it has been also read in a utopic or semi-prophetic light, as a critical handbook that provides a tentative map to navigate contemporary cultural complexities through the filter of the Western literary tradition. The text is forward looking, proposing to "consider the past in relation to the future,"[1] which puts it at odds with the broadly "apocalyptic" and critical tone that has characterized the Leftist Italian intellectual field for decades.[2] However, in their generality, or universality, these memos have at times been considered negatively as a collection of cultivated vagaries,[3] but also have fascinated many and been adopted as a set of tropes that can be moved analogically through disciplines and artistic practices. They have served as heuristic, conceptual, organizational frameworks that are not prescriptive but generative. They provide a template for the conceptual organization of knowledge, and for these reasons they have been adopted and applied as broad guidelines by a number of scholars in disciplines as diverse as architecture, graphic design, biology, mathematics, computer science, economics, engineering, and even pharmacology.[4]

The argumentative plasticity and the openness of the questions advanced by Calvino therefore authorized a range of interdisciplinary and inter-mediatic hermeneutic exercises. This is particularly true when considering Calvino's particular visual poetics and imagination, and his "ekphrastic impulse" and attitude.[5] The intention of this essay is to rearticulate Calvino's dicta to read and assess the work and the theoretical considerations of one of the most important and versatile twentieth-century Italian artists: Bruno Munari. This is not an arbitrary choice, for it is based on the belief that Munari embodies the six virtues extolled by Calvino like no

[1] Italo Calvino, *Saggi*, ed. Mario Barenghi (Milan: Mondadori, 1995), 2:2958. This quote is from one of Calvino's drafts for the inaugural lecture. All translations in this essay are mine unless otherwise stated.

[2] According to Giancarlo Ferretti, many Marxist writers and intellectuals of the 1960s and 1970s adopted a reactive stance (in recognition of their own fundamental impotence), taking a position of absolute, complete, and irreducible refusal when confronting the process of dehumanization and the neutralization of values by neocapitalism. It was also a refusal of any optimism. See Gian Carlo Ferretti, *La letteratura del rifiuto e altri scritti sulla crisi e trasformazione dei ruoli intellettuali* (Milan: Mursia, 1981).

[3] See Alessia Ricciardi's critique in *After La dolce vita: A Cultural Prehistory of Berlusconi's Italy* (Stanford: Stanford University Press, 2012).

[4] Johanna Jacob, "Calvino's Reality: Designer's Utopia," *Utopian Studies*, 9, no. 1 (1998): 103–19; Pio Zeppa, "'Six Memos' for Lymph Node Fine-Needle Cytology and Flow Cytometry," *Acta Cytologica* 60 (2016): 281–83; E. Brito and R. Furtado, "An engineer reads. Interpreting the Citylife Tower RdD1 structural design process through an essay of Italo Calvino," in *Structures and Architecture*, ed. J.S. Cruz (Boca Raton: CRC Press, 2016), 1255–62; Max D. Ray, "A pharmacist's reflections on Calvino's Six Memos," *American Journal of Health-System Pharmacy* 60, no. 22 (2003); Gabriele Lolli, *Discorso sulla matematica. Una rilettura delle lezioni americane di Italo Calvino* (Turin: Bollati Boringhieri, 2011); Paolo Ciancarini, Sergey Masyagin, Giancarlo Succi, "Software Design as Story Telling: Reflecting on the Work of Italo Calvino," in *Proceedings of the 2020 ACM SIGPLAN International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software*, November 2020, https://dl.acm.org/doi/10.1145/3426428.3426925, 195–208; Chris Steyaert, Daniel Hjorth, and William B. Gartner, "Six memos for a curious and imaginative future scholarship in entrepreneurship studies," *Entrepreneurship and Regional Development*, 23, nos. 1–2 (2011): 1–7.

[5] See Franco Ricci, *Painting with Words, Writing with Pictures: Words and Image in the Work of Italo Calvino* (Toronto: University of Toronto Press, 2001); and Birgitte Grundtvig, Martin McLaughlin, Lene Waage Petersen. eds., *Image, Eye and Art in Calvino* (London: Legenda-MHRA, 2007).

other artist in the Italian Novecento. This opinion was shared by Umberto Eco—the second Italian writer, after Calvino, to be invited to give the Charles Eliot Norton lectures at Harvard.[6] In his column for the weekly *L'Espresso*, "La bustina di Minerva," of October 15, 1998, commemorating Munari after he passed away on September 30, Eco described the artist as an exemplary case of Calvino's memos:

> He worked on the page as if tuning a violin. [...] His pencil moved with such an extraordinary lightness and rapidity, that it seemed to be tracing in the void the dance of bees. And I use terms like "lightness" precisely with Calvino's *Six Memos* in mind (who knows why I always saw Munari as a Calvinian character). I like to remember him like this, dancing and light, because by working alongside him I understood many things about rhythm, about empty space, about how one can "see" to the millimeter, from a simple sketch, what the finished work will look like—a very rare virtue.[7]

By extending Eco's considerations on Munari, it is easy to see how his work and method was informed not only by *lightness* and *quickness*, but also by *exactitude, visibility, multiplicity*, and *consistency*. Hence, Calvino's "exalogue" becomes a perceptive map to chart some common denominators in Munari's art, which has always been difficult to systematize because of his constant experimenting in many different fields of practice (graphic and industrial design, visual art, art pedagogy, children's literature, experimental film). The didactic dimension of Calvino's "lezioni americane" also resonates with Munari's pedagogical interests and preoccupations, charted in a series of seminal volumes such as *Arte come mestiere* (1966, *Design as Art*), *Artista e designer* (1971), *Codice ovvio*, (1971, *Obvious Code*), and *Design e comunicazione visiva* (1968, Design and Visual Communication), the latter, based on Munari's own Harvard lectures at the Design Workshop of the Graduate School of Design of the Carpenter Centre for the Visual Arts, being one of his most systematic books.[8]

Many considerations, remarks, annotations, methodological suggestions therein, not surprisingly, reverberate with Calvino's memos in an anticipatory way. The formulations included in *Six Memos* have in fact a precise correspondence with the aesthetic and methodological vocabulary of the Modern movement, of which Munari was a prominent example in Italy. As Johanna Jacob writes:

> Calvino's values can already be associated with existing concepts or guidelines in the design profession as established by the Modern movement. These formal guidelines are described to graphic designers using almost the same terms that Calvino titles each of his chapters in *Six Memos*: lightness, the use of white space in design, quickness, the delivery of a concise clear message in a given

[6] Eco "rubbed shoulders" with Munari in the context of the Milan art scene, and for their collaboration within the Bompiani publishing house, for which Munari designed several books covers and series. The experience of "Arte Programmata," spearheaded by Munari in 1961, was intercepted and became a case in point for the theoretical considerations put forward by Eco in *Opera aperta* (1962). See Bruno Munari and Giorgio Soavi, eds., *Arte programmata: arte cinetica: opere moltiplicate: opera aperta* (Milan: Officina d'arte grafica A. Lucini, 1962); Lindsay Caplan, *Arte Programmata: Freedom, Control, and the Computer in 1960s Italy* (Minneapolis: Minnesota University Press, 2022).

[7] Umberto Eco, "L'insostenibile leggerezza di una matita. Come s'impaginava un libro con Bruno Munari," *L'Espresso,* October 15, 1998.

[8] Bruno Munari, *Design e comunicazione visiva*. *Contributo per una metodologia didattica* (Rome: Laterza, 1968). For a general historical account of the Design Workshop of the Carpenter Centre in the years under the direction of Costantino Nivola and Mirko Basaldella, see Kevin McManus, *Italiani a Harvard*: *Costantino Nivola, Mirko Basaldella e il Design Workshop (1954-1970)* (Milan: Franco Angeli, 2015).

time frame, exactitude, the precision of the designer's craft, visibility, a clear visual communication of a message, and multiplicity, the dissemination of ideas via a system of communication.[9]

Figs. 1, 2. Bruno Munari, Covers of *Codice Ovvio*, ed. P. Fossati (Turin: Einaudi, 1971) and *Design e comunicazione visiva* (Rome: Laterza, 1978).

However, the distinctive originality in Munari is that these values are extendable to all his production, irrespective of genre, form, discipline, or type of artistic interventions. A key aspect of Munari's artistic production relates not only to the experimental nature of his works but also to the continuity and formal coherence running through them, despite their varying expressive modes and genres. Munari did not make rigid distinctions between different forms of "visual communication," regardless of whether critical or descriptive analysis sought to confine them within the boundaries of abstract art, graphic design, industrial design, or children's literature. Munari was constantly challenging critical and artistic conventions, trying to bridge the fault lines that too often divide different forms of artistic expression. For Munari, visual forms should be judged for their formal coherence and for their effectiveness at communicating specific eidetic information, irrespective of any intended audience. In his desire to overcome every form of subjectivism, Munari believed that the instruments of graphic design—form, color, spatial relations, visual rhythm—should respond to a sort of "sensory communication" understood as objective and universal, consistent with many of the programmatic points of Concrete art, and consistent more generally with a cognitive approach to the aesthetic experience. Consequently, the formal lexicon that we find in his graphic design output is also found in his experimental art works (without any intrinsic hierarchical trajectory of derivation); and similarly, the critical or theoretical categories that can be applied to the consideration of his industrial designs are also pertinent and productive in the analysis of his stories for children or experimental photography.

[9] Jacob, "Calvino's Reality," 105. A leading contemporary designer, Karim Rashid, claimed he took inspiration from Calvino's *Six Memos*. See Charles Reeve, *Karim Rashid: From 15 Minutes into the Future*, exh. cat. (Ontario: Onsite Gallery at OCAD University, 2007). Available at http://openresearch.ocadu.ca/id/eprint/589/.

On the Other Side of the Page: Calvino and Munari

In spite of the alleged commonality, and the fact the two found a meeting point in their editorial work for the Einaudi publishing house, particularly in the 1960s, Calvino never considered Munari a notable presence in the context of contemporary Italian art. In some of his editorial letters, Calvino refers to him simply as Einaudi's "graphic designer."[10] A marginal mention can be found in *Collezione di sabbia* (1984, *Collection of Sand*), in which Calvino refers to Munari's famous comic and whimsical machines (which he defines as "folli" [mad, crazy])[11] from *Le macchine di Munari* (1942, *Munari's Machines*), the first of a series of books that would grant Munari a relevant place in the history of children's books in Italy and at the international level.[12] In one of his autobiographical notes, "Ricordo di Vittorio Metz" (1984), Calvino also refers to his early reading in the 1930s of *Bertoldo* and *Settebello*, the satirical illustrated weekly magazines in which vignettes and cartoons by Federico Fellini or Saul Steinberg were published side by side with some of Munari's "useless machines."[13] Calvino's statement is consistent with what Munari wrote in the first lines of the preface to *Arte come mestiere* ("Lots of people know of me as 'You know, the man who made the useless machines'"),[14] i.e., the sustained reduction of his work to a series of commonplaces[15] or "curiosities" in the context of Italian art (all self-consciously listed in his book *Verbale scritto* [Written report]). It is also testimony of the protracted topicality of Munari's famous work to the point that it became a generic term or a metonym for a variety of post-futurist artistic articulation of "machine aesthetics." If in *Settebello* Munari published some early examples of his comic machines later developed in *Le macchine di Munari*,[16] in *Arte come mestiere*, Munari warns that these should not be confused with his "useless machines." "Munari's Machines" are in fact an antiphrastic subversion of the geometrical and rational simplicity of his kinetic sculptures, a humorous exercise with excessive, parodic, and histrionic translations of machine art, which departs from futurism and embraces a surreal and Dadaist approach, also inspired by popular comic representation, like the America cartoonist Rube Goldberg's comical contraptions (see fig. 3, Bruno Munari, *Le macchine di Munari*).

The lack of any explicit acknowledgement of Munari's art on the part of Calvino is somewhat surprising considering the role played by Munari in the definition of the "corporate image" of Einaudi, which has become an exemplary case study in the history of Italian graphic

[10] Italo Calvino, *Lettere 1940–1985*, ed. Luca Baranelli (Milan: Mondadori, 2000), 612, 820. In a 1973 letter to Toti Scialoja, Calvino also refers to Munari as the editor of Einaudi children's book series "Tantibambini," which represented a revolutionary approach to children's literature in Italy, but which was also marred by a number of misconceptions within Einaudi itself. See Federica Orsi, "Complicare è facile, semplificare difficile: Bruno Munari e la grafica di casa Einaudi," in *Storie in copertina. Protagonisti e progetti della grafica editoriale* (Novara: Edizioni Santa Caterina, 2014), 19–33. A very harsh critique to the series came from Natalia Ginzburg, in *Vita immaginaria* (Milan: Mondadori, 1974), 160–66.

[11] Calvino, *Saggi*, 1:59.

[12] On this see Leonard S. Marcus, "Invention and Discoveries: An Interview with Ann K. Beneduce," *The Lion and the Unicorn* 7 (1983): 47–63; Marnie Campagnaro, *Il cacciatore di pieghe. Figure e tendenze della letteratura per l'infanzia contemporanea* (Lecce: Pensa MultiMedia, 2017); Marnie Campagnaro, "The Function of Play in Bruno Munari's Children's Books. A Historical Overview," *Ricerche di Pedagogia e Didattica. Journal of Theories and Research in Education* 11, no. 3 (2016).

[13] Calvino, *Saggi*, 2:2903. For a detailed account of Munari's activity as graphic designer and collaborator for a number of Italian magazines in the 1930s and 1940s, see Alessandro Colizzi, "Bruno Munari and the Invention of Modern Graphic Design in Italy, 1928–1945" (PhD Dissertation, University of Leiden, 2011).

[14] Bruno Munari, *Design as Art*, trans. Patrick Creagh (London: Penguin, 2008), 15; *Arte come mestiere* (Roma: Laterza, 1966).

[15] Bruno Munari, *Verbale scritto* (Mantova: Corraini, 2008), 84.

[16] Bruno Munari, *Le macchine di Munari* (Turin: Einaudi, 1942). In *Il Settebello* Munari published "Apparecchio clandestino per vincere la malinconia," *Il Settebello* 261 (November 3, 1938). An earlier example is also included in *Almanacco Bompiani 1933* (Milan: Bompiani, 1932), 301.

design. With Max Huber, Munari designed the covers of the most famous post World War II book series by Einaudi, increasing the public recognizability of the Einaudi "brand," in a way that remains unmatched in the history of Italian publishing (possibly with the exception of Adelphi).[17] The PBE, the Nuovo Politecnico, the Nuova Universale Einaudi, the "collana bianca" of poetry, and the Paperbacks are still some of the most iconic and the most memorable series of the Turinese publisher. Munari also designed two of Calvino's most important editorial contributions to the Einaudi catalogue: the series "Centopagine," and the literary journal *Il Menabò*, co-edited with Vittorini (see fig. 4, "Centopagine").[18]

This oversight might be due to historical, critical, and ideological circumstances. Graphic design has long been considered a lesser art form in the context of Italian culture,[19] while Munari's critical fortune might have also been tainted by his early affiliation with Futurism in the late 1920s and 1930s, given that movement's political involvement with the Fascist regime.[20] Among the great designers of the Italian school, Calvino in fact devotes a personal tribute only to Albe Steiner after his passing in August 1974,[21] in which he glosses over Steiner's artistic activity, by sketching the latter's political, intellectual, and psychological profile, characterized by a forward-looking optimism and by "a lightness and serenity of soul, which allowed him to move through the crises of our world, with all its exasperating issues, without sinking into quicksand and miraculously remaining himself."[22] Steiner's personality seems to parallel Munari's, as noted for instance by Giulio Einaudi, who remembered the artist's "wisdom," "intelligence," "wit," and "lightness."[23]

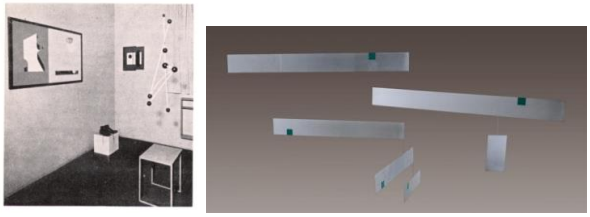
In this map of missed recognition or recognition "by proxy" in the context of Italian visual art, Calvino found in Fausto Melotti's work a specific point of interest and a visual inspiration for many of his books.[24] In particular, Melotti's sculptures, with their tension towards verticality, transparency, and lightness explicitly informed Calvino's *Le città invisibili* (1971, *Invisible Cities*): "The happiest images of cities are those that are rarefied, threadlike, as if our most optimistic imagination today could only be abstract […]. There was a moment when after meeting the sculptor Fausto Melotti, one of the first Italian abstractionists […], I would come to write cities as thin as his sculptures: cities on stilts, spider web-like cities."[25] As Letizia Modena explains:

> From the abstract sculptures of the '20s and '30s to the threadlike works of the '60s and '70s, Melotti's oeuvre developed as a progressive subtraction of

[17] Cf. Mario Piazza, "Il libro al centro: L'Einaudi e la grafica," in *I libri Einaudi 1933-1983*, ed. Andrea Tomasetig (Milan, 2016).
[18] See Federica Orsi and Gasparro Pasqua, "Le copertine della rivista Il Menabò," in *Autori, lettori e mercato nella modernità letteraria*, ed. I. Crotti et al. ((Pisa: ETS, 2011), 307–14.
[19] See for instance Mario Piazza, "La grafica per il 'made in Italy,'" *Ais/Design Journal. Storia e Ricerche* 1, no. 1(2013): 52: "Il dibattito della fine degli anni Cinquanta vede la grafica ancora confinata nell'interregno dell'arte minore, lontana dall'insorgente nozione di progetto e succube dell'incalzante affermazione della pubblicità." See also Vanni Pasca, "Design: Storia e storiografia," *Ais/Design Journal. Storia E Ricerche* 1, no. 1 (2013) 7–23.
[20] For a nuanced and informed discussion on Munari's political outlook in relation to his work as graphic designer in 1930s and 1940s, see J. Schnapp, "Munari's Bombs," in *Magazines, Modernity and War*, ed. Jordana Mendelson (Madrid: Museo Nacional Centro de Arte Reina Sofia, 2008), 141–59; Maria Antonella Pelizzari, "The Charade of Bruno Munari's *Photo-reportage* (1944)," in *Bruno Munari: The Lightness of Art*, 133–92; and Pelizzari, "Facts and Fantasies: Photography and Camouflage in 1930s Italian Illustrated Media," *Modernism/Modernity* 26, no. 3 (2019): 563–94.
[21] Calvino, *Saggi*, 2: 2799–2802.
[22] Ibid., 2:2800.
[23] Giulio Einaudi, "Con la casa editrice Einaudi," *Munaria, Abitare festeggia i 90 anni di Bruno Munari. Abitare*, no. 366 (October 1997).
[24] Marco Belpoliti, *L'occhio di Calvino* (Turin: Einaudi, 1997), 76, 148.
[25] Italo Calvino, *Romanzi e racconti*, ed. by Mario Barenghi and Bruno Falcetto (Milan: Mondadori, 1992) 2:1363.

> weight. The disembodiment, or stripping, of an oversaturated urban reality plays a crucial role in the novel as it does in Melotti's sculptures, precisely because Calvino saw in Melotti's oeuvre the plastic rendering of his own […] concept of lightness.[26]

The art critic and editor at Einaudi, Paolo Fossati, could have played a key role in this relationship. He spearheaded the innovative series "Einaudi Letteratura," and for this collection, in 1971, he edited both Melotti's book, *Lo spazio inquieto* (The restless space), with an introduction by Calvino, and Munari's *Codice ovvio*.[27] Possibly conceived as a parallel book to Melotti's, the latter did not attract Calvino's interest, in spite of formal similarities between the two artists, and the influence that Munari's work might have had on Melotti. Commenting on Calvino's writing on contemporary artists, Letizia Lodi refers to Alexander Calder to describe Melotti's threadlike sculptures of the 1960s and 1970s.[28] However, the formative period for Melotti's abstract sculptures coincides with Munari's, and their exchanges with the protagonists of Italian abstractionism in Milan in the 1930s (Atanasio Soldati, Osvaldo Licini, Mario Radice, Lucio Fontana, Mauro Reggiani), particularly around the Il Milione Gallery.[29] From a chronological standpoint, both Munari's *Macchina aerea* (fig. 5, 1930, *Aerial machine*) and the first *Useless Machines* (fig. 6, 1932) predate Melotti's sculptures, which clearly borrow formal elements from both.[30]



Figs. 5, 6. Macchina aerea, 1930, and Useless Machine, 1932.

However, like Calder, Melotti opted for a more traditional approach to sculpture, and more durable and permanent materials, as evident for example in his *Sculpture 21* (fig. 7) and *Little Chains* (fig. 8). Munari was more radical in his approach to structural and material lightness (a constant ideational and constructive method for him), but also increased the fragility and the ephemerality of these works, contributing to his patchy critical recognition.[31]

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[26] Letizia Modena, *Italo Calvino's Architecture of Lightness: The Utopian Imagination in An Age of Urban Crisis* (London: Routledge, 2014), 16.

[27] Fausto Melotti, *Lo spazio inquieto*, ed. Paolo Fossati (Turin: Einaudi, 1971); Bruno Munari, *Codice ovvio*, ed. Paolo Fossati (Turin: Einaudi, 1971). Available in English translation as *Obvious Code*, ed. Francesca Bertolotti-Bailey, Stuart Bertolotti-Bailey, Vincenzo Latronico, David Reinfurt (Amsterdam: Roma Publications, 2019).

[28] Letizia Lodi, "I colori della mente. Italo Calvino: Scritti sulle arti (1970–1985)," in *Italo Calvino, la letteratura, la scienza, la città*, ed. Giorgio Bertone (Genoa: Marietti, 1988), 149. See also Germano Celant, "Viaggio nella galassia Melotti," in *Fausto Melotti*, ed. G. Celant, exh. cat. (Milan: Electa, 2012), 13–33.

[29] See Paolo Fossati, *L'immagine sospesa. Pittura e cultura astratte in Italia, 1934–1940* (Turin: Einaudi, 1971); Luciano Caramel, "Gli Astratti," in *Anni Trenta. Arte e Cultura in Italia* (Milan: Mazzotta, 1983),151–74; Elena Pontiggia, *Il Milione e l'Astrattismo 1932–1938* (Milan: Electa, 1988).

[30] Munari's first personal exhibition was held in 1933 at the Galleria 3 Arti in Milan. Melotti's at Il Milione Gallery in 1935.

[31] "Nearly all of them [my friends] had one of my useless machines at home, but they kept them in the children's rooms because they were absurd and practically worthless, while their sitting rooms were adorned with the sculptures of Marino Marini and paintings by Carrà e Sironi […] Then these friends of mine discovered Alexander Calder, who was making mobiles; but his things were made of iron and painted black or some stunning colour. Calder triumphed in our circle, and I came to be thought of as his imitator." Munari, *Design as Art*, 15–16.


Figs. 7, 8. *Sculpture 21* and *Little Chains*.

Lightness

In the volume *Bruno Munari: The Lightness of Art* (2017), my fellow editors and I opted for Calvino's *lightness* as the symbol and as the descriptive and formal approach that summarizes the multiple variety of Munari's works.[32] As in Calvino's ideation, Munari's *lightness* is not frivolity or superficiality, but a "thoughtful" lightness,[33] that is a structural element of the work of art, through a process of subtraction of weight, and through the reorganization of physical forces, like gravity and movement. Many of Munari's works are perfect examples of the kind of lightness discussed by Calvino, from material, formal, and morphological standpoints: the *Useless Machines* (1932), *Concave-convex* (1949), *Filipesi* (1981), the *Travel Sculptures* (1958), the multiple *Flexy* (1968), the performance *Fare vedere l'aria* (1969, *Air made visible*), but also projects of industrial design like the *Falkland lamp* (1964) or *Abitacolo* (1971). In this process of de-materialization, of "figures suspended in air,"[34] *Concave-convex* is perhaps one of the most emblematic: it is a form generated by the bending of a metal wire mesh, mounted on a room's ceiling alongside a small light projector, that offers a kind of "perpetually changing shimmering,"[35] "beautiful *moiré* effects that appear and dissolve like a cloud,"[36] in a precise and absolute form of weightlessness, and as a perfect mental and visual example of *lightness* (fig. 9, Bruno Munari, *Concave-Convex*).

In general, Munari's method moves towards essentialization and "simplification to the bone" (as expressed by Dino Buzzati)[37] of the components of an object of design or visual communication, which is a thought through aesthetic, and creative methodology. A motto by Munari that is constantly quoted is: "To complicate is easy. To simplify is difficult. To complicate you just need to add anything you want. Colors, shapes, actions, decorations, people, environments full of things. Everyone is able to complicate. Few are able to simplify."[38] *Lightness* is expressed in many of his works also in terms of portability (epitomized by *Travel Sculptures* [fig. 10] and *Direct Projections*, 1950) through a process of material recombination, foldability, and miniaturization, following the technological innovations that are constantly at the disposal of contemporary artists and designers.[39]

Munari's *lightness* has also been interpreted as his sense of humor, irony, lack of *gravitas*, irreverent spirit. However, irony should not simply be considered as the survival of a latent Dada spirit, nor as a cipher of a postmodern skepticism *avant la lettre*. It is rather, on the one hand, a deliberate rhetorical device used to make his arguments more compelling and evident,

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[32] Pierpaolo Antonello, Matilde Nardelli, Margherita Zanoletti, eds., *Bruno Munari: The Lightness of Art* (Oxford: Peter Lang, 2017). See in particular the introduction, "Bruno Munari's Lightness," 1–23.
[33] Italo Calvino, *Six Memos for the Next Millennium*, trans. by Geoffrey Block (London: Penguin, 2016), 14.
[34] Calvino, *Six Memos*, 42.
[35] Munari, *Obvious Code*, 41.
[36] Munari, *Design as Art*, 164.
[37] Dino Buzzati, "Il folletto Munari. Quarant'anni di nuove idee," *Corriere della Sera*, October 22, 1971, 3. "[Munari] interviene continuamente e giocondamente nella nostra vita quotidiana, e tutto quello che fa, anche se scaturito da concetti e calcoli molto sottili [...] riesce estremamente semplice e chiara, la semplificazione all'osso essendo, grazie a Dio, il suo chiodo fisso."
[38] Bruno Munari, *Verbale scritto* (Mantova: Corraini, 2008), 53.
[39] Munari, *Design as Art*, 183–87. See also Matilde Nardelli, "The Small, the Large, and the Moving: Bruno Munari and Cinema," in *Bruno Munari: The Lightness of Art*, 253–92

particularly in his writing, and on the other, a procedural strategy of self-regulation. As Munari repeated to several interviewers, for him irony is a technical test or a

> form of self-criticism to see if what I plan to do would stand objections. You could say that irony is a kind of testing. There are some people who produce objects in the field of art or in any other field and they cannot bother to test them, so they put them out and, maybe, they don't work. On the other hand, if we think, for example, of when an engineer builds a bridge for trains and loads it with a weight equivalent to ten trains; you might say he is being ironic, but in fact, we are quite sure that trains will pass safely over that bridge. So, what I do, when I plan and design something, is enact an operation of criticism, of self-criticism, to see if what I am thinking of doing stands any objection. If it stands, that means it works.[40]

Irony as a tool for endo-critical testing, plays also an exo-critical and political role. Just as Calvino, for whom irony plays a "modalizing function [funzione modalizzante]," used to contrast "certain intellectual attitudes against which it would serve as an antidote,"[41] Munari's work could also be read in meta-artistic terms, as an ironic comment against specific contemporary artistic trends or expressive commonplaces. Clear examples are the "useless machines," which, although in dialogue with international abstractionism, are also an antiphrastic debunking of the futurist representation of the machine.[42]

Calvino also linked "humor and lightness" to another of Munari's close collaborators for a series of publishing ventures:[43] Gianni Rodari, for whom these traits were "gifts of his temperament and his gracefulness, and of his clear head."[44] Rodari's "experiment-games [esperimenti-giochi]," and his "associations of words and ideas by phonetic or semantic contiguity" as his "main working tool,"[45] were common practices in Munari's work since the beginning of his artistic career. With a penchant for surrealist inflected nonsense and calembours, many of Munari's works are examples of this playful attitude, starting from the texts included in *Le macchine di Munari*.[46] They also resonate with the Oulipo practice *avant la lettre*, as in the case of his polymateric work *ABCDadà* (1944) or the primer *Alfabetiere* (fig. 9, 1960),[47] which are not very dissimilar from Calvino's exercise, "Piccolo sillabario illustrato (da Georges Perec)" (1978).[48]

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[40] Bruno Munari, "Il caso e la creatività," *Domus*, no. 659 (March 1985): 84–85.

[41] Bruno Falcetto, "Sorriso, riso, smorfia. Il comico nello stile di Calvino, in *Calvino & il comico*, ed. Luca Lerici, Bruno Falcetto (Milan: Marcos Y Marcos, 1994), 49–50.

[42] See Pierpaolo Antonello, "Beyond Futurism: Bruno Munari's Useless Machines," in *Futurism and Technological Imagination*, ed. G. Berghaus (Amsterdam: Rodopi, 2009), 313–34.

[43] Starting from 1960, with *Filastrocche in cielo e in terra*, Rodari published with Einaudi a series of books illustrated by Munari. See Gianni Rodari, *I libri della fantasia*. Disegni di Bruno Munari (Turin: Einaudi, 2009).

[44] Calvino, *Saggi*, 1:1245–46.

[45] Ibid., 1:1246. For a discussion of Calvino's "playfulness," with reference to Rodari, see Stefano Bartezzaghi, "Calvino at Play: Rules and Games for Writing in Space," in *Image, Eye and Art in Calvino*, 122–40.

[46] An exemplary collection is Bruno Munari, *Verbale scritto* (1992). Cf. P. Antonello, "Ecfrasi andata e ritorno: l'opera di Bruno Munari tra contaminazioni visivo-testuali, ironizzazioni d'arte e auto-progettazione," *Letteratura & Arte* 19 (2021): 121–44; Margherita Zanoletti, "Word Imagery and Images of Words: Bruno Munari the Writer," in *Bruno Munari: The Lightness of Art*, 193–226

[47] Bruno Munari, *Alfabetiere. Facciamo assieme un libro da leggere secondo il metodo attivo* (Turin: Einaudi, 1960).

[48] Italo Calvino, *Romanzi e racconti*, 3:334-41.

Fig. 11. Alfabetiere.

This would point to a formal and conceptual concurrence between Munari and Calvino with respect to the relationship between combinatorics, play and art, as expressed, for instance, in Calvino's "Cibernetica e fantasmi" ("Cybernetics and Ghosts"):

> The processes of poetry and art, says Gombrich, are analogous to those of a play on words. It is the childish pleasure of the combinatorial game that leads the painter to try out arrangements of lines and colors, the poet to experiment with juxtapositions of words. At a certain moment, things click into place, and one of the combinations obtained—through the combinatorial mechanism itself, […]—becomes charged with an unexpected meaning or unforeseen effect which the conscious mind would not have arrived at deliberately.[49]

These considerations are parcels of a wider aesthetic and anthropological discussion in the 1960s that Munari tapped into, particularly through the mediation of the art critic, friend, and collaborator with the Arte concreta (Concrete Art) movement, Gillo Dorfles. Dorfles in *Nuovi riti, nuovi miti* (1965, New rites, new myths), discusses the art-play relationship, contending with Levi-Strauss' notion of *bricolage* and with Tomas Maldonado's conception of *jongleurie*,[50] which converge both with Calvino's considerations and with Munari's practice. In *Arte come mestiere*, Munari borrows Dorfles' reference to Japanese concept of *asobi*, both "art" and "play,"[51] and it is fully enacted in his pedagogical workshops for children and in his creative toys, all based on a combinatorial principle at the formal and structural levels.[52]

Quickness

In his second lecture, "Quickness," Calvino commences by discussing the expressive parsimony and the functional storytelling typical of the folkloric tradition, and of oral narratives of traditional popular culture. Calvino also refers to *quickness* as "concision," as the effective and essential amalgamation within a text of both thought and poetry.[53] This echoes Munari's dictum cited above: "Everyone is capable of complicating things. Few are able to simplify. [...] Removing instead of adding means understanding the essence of things and communicating their essentiality. […] Simplification is symptom of intelligence, as an ancient Chinese saying goes: what can't be said in a few words cannot be said in many."[54] Quickness as "concision" is aptly applied by Munari to his own particular type of story-telling for children, from *Nella notte buia* (1956), *In the Darkness of the Night*), to the three chromatic variations of "Little

[49] Italo Calvino, "Cybernetics and Ghosts," in *The Uses of Literature*, trans. by Patrick Creagh (San Diego: Harcourt Brace & C., 1986), 40.
[50] Gillo Dorfles, *Nuovi riti, nuovi miti* (Milan: Skira, 2003), 48–53; 71–77.
[51] Munari, *Design as Art*, 182.
[52] Cf. Bruno Munari, *Da cosa nasce cosa. Appunti per una metodologia progettuale* (Roma-Bari: Laterza, 1981), 240–52. Examples are *Scatola di Architettura MC1* (1945), *Aconà Biconbì* (1961), and Giovanni Belgrano, Bruno Munari, *Più e meno* (1970).
[53] Calvino, *Six Memos*, 45.
[54] Munari, *Verbale scritto*, 53–54.

Red Riding Hood."[55] Expressive concision is achieved both at the linguistic and visual level, informed by the typical modernist disposition to simplification and communicative effectiveness, but also by the understanding that children require clarity, precision, and a degree of interpretative freedom: "With children you have to be very simple but extremely clear. It is always a matter of clarity and simplicity […] Taking away the superfluous to give exact information."[56] In *Nella notte buia* or in *Nella nebbia di Milano* (1968, *The Circus in the Mist*), narratives are in fact not built around plots, but are made of settings, of zones of exploration and possibilities. Texts are minimal, while sharp chromatic contrasts and simple images are at the service of the child's imagination and propel the story. Quoting Scott McCloud's thesis on iconic images in comics and sequential art, the more iconic an image is, the more universal it seems. Lacking specific features, readers project themselves onto the character, filling in the details. McCloud calls this principle "amplification through simplification,"[57] which may resonate with Calvino's postulation that "a quick, concise style is pleasing because it offers the mind a host of ideas simultaneously."[58]

What also emerges in Calvino's "Quickness" is a particular, performative dimension of the creative act, based on the "relation between physical and mental speed,"[59] and on the capacity to establish a meaningful relationship between elements that are apparently far from each other. Eco remembered how Munari's pencil would move "with extraordinary lightness and speed," trained by years of practice and research on a wide variety of forms of communication and expression. Giulio Einaudi's comment was similar:

> I remember him in hundreds of meetings. He would arrive and we had already prepared a stack of books that needed cover art: with lightning-fast inventiveness he would give immediate formal response to the books' content. He would choose the fonts, the colors, the pictures. He had very fast mental circuits that coagulated in his hands. His hands acted and created as in an accelerated film; he seemed to think with his hands and thoughts would become actualizations in real time.[60]

If, for Cesare Pavese, Calvino was the "scoiattolo della penna" ("squirrel of the pen"), [61] for Raffaele Carrieri, Munari was a "grillo analogico" ("analogical cricket"), who "worked with the precision and speed of a pearl threader."[62] Dino Buzzati also described Munari as "un folletto" ("a sprite")[63] who could move with swift agility on the various branches of artistic forms, and who explored with a similar productive effectiveness and manual dexterity, guided by a constant experimental desire to push the limits of what can be done in the field of visual communication, with respect both to tradition and to contemporary technological and material innovations.[64]

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[55] Bruno Munari, *Nella notte buia* (Milan: Muggiani, 1956); *Nella nebbia di Milano* (Milan: Emme Edizioni, 1968); *Cappuccetto Verde* (Turin: Einaudi, 1972)*; Cappuccetto Giallo* (Turin: Einaudi, 1972); *Cappuccetto Bianco* (1981). See Marnie Campagnaro, "Tocca! Come funzionano gli albi di Bruno Munari," *Rivista di storia dell'educazione* 1 (2019): 81–96.
[56] Munari, *Design e comunicazione visiva*, 74–75.
[57] Scott McCloud, *Understanding Comics: The Invisible Art* (New York: HarperPerennial, 1994), 30.
[58] Calvino, *Six Memos*, 38.
[59] Ibid., 46.
[60] Giulio Einaudi, "Che miracolo le sue mani," *La Stampa*, October 1,1998, 25.
[61] Cesare Pavese, "Calvino," *L'Unità*, October 26, 1947.
[62] Raffaele Carrieri, "Munari si diverte," *Tempo* 10, no. 13 (March 27-April 3, 1948): 21.
[63] Buzzati, "Il folletto Munari."
[64] On this score see Alberto Munari, "How Could it be Done Differently?" in *Bruno Munari: My Futurist Past*, ed. Miroslava Háyek and Luca Zaffarano (Milan: Silvana Editoriale, 2012), 165–68.

"Quickness of style and thought means above all nimbleness, mobility, and ease," Calvino writes.[65] "Thinking muddles ideas," Munari used to repeat, because of his "learning by doing" approach to art practice,[66] but also because any artistic execution should be guided by a "precise spontaneity," one may say "sprezzatura," which does not amount to any form of erratic improvisation, but is rather characterized by a gestural approach based on extended training, constant observation and prolonged practice. In his argument on *quickness*, Calvino resorts to the symbolic density of two mythical figures, or archetypes: Mercury and Vulcan. Mercury/Hermes is the god of communication and mediation, who move quickly and freely between worlds, but also the god of *syntony*, or harmonious participation in the world around us. Vulcan is, on the contrary, a chthonic god, who "holes up in craters, working tirelessly in his smithy," and is also principle of *focalization*, or "constructive concentration." They represent the two sides of the same disposition to efficacy and productive dexterity: "Vulcan's concentration and craftsmanship are necessary in order to write about Mercury's adventures and transformations."[67] As an example of the contrasting complementarity of these two dispositions, Calvino concludes his lecture by quoting the story of Zhuang Zhou, a painter who asks his king for twelve servants and ten years in order to draw a simple crab. At the end of the story, Zhuang Zhou, "in an instant, with a single flourish, drew a crab, the most perfect crab anyone had ever seen."[68] This is a story that finds an echo in what I have called Munari's own "lezioni americane," where he discusses how a work of art "made quickly retains all the life that was present at the moment of its conception: the bamboo leaves in a Chinese or Japanese painting are made in a moment, but they have been observed for a long time. Observe for a long time, understand deeply, make it in an instant."[69] The motto *festina lente* (make haste slowly) cited by Calvino in "Quickness,"[70] could then be applied to Munari's approach to artistic creativity. He does not in fact associate quickness with speed or haste: in *Design e comunicazione visiva*, "fretta" ("haste") defines what prevents us from understanding a problem with the required attention and comprehensiveness, and is a symptom of ignorance, and of competitive anxiety, which becomes particularly relevant and problematic in an educational setting: "The rush to do something right away that others might do to our detriment."[71]

Exactitude

For Calvino, *exactitude* denotes three things: "1. a well-defined, well-considered design for the work; 2. the evocation of clear, sharp, memorable images (in Italian we have an adjective that doesn't exist in English: *icastico*, from the Greek εἰκαστικός); 3. a language that is as precise as possible in its choice of words and in its expression of the nuances of thought and

[65] Calvino, *Six Memos*, 40.
[66] For this methodology as key to the Design Workshop directed by Nivola and Basaldella, see Marcus, *Italiani a Harvard*.
[67] Calvino, *Six Memos*, 46.
[68] Ibid.
[69] Munari, *Design e comunicazione visiva*, 69.
[70] Ibid.; Calvino, *Six Memos*, 42: "I have always preferred emblems that, like a rebus, combine incongruous, enigmatic figures—such as the butterfly and crab with which Paolo Giovio illustrated *festina lente* in his sixteenth-century collection of emblems: two animal shapes, both bizarre, both symmetrical, that create between themselves an unexpected harmony."
[71] Munari, *Design e comunicazione visiva*, 54. Already in 1967, Munari acknowledged this pedagogical problem discussed by Joanna Jacobs with respect to current graphic design education: "[students] see their success and failure in relationship to another student with the perception that there is only one or two correct answers. By default, this creates a competitive environment and does not nurture the concept of a utopian community of learners." See Jacobs, 104–05.

imagination."[72] Similarly, Munari's artistic practice is informed by a rational approach, linked to a geometric and anti-impressionist outlook (emanating from the aesthetics and formal parameters of concrete art and the Bauhaus). Munari's works are carefully planned and informed by formal rigor. He has a scientific approach to composition and in fact he described his experimentation in terms of "research": "research always starts from a technical fact. It starts from the possibilities of the medium so to explore the values of visual communication, regardless of the content of the information, and without regard to any past or future aesthetics."[73] The need for precision and exactitude also drives him to be open to, and to interface with, new technologies which provide both new means and avenues of expression, and more precise tools for execution: "the principle is to arrive at the goal not only without physical effort but with greater precision;" "art is a mental fact whose physical realization can be entrusted to any means,"[74] where the implicit reference goes to the famous dictum by Leonardo "la pittura è cosa mentale" ("painting is a mental thing").[75]

For Munari, who rejects any form of solipsism or transcendental approach to art, what is important is the objective value of a work of art, or of any form of visual communication: "If an image used for a certain message is not objective, it has much less chance of communicating objectively: images must be readable by all in the same way, otherwise there is no visual communication, there is just visual confusion."[76]

This is in fact one of the concerns expressed by Calvino in "Exactitude": the epidemic of images to which we are subjected by contemporary media, "images that are largely void of the internal necessity that ought to distinguish every image, as a form and as a meaning, as a force that lays claim to our attention, as a wealth of possible meanings."[77] Similarly, Munari in his "lezioni americane" addresses the confusion and incoherence of the images that plague our daily experience, claiming that it is art's duty to rein in this disorder. By insisting on the need to "intervene and collaborate to try to bring some order to the chaos," Munari's words finds an echo not only in *Six Memos*, but also in the memorable and often cited final lines of Calvino's *Le città invisibili*: "seek and learn to recognize who and what, in the midst of the inferno, are not inferno, then make them endure, give them space."[78] What did artists do, throughout history, when they designed their works, Munari asks, answering: "They were trying to make evident an order (which is called aesthetics) in the chaos of nature. An order governed by laws of 'harmonic' relationships between parts and the whole."[79] For Calvino, the "plague" that affects images inevitably is mirrored by a similar disease that infects language, "as a loss of cognitive power and immediacy, as an automatic tendency to reduce expression to its most generic, anonymous, abstract constructions and to dilute its meanings."[80]

Similarly, for Munari, communicative clarity, both in visual and verbal terms, is a rational, intellectual, cognitive and ethical necessity. His books demonstrate a clear awareness and authorial control both at the linguistic and stylistic levels. They are written in a simple, uncomplicated, transparent language that can be accessible to a wide audience. They are democratic and "light" like his art works; in his writing, Munari is constantly aiming for what is essential. He employs a language devoid of technical terms, of any critical jargon, of erudition, but pedagogically informed and propaedeutic for a clear understating of the creative process and of aesthetic questions and issues in a variety of artistic fields. Munari's writing is

[72] Calvino, *Six Memos*, 48.
[73] Munari, *Design e comunicazione visiva*, 27.
[74] Ibid., 69–70.
[75] Leonardo da Vinci, *Trattato della pittura*, § 27.
[76] Munari, *Design e comunicazione visiva*, 13.
[77] Calvino, *Six Memos*, 49.
[78] Italo Calvino, *Invisible cities*, trans. William Weaver (Orlando: Harcourt Brace & Company, 1974), 165.
[79] Munari, *Design e comunicazione visiva*, 53.
[80] Calvino, *Six Memos*, 49.

a clear example of what Calvino advocates in his 1965 essay "L'antilingua": a form of writing that resists and contrast the anti-language of "hundreds of thousands of our fellow citizens" who speak

> the Italian of those who cannot say "I have done" [ho fatto] but must say "I have carried out" [ho effettuato] […] The main characteristic of the anti-language is […] "semantic terror" that is, flight in the face of any word that has meaning in itself […] the psychological motivation of the anti-language is the lack of any authentic relationship with life, which amounts, basically, to self-hatred.[81]

It is a language deprived of its cognitive and communicative efficacy, and by which "language is killed."[82] Munari's style is an "obvious code" that is made transparent by its essentiality, by the cancellation of any conceptual opacity, against any form of critical and descriptive mystification, traits typical of art criticism (which he mocks in *Artista e designer*),[83] and which amount to an elitist gatekeeping of the art world.

Munari also opposes any form of artistic "disharmony" that presumes to mimetically represent the chaotic nature of reality, and which is assumed to be critical in its revelatory demand. He rather predicates the need for clarity and communicability, as the prerequisite for a democratic political outlook in visual language. Much like Primo Levi in his polemic against Paolo Volponi,[84] Munari is against the programmed "incommunicability" of the critical language of artists who are "locked in their ivory towers" and responsible for the "utmost confusion" that we experience today, and "from which we can only get out by re-establishing new rules for visual communication, rules that are elastic, dynamic, and not fixed forever […] Rules that are above all objective, that is, valid for everyone, and that would produce a form of visual communication such that it does not need interpreters to be understood."[85]

In "Exactitude," Calvino also dwells on a binomial epistemological and aesthetic category that it is dear to him: the opposition between the crystal and the flame. They are "two forms of perfect beauty that rivet the gaze, two modes of growth over time, of use of surrounding material, two moral symbols, two absolutes, two categories for classifying facts and ideas and styles and feelings."[86] These two symbols, these two aesthetic forms, are carefully observed, registered and discussed, through a record of visual examples, in *Design e comunicazione visiva*. In his book, Munari includes a series of drawings, models, topological exercises, complex and texturized forms, modular elements, a selected repertoire of sculptures and architectures, operational modules, and design objects that are constructed —like crystal —by the serial multiplication, development, or growing of basic geometrical shapes and forms (fig. 10).[87]

[81] Calvino, *Saggi*, 1:155.
[82] Ibid..
[83] Munari, *Artista e designer*, 81–85.
[84] Primo Levi, *Opere*, vol. II (Turin: Einaudi, 1998), 680.
[85] Munari, *Design e comunicazione visiva*, 77.
[86] Calvino, *Six Memos*, 60.
[87] For a discussion see Pierpaolo Antonello, "Natura inventata: forme e strutture geometriche nell'opera di Bruno Munari," in *Matematica e letteratura*, ed. Paolo Maroscia, Carlo Toffalori, Francesco Saverio Tortoriello, Giovanni Vincenzi (Turin: UTET Università, 2019), 289–315.

Fig. 12. *Design e comunicazione visive.*

Although, much like Calvino, the rationalistic and geometrical approach to art composition adopted by Munari makes him a champion of the crystal, he is not oblivious to the aesthetic interest of the "flame," meaning of all those organic forms that develop and evolve through irregular patterns (fig. 13):

> By organic forms one can consider those forms that have no geometric structure such as lightning, rivers, nerves, the circulatory system of blood vessels, roots or branches of plants, etc. These are forms that adapt to the environment in which they are formed, while geometric forms force it […] by imposing their internal forces in opposition to the resistances of their surroundings. Many minerals have a geometric growth that forces its way into the land around them. A river, on the other hand, adapts to the nature of the land, and takes forms according to nature itself.[88]

It is this co-presence and co-determination of this polarity of geometric and organic forms, which are part of the physical manifestation of the natural world, that his students and his readers are invited to observe and understand as a way to address planning, compositional, and aesthetic problems for the twentieth and twenty-first centuries.

Visibility

Discussing the idea of visibility in reference to a visual artist might seem pleonastic, particularly for someone like Munari who embraced the aesthetic paradigms of Concrete Art, whose aims, according to Max Bill, are to make "visible in a concrete form […] abstract ideas which previously existed only in the mind."[89]

However, the idea of *visibility* expressed by Calvino addresses first of all the role of imagination in literature, which–he states–is a place "in which it rains," paraphrasing Dante in *Purgatorio* 12 ("piovve dentro l'alta fantasia").[90] By extending this image, one may say that by publishing *Fantasia* (1977), Munari provides his reader with a sophisticated "pluviometer."[91] *Fantasia* could be considered on the side of the visual, a response or a parallel book with respect to Rodari's *Grammatica della fantasia* (1973, *The Grammar of Fantasy*), both informed by a precise utopic pedagogical project. Munari always advocated the need to increase the visual literacy of students and laypeople, by fostering the "thinking through images" which is at the core of Calvino's argument. Crucial for Munari is to acquire an aesthetic fluency which would allow everyone to understand the formal coherence of any type of visual communication, and to creatively activate one's visual encyclopedia in order to stimulate the imagination. As he writes in *Fantasia*: "Imagination is the means to visualize and

[88] Bruno Munari, "Una ricerca sulle forme organiche," *Immagini* 24 (1968): 6. See also Munari, *Design e comunicazione visiva*, 242–51.
[89] Quoted in E. Hüttinger, *Max Bill* (New York: Rizzoli International, 1978), 61.
[90] Calvino, *Six Memos*, 99.
[91] For a discussion on the relationship between Rodari and Munari see Vanessa Roghi, *Lezioni di Fantastica. Storia di Gianni Rodari* (Bari-Roma: Laterza, 2020), 191–97; and *Munari per Rodari* (Mantua: Corraini, 2020).

to make visible what *fantasia*, invention, and creativity think."[92] In this sense, Munari offers a more precise terminological and conceptual distinction compared to Calvino's lecture. For Munari, imagination interacts constructively with invention (which pertains to the practical domain and is not limited by aesthetic concerns), and with creativity which is the finalized, and organized use of fantasy, which in itself is a totally unconstrained, free form of thought.

Discussing imagination, Calvino refers to Jean Starobinski's bipartition in *L'empire de l'imaginaire* (1970),[93] which discusses two historical schools of thought that considered imagination either "as tool of knowledge or as identification with the world soul."[94] For Calvino, the type of imagination that activates his storytelling derives primarily from "the spontaneous logic of images to a design guided by rational intent." However, he has also constantly seen imagination as "a route to knowledge that lies beyond the individual, beyond the subjective."[95]

Imagination for Munari is a form of relational knowledge because it "stems from the relationships that thought makes with what it knows."[96] It is the ability to articulate connections between images that we acquired and stored in our memory, which is also congruent with what Calvino expresses in "Visibility": creative work is the ability to produce "image associations"; "imagination [fantasia] is a kind of electronic machine that keeps track of all possible combinations and selects those that suit a particular purpose, or simply those that are the most interesting or pleasing or amusing."[97]

As for Rodari, for Munari, imagination responds to a specific set of rules, or a "grammar." It can be unpacked and analyzed through invariances, mechanisms of perception, objective values, contrasts, visual affinities, modifications of colors, material, places, dimension, movement, etc. Munari's perspective is germane to the "pedagogy of the imagination" that Calvino predicates as an antidote against the contemporary imaginative confusion: "bits of images cover our memory like a layer of trash, and among so many shapes it becomes ever more difficult for anyone to stand out."[98] For Calvino, it is imperative to foster this "potential pedagogy of the imagination that would assist in the control of inner vision, that would neither suffocate it nor let it slip into vague, ephemeral fancy but would instead allow images to crystallize into forms that are distinct, memorable, autonomous—icastic."[99] This is what Munari attempts with his art and writing.

Multiplicity

Calvino's fifth lecture opens by discussing "the contemporary novel as encyclopedia, as method of knowledge, and above all as network of connections among events, among people, among the things of the world."[100] A key example is Gadda's bulimic encyclopedism for which understanding reality is to map it in all its folds (in Deleuzian terms), in its complexity and relational entanglements.

The intrinsic encyclopedism in Munari is more controlled and precise, part of his methodological approach, and of his structural understanding of compositions. In his "lezioni americane," Munari explains that the more information we retain, the more connections we can create, developing our capacity to understand and to invent. Multiplicity for Munari refers to

[92] Bruno Munari, *Fantasia* (Rome: Laterza, 1977), 22.
[93] Jean Starobinski, *L'empire de l'imaginaire*, in *La Relation critique* (Paris: Gallimard, 1970).
[94] Calvino, *Six Memos*, 74.
[95] Ibid.
[96] Munari, *Fantasia*, 29.
[97] Calvino, *Six Memos*, 75.
[98] Ibid.
[99] Ibid.
[100] Ibid., 85.

the need for an epistemic openness: "the more aspects we know about the same thing, the more we appreciate it, and the better we can understand its reality that once appeared to us only in one aspect."[101] This was first of all a personal and methodological disposition. Since the start of his career in the late 1920s, Munari was in dialogue with and borrowed formal elements from futurism, cubism, surrealism, Dadaism, abstractionism, constructivism, rationalism, the Bauhaus. Munari was guided by the need and the impulse to experiment, "of 'trying,' of wanting to know everything."[102] As other protagonists of international modernism, Munari experimented with all possible genres and artistic techniques, including painting, sculpture, illustrations, graphic and industrial design, advertising, publishing, architecture, performance, experimental cinema, creative and essayistic writing, art pedagogy. His artistic experience could then be seen, in Calvino's words, as an "encyclopedia, a library, an inventory of objects, a pattern book of styles," [103] in spite of the fact that he has also been considered as a sort of outlier in Italian art history, a unicum in the art world.[104]

Munari's multiplicity also relates to a structural and genetic aspect of his artistic compositions. As suggested by Filippo Menna, in Munari's works "everything is governed by strictly calculated principles, by repeatable rules, and yet the structures that arise from these rules assume a virtually infinite multiplicity of forms."[105] Similarly to Calvino's Oulipo companions, Munari develops a generative idea of the work of art, linked to its programmability, in order to produce an infinite multiplication of aspects. As is already evident in early works like *Useless machines* and *Concave-convex*, in a very explicit manner Munari became the promoter of a collection of aesthetic and artistic experiences, grouped under the label of "Arte programmata," generated by procedures and visual mechanisms and artifacts which lead to "a succession of different visual situations that are ordered according to an unpredictable chronological unfolding, albeit with variations within a range of situations that may be more or less completely foreseen by the author."[106] Inspired by Lao Tse's motto: "Production without appropriation, action without imposition, development without oppression,"[107] Munari's programmed art also codifies the active participation of the spectator as a cooperator in the development of the aesthetic potentialities of the art work, an aspect that resonates both with Eco's theorization on the "open work" and with the wider perspectives of reception theory. This structural multiplicity is also an expression of coeval technological, material and industrial innovations, that Munari exploits with his "multiples," like *Flexi* or *Strutture continue*, objects of industrial design with an aesthetic function, which can be manipulated and recombined in a variety of ways, "in order to grant everyone the possibility to enrich their visual culture and directly absorb this information."[108] Munari's multiplicity then reframes the issue of the "mechanical reproduction of the work of art" not as a problem of "loss of aura," but as an

[101] Munari, *Design e comunicazione visiva*, 78.
[102] Arturo Carlo Quintavalle, "Intervista a Munari," in *Bruno Munari, Il disegno, il design* (Mantua: Corraini, 2009), 35.
[103] Calvino, *Six Memos*, 99.
[104] Both Gillo Dorfles and Pontus Hulten singled out Munari as one of the most influential artists of post-World War II Italy. See Pontus Hulten, "Un secolo italiano?," in *Arte Italiana. Presenze 1900-1945*, ed. Pontus Hulten, Germano Celant (Milan: Bompiani, 1989), 15. In Dorfles' words, "Nella seconda metà del nostro secolo Munari ha un'influenza pressoché analoga a quella di Marcel Duchamp." See Giorgio Maffei, "Intervista a Gillo Dorfles," in *MAC Movimento Arte Concreta Opera Editoriale*, ed. Giorgio Maffei (Milan: Sylvestre Bonnard, 2004), 67–68. Ernesto Nathan Rogers' comments on Munari are also eloquent: "Munari cerca e trova; i suoi strani mestieri si possono spiegare e identificare solo col suo nome. Che cos'è Munari? Noi abbiamo verbi in 'are'; in 'ere'; in 'ire'; non abbiamo verbi in 'ari.' Munari è un'eccezione ed è un verbo attivo che ha solo l'infinito." Ernesto N. Rogers, "Trovare è la conseguenza di cercare," *Bollettino arte concreta*, no.1 (November 1951): 3.
[105] Filiberto Menna, "Munari o la coincidenza degli opposti," *La botte e il violino*, n. 3, 1966: 18.
[106] L. Vinca Masini, "Arte Programmata," *Domus*, no. 422 (January 1965).
[107] Quoted in Munari, *Da cosa nasce cosa*, 5.
[108] Munari, *Obvious Code*, 85.

instrument for a better understanding of aesthetic questions, and as a more democratic access to formal and perceptive experiences (fig. 14).

In "Multiplicity," Calvino then returns once again to the descriptive and conceptual bifurcation that is intrinsic to the values explored in *Six Memos*. As for his "Ancestors," where, as Belpoliti states, "the hero in Calvino's stories is the one who holds the two opposites together and tries to reconcile them in a difficult balance,"[109] according to Calvino "the qualities I have chosen as subjects for these lectures do not […] exclude their opposite qualities. Just as my respect for weight was implicit in my praise of lightness, so [my] defense of quickness does not presume to deny the pleasures of delay."[110] Similarly, "the poet of vagueness can only be the poet of precision";[111] *visibility* is also "a process of abstraction, condensation, and interiorization of sensory experience," an "internal, mental, invisible fantastic,"[112] "the power to bring visions into focus with our eyes closed."[113]

This bi-focality, this antinomic tension between opposite elements, is also what informed many of Munari's artistic creations: *Concave-convex*, *Negative-positive*, the antithesis between "law" and "chance" (but also oxymoronic titles like "unreadable books" or "original xerographies"),[114] are polarities that are conceptually and aesthetically recomposed in a single aesthetic object (fig. 15).

Munari refers to the Chinese symbol and concept of the Yin-Yang as "the unity created by a balance between two opposing forces that are equal and contrary."[115] This logic is what structures nature, creativity, and, by extension, also everyone's personality, as he states in a 1955 article in *Domus*, in which we find a surprising version or "ancestor" of *Cosmicomics*' Qfwfq:

> Yang and Yin are present in all things, even in Mr. Pwszzk (who is a bit like us). He too is cheerful and sad, good and bad, hot and cold, sleeping and awake, working and resting. He is certainly not always as we see him in his portrait; he too is full of negatives-positives. But what keeps him alive? It is the balance of opposing forces: fatigue alternating with rest, light with darkness, yes with no. In his retina an excess of red light produces green images. Mr. Pwszzk is also a "dynamic unit" generated by the dualism of opposites.[116]

As specified in *Fantasia*, this constitutional dualism has an intrinsic generativity in terms of ideas and imagination: "It is natural [...] and spontaneous that a person, thinking of one thing, also thinks of the opposite."[117] Filippo Menna and Guido Bartorelli suggested that more than of antinomic disjunction, we should think in terms of "synergies between complementaries":[118]

> Munari addresses the problem of the harmonious coexistence of two opposing principles by showing how precisely this is the dominant theme of his long and

[109] Belpoliti, *L'occhio di Calvino*, 29.
[110] Calvino, *Six Memos*, 41.
[111] Ibid., 51–52,
[112] Ibid., 78.
[113] Ibid., 75.
[114] "La regola, da sola è monotona / il caso da solo rende inquieti. / Gli orientali dicono: / la perfezione è bella ma è stupida / bisogna conoscerla ma romperla. / La combinazione tra regola e caso / è la vita, è l'arte / è la fantasia, è l'equilibrio." Munari, *Verbale scritto*, 33.
[115] Munari, *Design as Art*, 175.
[116] Bruno Munari, "Antichissima storia dei "negativi-positivi," *Domus*, no. 310 (1955).
[117] Munari, *Fantasia*, 38.
[118] Guido Bartorelli, "Il missile terra-aria dell'opera di Bruno Munari," in *Bruno Munari. Aria Terra*, ed. G. Bartorelli (Mantua: Corraini, 2017), 9.

> manifold activity as an artist, designer and graphic designer. The unitary meaning of his work must be traced precisely in this profound aspiration to bring together, in ever-changing balances, two opposing urges, whereby the functionality of the machine is accompanied by the gratuitousness of play and the freedom of contemplation, the positive is inextricably linked to the negative, just as the foreground and the background, and the convex to the concave. The book is transformed into a useful object, into an unreadable book, but at the same time it presents itself as a model for books that can offer the possibility of ever-new readings full of the unexpected.[119]

Consistency

The lecture about *consistency* as a value for the next millennium was never completed. Calvino's critics have long speculated on what he might have meant by selecting this term as one of the values, qualities, or memos, basing their argument on the notes and partial drafts that he left behind.[120] Besides any speculative philological reconstruction of Calvino's writing and intentions (the term *consistency* is never discussed in his notes), the generality of the term allows for some interpretative extensions. It is in fact coherently oriented with Munari's artistic exercises and conceptual and aesthetic framework, providing in turn a speculative orientation within Calvino's own intentions.

The semantic ambivalence of the English term would also aptly allow one to articulate the notion of consistency in different directions: in its objective and structural sense as agreement or harmony between parts of something complex; or in the ethical and subjective form as conformity with previous attitudes, behavior, and practice.

Speculating about Calvino's missing memo in the context of graphic design, Johanna Jacob claims that "consistency for the designer is usually defined in the context of an aesthetic style that defines the identity of the client."[121] However, this principle, according to Munari, may have a negative effects when it is inflected by "stilismo," when the artist's subjectivity and personal mannerism or style interfere with the objectivity of the communicative needs of a properly, coherently planned project of design, which has to be informed not by a subjective signature, by the "the aesthetics of logic."[122] For Munari this is an ethical and epistemic requirement that goes beyond the precepts of functionalism *strictu senso*, toward an "intersubjective" position by which "objective research is accomplished by the depersonalization of inquiry."[123] This position may correspond with the duality envisioned by Mario Barenghi's hypothesis on Calvino's last lecture, which might have pivoted "around the nexus 'intersubjectivity-solipsism.'"[124]

This hetero-directed form of consistency does not obliterate the singularity of the artist. In an essay on Paul Klee, Calvino underscores the need to be "always oneself by always doing

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[119] Menna, "Munari o la coincidenza degli opposti."

[120] See Mario Barenghi, in Calvino, *Saggi*, 2:2958–65. For Adriano Piacentini, *Tra il cristallo e la fiamma. Le Lezioni americane di Italo Calvino* (Florence: Atheneum, 2002), *Consistency* should have dealt with the notion of the self, with reference to Jean Piaget and Gregory Bateson's epistemology. For Massimo Riva, consistency is understood as a synonym of the art of ending, Massimo Riva, "Beginning/Ending, Openness/Consistency: Models for the Hyper-Novel," *Annali d'Italianistica* 18 (2000): 109–13. According to Domenico Scarpa, "È probabile che Calvino abbia preso in prestito la nozione di consistency da Edgar Poe, che ne fece il perno del suo trattato o poema cosmologico in prosa 'Eureka,' scritto nel 1848." See Domenico Scarpa, *Italo Calvino* (Milan: Bruno Mondadori, 1999), 93.

[121] Jacob, "Calvino's Reality," 114.

[122] Munari, *Artista e designer*, 52.

[123] Ibid.

[124] Calvino, *Saggi*, 2:2965.

something new."[125] In spite of the variety of his artistic projects and outputs, Munari maintained conceptual and aesthetic coherence which becomes in fact one of the key elements of his originality and of his uncompromised identity, by rejecting the mannerism of seriality that many artists adopt as a requirement of the art market and art criticism.

Among the interpretations given to Calvino's final lecture, we could also resort to that of Marylou Miner, who offers a synthetic understanding of the *Six Memos* that shares with Munari a structural understanding of *consistency*:

> If we replace the terms by their literary equivalent, the pattern becomes apparent. Lightness is Tone; Quickness is Time; Exactitude is Vocabulary; Visibility is Imagery; Multiplicity is Knowledge. The missing link is structure, harmonious structure […] The ultimate ideal in the creation of a work of art is its harmonious structuring such that there is a consistency of tone, of time, of vocabulary, of imagery, and of coherence among its complex ideas. Hence, the sixth memo might have consisted of a collective view of the previously discussed values as well as a sense of a new value, a thing apart; paradoxically both a synthesis of the other values and an entity unto itself.[126]

This "harmonious structuring" as synthesis of all the other values, responds to Munari's advocacy for "formal coherence" in any type of aesthetic project, whether it is "fine" or "applied" art: "an object should now be judged by whether it has a form consistent with its use, whether the material fits the construction possibilities […], whether the individual parts are logically fitted together."[127] This formal coherence, which is synonymous of beauty,[128] finds correspondence and inspiration from nature, which, according to Munari, always diversifies by developing consistent rules, laws, and forms.[129] It is linked to simplification and therefore to "lightness,"[130] and its multiplicity is the expression of a conceptual, formal, and material principles of construction (the *organon*), which links the different parts within a harmonic whole.[131]

This type of formal consistency frees the artist from the solipsistic relationship with the limitation of the "self*"* ("what if it were possible for a work to be conceived beyond the self, a work that allowed us to escape the limited perspective of the individual ego*"*),[132] with any temptation to seek artistic expression as a form of self-monumentalization, opening up to a utopia of artistic projectuality tied to the structural functionality intrinsic to nature, to human cognition, and to practical dispositions, in which unity and universality, innovation and tradition, find a perfect and coherent balance.

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[125] Ibid., 2:1806. For a discussion of Calvino and Klee, also in the light of the *Six Memos*, see Franco Ricci, "Calvino and Klee: Variation of Line," in *Image, Eye and Art in Calvino*, 260–75.
[126] Marylou Miner, "Calvino's Values in Literature," *The Journal of Educational Thought / Revue de la Pensée Éducative* 24, no. 3A (1990): 131–34.
[127] Munari, *Design as Art*, 35.
[128] Munari, *Design e comunicazione visiva*, 5.
[129] Munari, *Design as Art*, 30–31. Munari, *Da cosa nasce cosa*, 146.
[130] Munari, *Da cosa nasce cosa*, 132–37.
[131] Ibid. As Scarpa suggests in this regard, "è la cognizione dell'unità del cosmo pensato come totalità e nello stesso tempo come articolazione e interdipendenza reciproca di ogni sua parte. *Consistency* è dunque una facoltà del pensiero che abbraccia simultaneamente l'uno e il molteplice, è un principio analogico universale." See Scarpa, *Calvino*, 93.
[132] Calvino, *Six Memos*, 99.