EINAUDI LETTERATURA 21

BRUNO MUNARI

codice ovvio

Previous issues of The Serving Library's journals have been collections of individual "bulletins" loosely bound by a common theme. This one is different: it comprises the first English translation of the late Italian polymath Bruno Munari's *Codice ovvio* (Obvious code). The Italian original was published by Einaudi in 1971, then republished by Corraini in 2017. We are hugely grateful to both publishers, and to the estate of Bruno Munari, for their permission and support.

Munari's work, approach, and demeanor have been a key influence on The Serving Library, and the idea of dedicating an entire issue of the journal to his work has been floating around for a while. Considering that half of our current editorial team is Italian, and half of that half is a professional translator, we settled on the idea of translating *Codice ovvio*, a modest portfolio of Munari's work compiled by Munari himself. Importantly for us, it brings together his often overlooked writing about and around those works. For non-Italian readers, it is all too easy to glance at Munari's paragraphs — or feed them to an online translator — and glean the sort of thing they probably say in view of captioning the work. But as the non-Italian half of the editorial team discovered as the translation arrived in fits and starts, this is to miss the considerable nuance and serious humor of Munari's words.

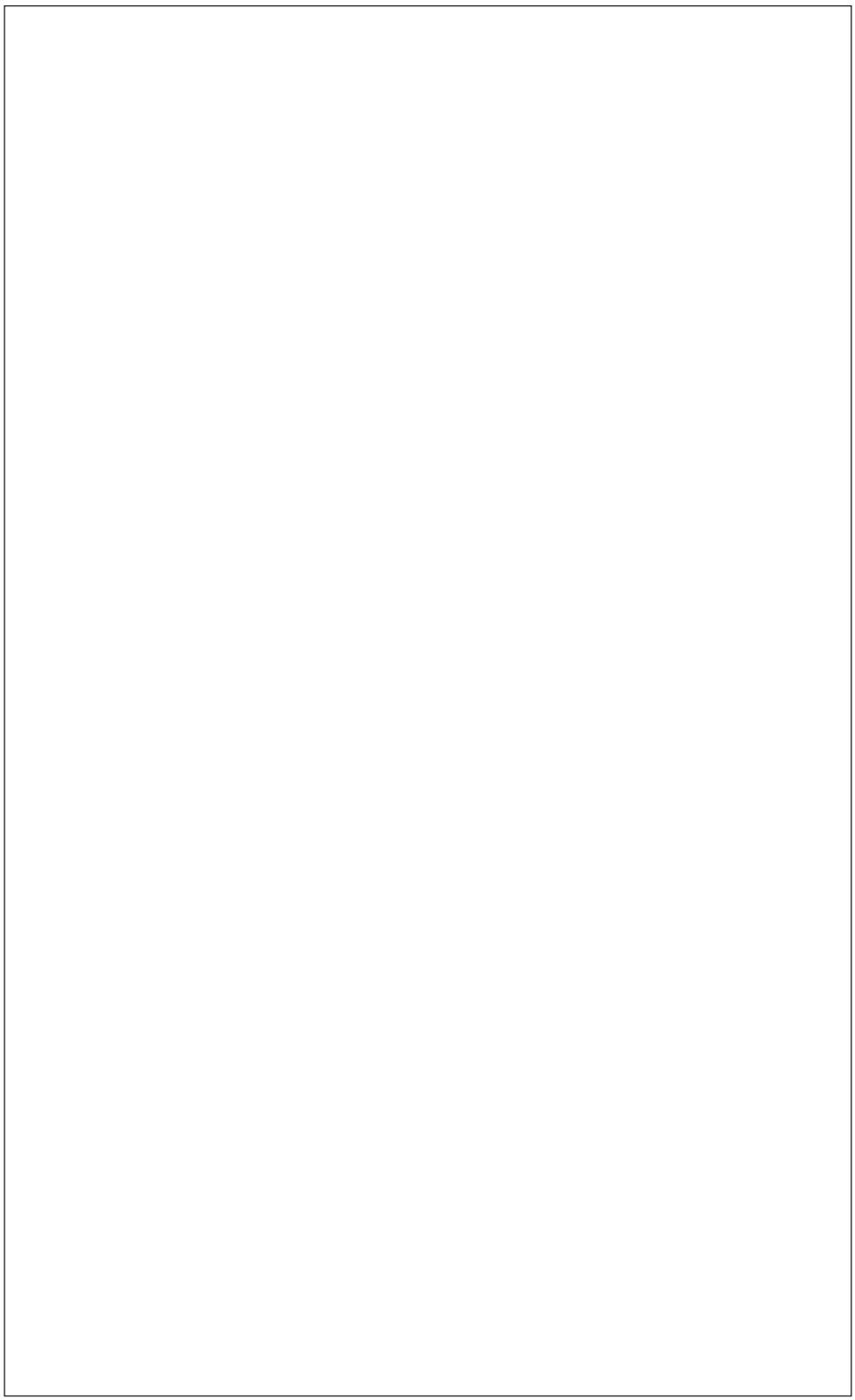
When we eventually began assembling our version, we found that Munari's original pages could be plugged precisely into our usual text area. This auspicious fit left a couple of spacious margins on each page that we thought could be usefully populated by notes made by Munari fans and commentators both dead and alive, adding a new, fourth dimension to the book as it approaches its 50th birthday. As you will see, there were no hard and fast rules regarding the nature of these contributions beyond in some way annotating Munari's pages. The margins also contain a few incidental translator's and editors' notes.

After some deliberation, we have decided on a double pagination: the smaller numbers on the book-within-the-book *Obvious Code* pages correspond to the two Italian editions, while the larger numbers at the foot of the outer *Annual* count the actual pages in this new one. The former correspond with the photo credits at the back; the latter correspond with everything else, such as the table of contents and marginalia references.

We have retained the original layout's subtle energy, its pages seemingly collaged ad hoc from other publications — a breezy pragmatism that Umberto Eco recalls first-hand on page 134. Typographically speaking, the new English text occupies more or less the same space as the Italian, but is then typeset in one of our multiple Meta-the-difference-between-the-two-Fonts, The Serving Library's house typeface that can morph to look like other typefaces. And so, here, various styles are chosen to mimic the size, shape and feel of the ten or so fonts in the original edition.

The volume closes with the translation of an essay by the late Italian art critic and scholar Paolo Fossati, "For *Obvious Code*," which was originally included as a postscript to the book.

Cover: The first edition, 1971



Bruno Munari (1907–1998) was a versatile character in 20th century art, consistently out of sync with various movements and manifestos of his time, who over the course of his career created a genuine idea of an alternative reality. He was a leading graphic designer and designer of objects, an artist, an inventor, and a teacher, constantly in dialogue with various artistic and technical languages, as well as the diverse media that he continuously made use of. In many ways, Munari is one of the few minds with a truly Leonardo-esque outlook that we have come to recognize in the recent history of art, with a strong sense of self-irony that shielded him from belonging to any one group or artistic movement: "I was highly successful despite the general indifference towards me."

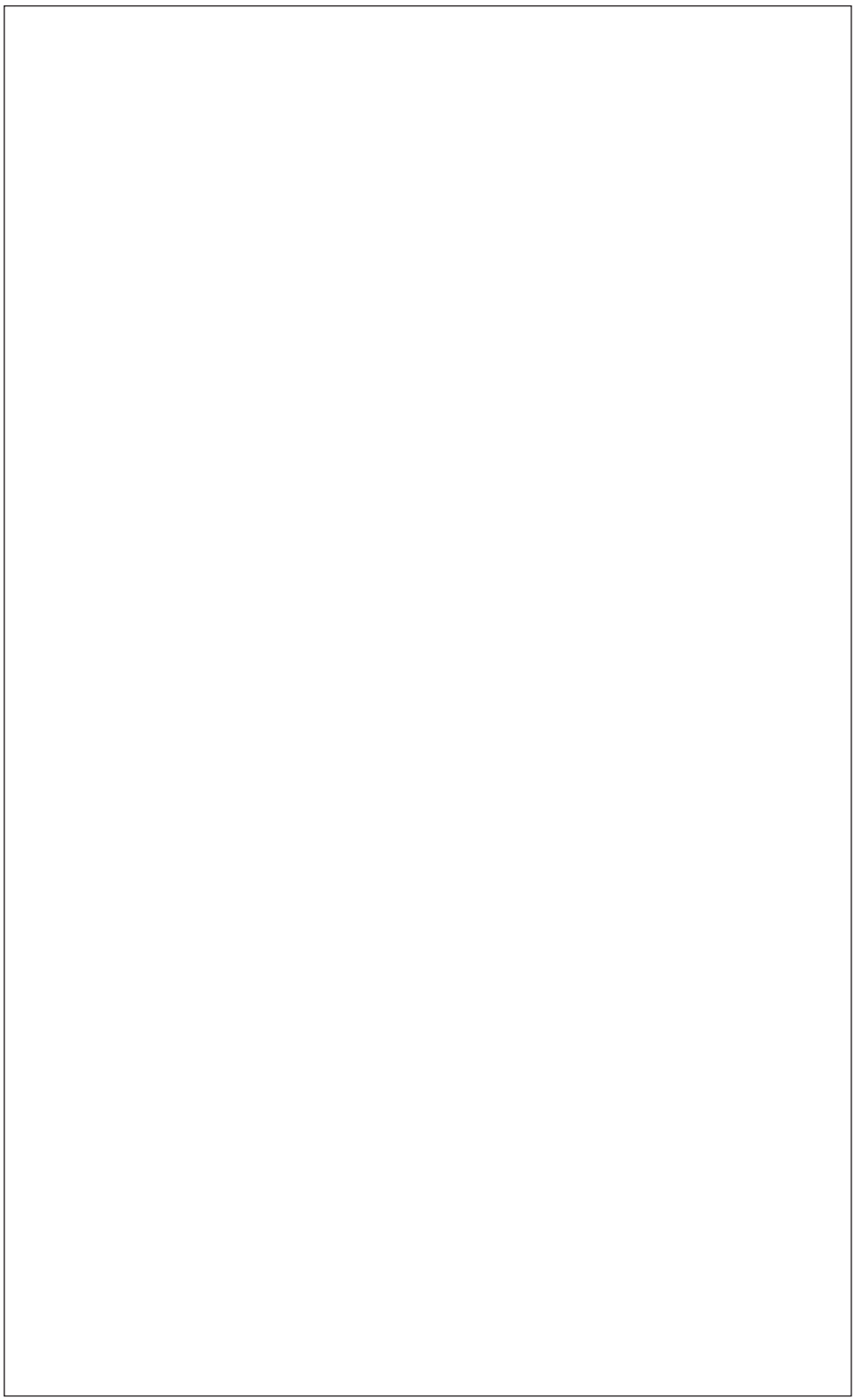
(Alberto Salvadori)

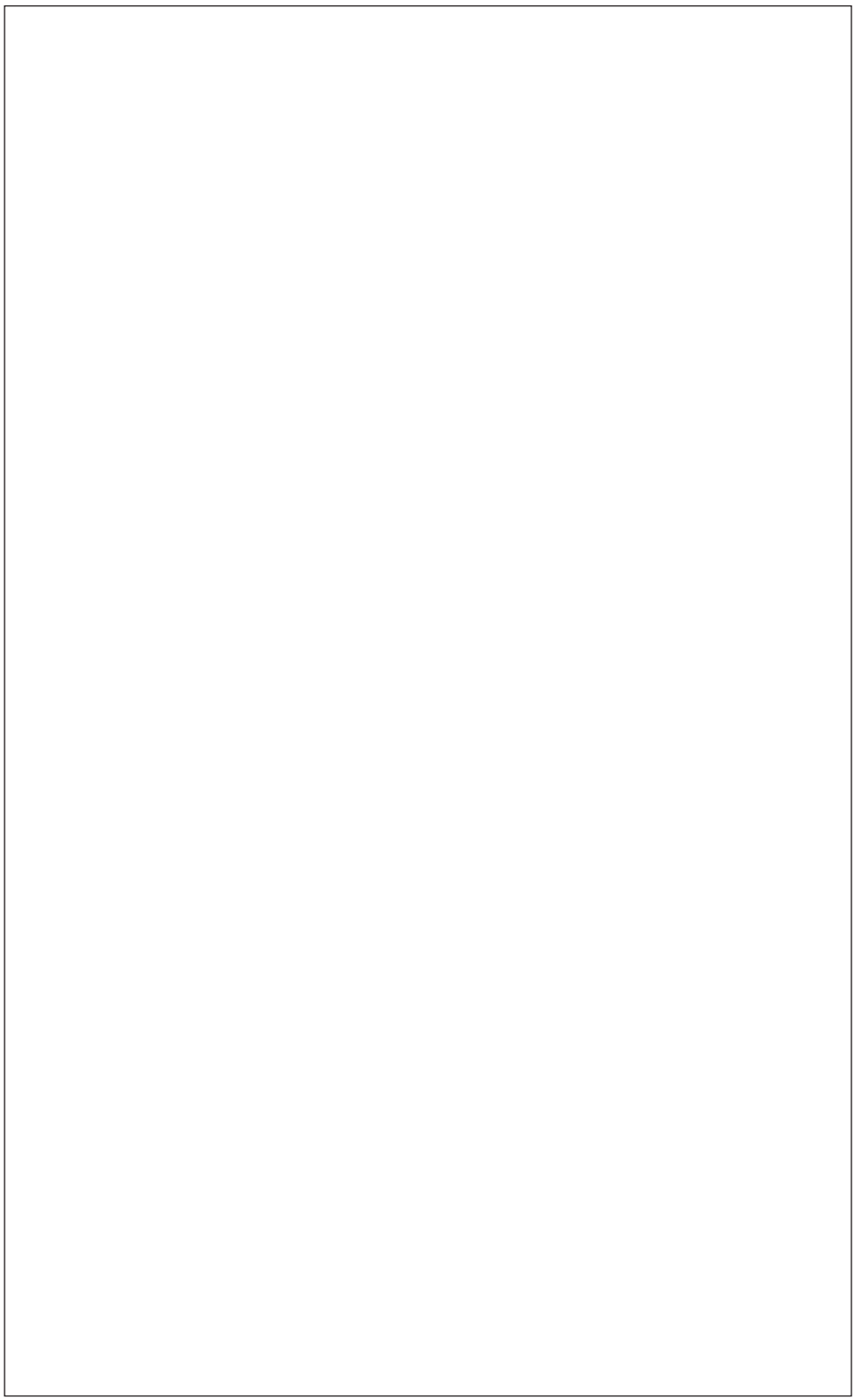
I've walked down Via Ravizza in Milano almost every day, for the first 20 years of my life, and I still do. I lived around the corner. I still do. Munari's first studio (Studio Grafico r+m, the first graphic design studio in town that he started in 1931 with Riccardo Castegnedi, who helped the artist develop his *macchine inutili*) was in a large basement at Via Ravizza no. 16. The house of my second family, a tribe of five brothers and sisters ruled by Liliana, an undisputed queen and fiercely ironical single mother, was on a third floor of Via Ravizza no. 62, on the same side of the street. When Munari got married to Dilma (in 1934), he moved literally around the corner of his former block, to an apartment in Via Vittoria Colonna no. 39, where he remained for the rest of his days and later opened his own studio. His son Alberto was born there.

My *scuola media* was in Via Vittoria Colonna, so that my paths crossed Munari's often, back and forth Via Ravizza. I hated that school, and vowed never to to set foot in it again. But then my son — who went to a primary school that offered bi-weekly workshops based on Munari's methodology — chose it as his own *scuola media*, so I was forced into making peace with the perpetual retracing of my sentimental geographies on the same two streets. As I write this, I look up at the rows of stenciled black *Gatto Meo* (an eternally shape-shifting foam rubber toy created by Munari in 1949 for Pirelli) spray-painted on the walls of my studio, that once was my son's room: they are tattooed in our memories of this house, just like all the other animals of Munari's book *Zoo*, endlessly perused. Munari is so familiar, that I see roses in salad. As he writes in *Design as Art*:

It is certainly quite wrong to read a poem in a hurry, as if it were a telegram [...] A poem only communicates if read slowly: only then does it have time to create a state of mind in which the images can form and be transformed.

(Barbara Casavecchia)





* Translator's note: In Italian, "giochini" and "giochi" share the same root, but the former (literally "little toy" which I translated as "doodle") has a dismissive undertone and does not necessarily refer to a physical object, nor to something fun.

Editors' note: Munari starts off his collection of newspaper articles translated and published as *Design as Art*, 1971 (originally *Arte come mestiere*, 1966), by introducing himself:

Lots of people know of me as "You know, the man who made the useless machines," and even today I still occasionally get asked for one of these objects, which I designed and made in about 1933. That was the time when the movement called the "novecento italiano" ruled the roost, with its High Court of super-serious masters, and all the art magazines spoke of nothing else but their granitic artistic productions; and everyone laughed at me and my useless machines. They laughed all the harder because my machines were made of cardboard painted in plain colors, and sometimes a glass bubble, while the whole thing was held together with the frailest of wooden rods and bits of thread. They had to be light so as to turn with the slightest movement of the air, and the thread was just the thing to prevent them getting twisted up.

In every century, the way that artistic forms are structured reflects the way in which science or contemporary culture views reality. The closed, single conception in a work by a medieval artist reflected the conception of the cosmos as a hierarchy of fixed, preordained orders. The work as a pedagogical vehicle, as a monocentric and necessary apparatus (incorporating a rigid internal pattern of meter and rhymes) simply reflects the syllogistic system, a logic of necessity, a deductive consciousness by means of which reality could be made manifest step by step without unforeseen interruptions, moving forward in a single direction, proceeding from first principles of science which were seen as one and the same with the first principles of reality. The openness and dynamism of the Baroque mark, in fact, the advent of a new scientific awareness: the tactile is replaced by the visual (meaning that the subjective element comes to prevail) and attention is shifted from the essence to the appearance of architectural and pictorial products. It reflects the rising interest in a psychology of impression and sensation—in short, an empiricism which converts the Aristotelian concept of real substance into a series of subjective perceptions by the viewer. On the other hand, by giving up the essential focus of the composition and the prescribed point of view for its viewer, aesthetic innovations were in fact mirroring the Copernican vision of the universe. This definitively eliminated the notion of geocentricity and its allied metaphysical constructs. In the modern scientific universe, as in architecture and in Baroque pictorial production, the various component parts are all endowed with equal value and dignity, and the whole construct expands toward a totality which is close to the infinite. It refuses to be hemmed in by any ideal normative conception of the world. It shares in a general urge toward discovery and constantly renewed contact with reality.

[…]

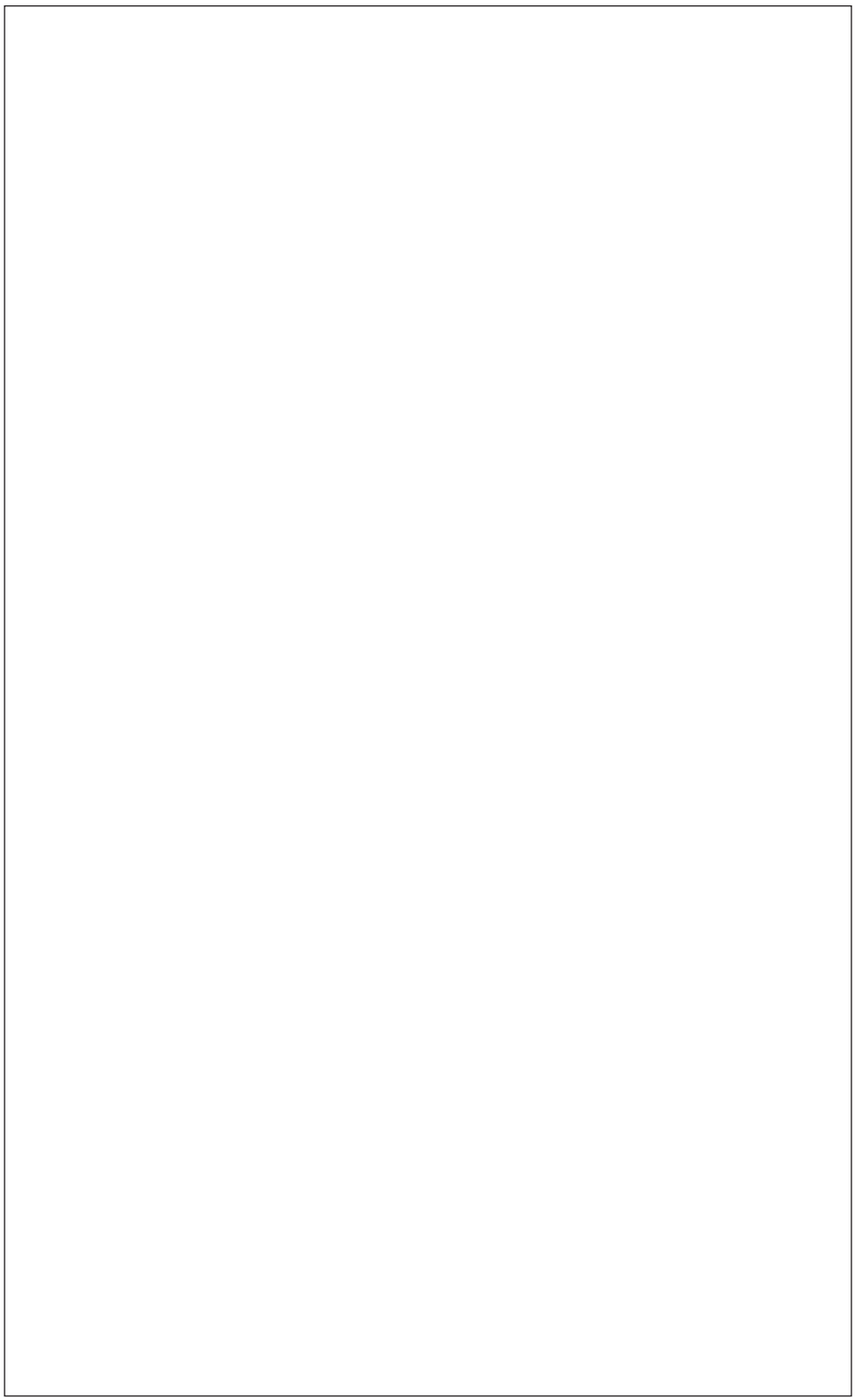
The moment an artist realizes that the system of communication at his disposal is extraneous to the historical situation he wants to depict, he must also understand that the only way he will be able to solve his problem is through the invention of new formal structures that will embody that situation and become its model.

[…]

At this point, however, the critic of contemporary poetics might suspect that such undue attention to formal structures means contemporary art is much more interested in abstractions and abstract

speculations than in man. This misunderstanding would be merely another expression of the belief that art can speak of man only in a traditional form — which essentially means that art can speak only of yesterday's man. To speak of today's man, however, art has no choice but to break away from all the established formal systems, since its main way of speaking is as form. In other words — and this amounts to an aesthetic principle — the only meaningful way in which art can speak of man and his world is by organizing its forms in a particular way and not by making pronouncements with them. Form must not be a vehicle for thought; it must be a way of thinking.

(Umberto Eco)



In 1930, Alexander Calder visited Piet Mondrian's studio and suggested to the Dutch painter that it would be lovely if his abstract compositions moved (Mondrian did not agree). Following this meeting, Calder broke with his previously figurative work and began to attempt purely abstract compositions which would change over time. By 1932, he was making moving geometric constructions from wire and sheet metal. As he recalled a few years later:

I had been working on things with a little motion, some with more motion. I had quite a number of things that went round and round, driven by a small electric motor — some with no motor — some with a crank.

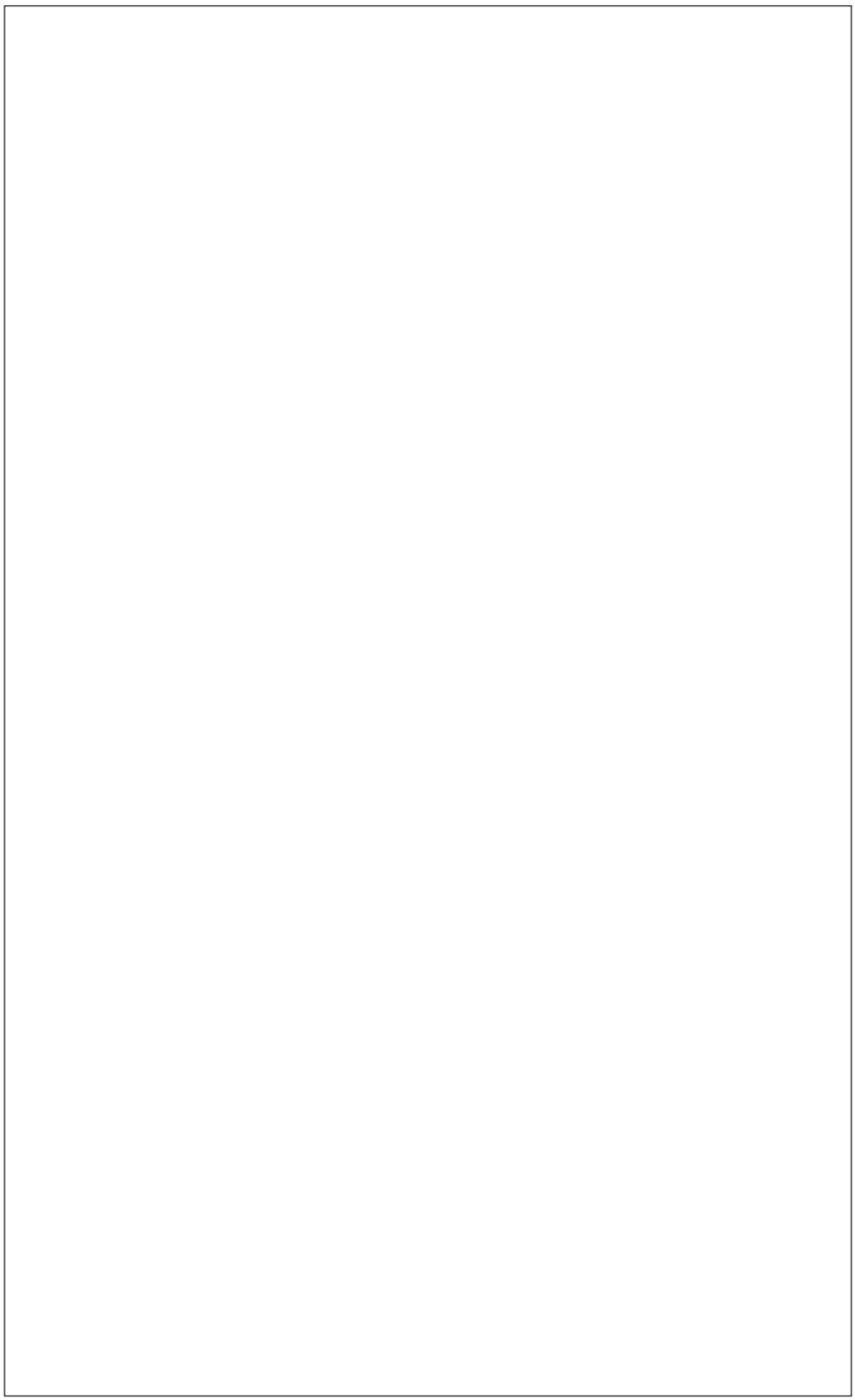
Around 1933, Marcel Duchamp paid a visit to Calder's studio and was taken by the machines, suggesting immediately a name for them — "mobiles" whose double meaning in French is both a "thing that moves" as well as "motive."

At the same time and independently, Bruno Munari was developing his own moving models. In *Design as Art*, Munari wrote about the difference between the pure geometric abstraction of his useless machines and the natural figures of Calder's mobiles.

There is a harmonic relationship between all the parts which go to make up a useless machine [...] Mobiles are by nature different. The inspiration seems to be drawn from the vegetable kingdom.

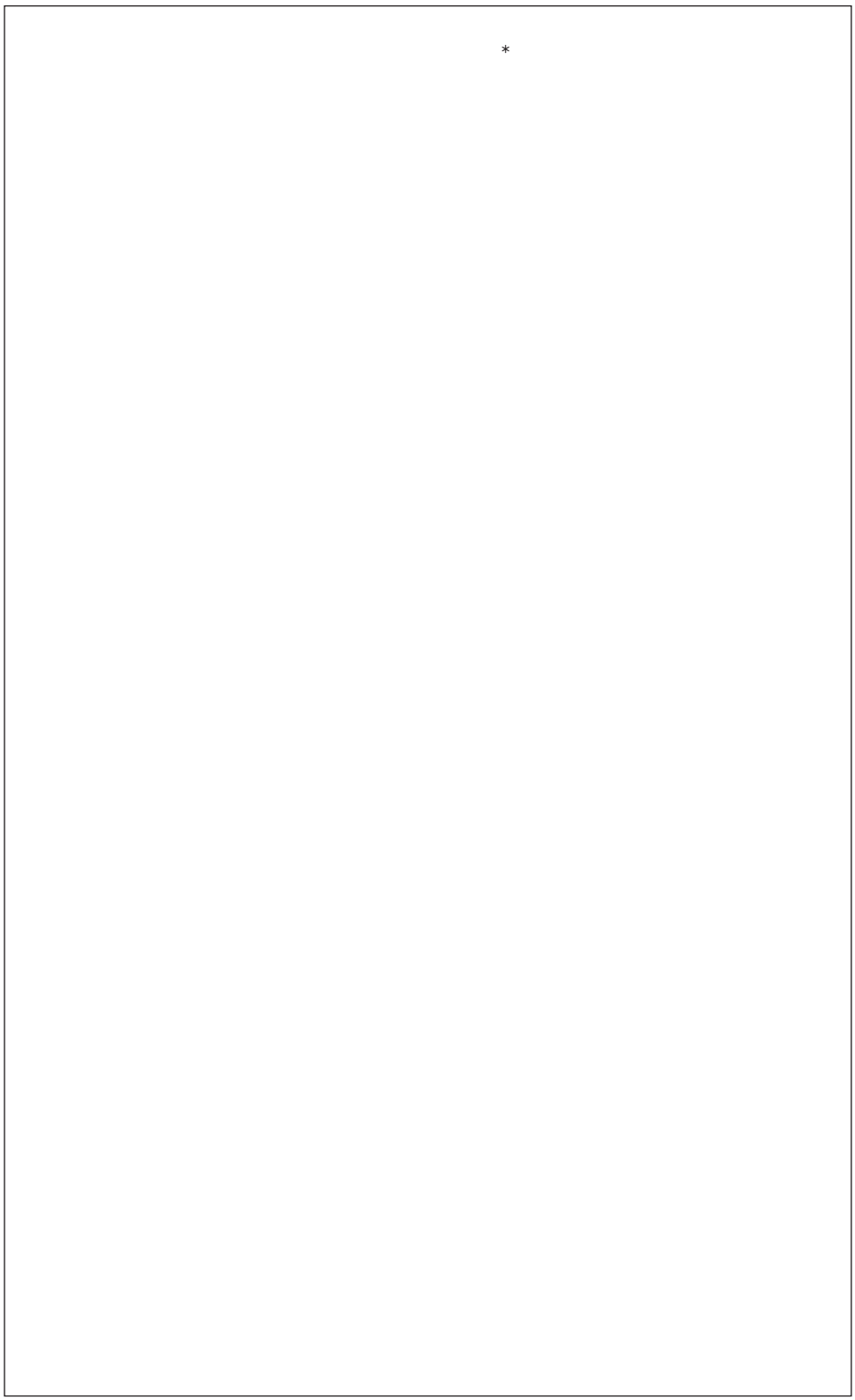
Continuing, Munari describes that "the pieces of a useless machine all turn upon themselves and in respect to each other without touching" and therefore the total composition is solely determined by the unpredictable independent movement of its parts at one point in time. Meanwhile, Alexander Calder's compositions mimic natural form with individual parts subordinate to a continuous whole. "One might say that Calder was the first sculptor of trees."

(David Reinfurt)



As an architecture student I made an excellent study tour with my school to Ferrara and Rome. It was there for the first time I did drawings from life. I, who have had no professional artistic training and have learned to draw by drawing, had so far thought mostly of imaginary drawings, things you invent. During that trip, I realized how hard it is to do a drawing from life, and how important to understand the nature, the truth of reality. To understand the truth of the drawing's subject matter — people, architecture, or landscape — is a complex thing since it isn't a visible, superficial truth. And it takes a lot of effort, a dedication that sometimes, out of laziness, one strives to avoid (it's easier to invent). You must manage to establish complicity with whatever you're drawing, until you gain a deep knowledge of it. You don't draw well if you're telling a lie. And conversely, when a drawing from life tells the truth, it automatically turns out to be a good drawing. Another problem in drawing from life is that we're obliged to find answers to questions that so far haven't been raised. The work you do in the studio is often an answer to questions that are already familiar.

(Saul Steinberg)



*Translator's note:

Warning warning

No entry to unauthorized personnel

No authorization to unentered personnel

This translation does not work.

In this early, pun-based work, Munari plays with the standard wording of a construction-site sign ("No entry to unauthorized personnel"), by subjecting it to slight shifts in word order, spelling or pronunciation, that — building upon one another — end up drastically transforming the original. Any two subsequent lines are extremely similar, but the further you go down, the more any semantic or phonetic trace of the starting point is all but recognizable. ("The Moorish horse congress has been cursed," line 14; "Codfish is never sold without decorum," line 18.)

The right way to translate this, of course, would be to start from a recognizable English phrase that proves more fruitful as an origin:

Please do not disturb
Disturb, do not please
This turban, do please
Diss touring bands. Ease

Ease not on the turd
Cheese topping on curb

Ban dissings and cheese

Ring bandits' disease

But why is this attempt at remaking (with gaps and imprecisions, in this case) understood to be part of the translator's work? Any more successful rewriting of Munari's pun-poem would be but a rewriting — the application of Munari's concept to another starting point, with different constraints and other twists and turns. In a similar manner, Piero Falchetta translated Georges Perec's *La Disparition* (a novel in which the letter E never appeared) in *La scomparsa*, fundamentally remaking the whole text in order to respect the original's constraint. (The English version by Gilbert Adair is called *A Void*.) It is a remarkable book — captivating, surprising, at times slightly clunky, at times unbelievably clever. However, it is much more Piero Falchetta's work than Perec's.

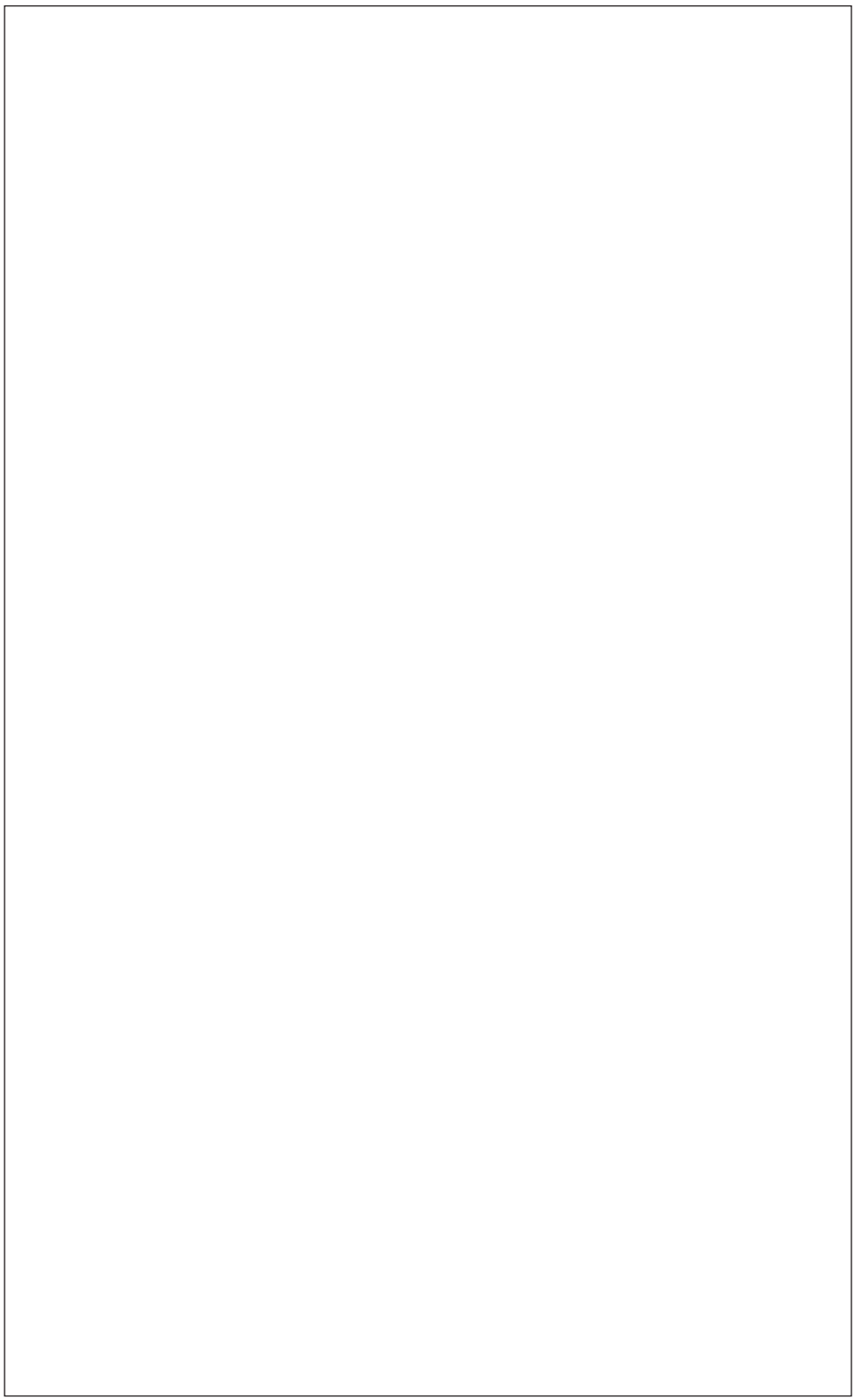
Hence, it might be more interesting — and more in line with Munari's spirit — to translate this work into a set of instructions that the reader may follow to generate a rewriting of Munari's work in a language of their choice:

1. Take a common phrase.

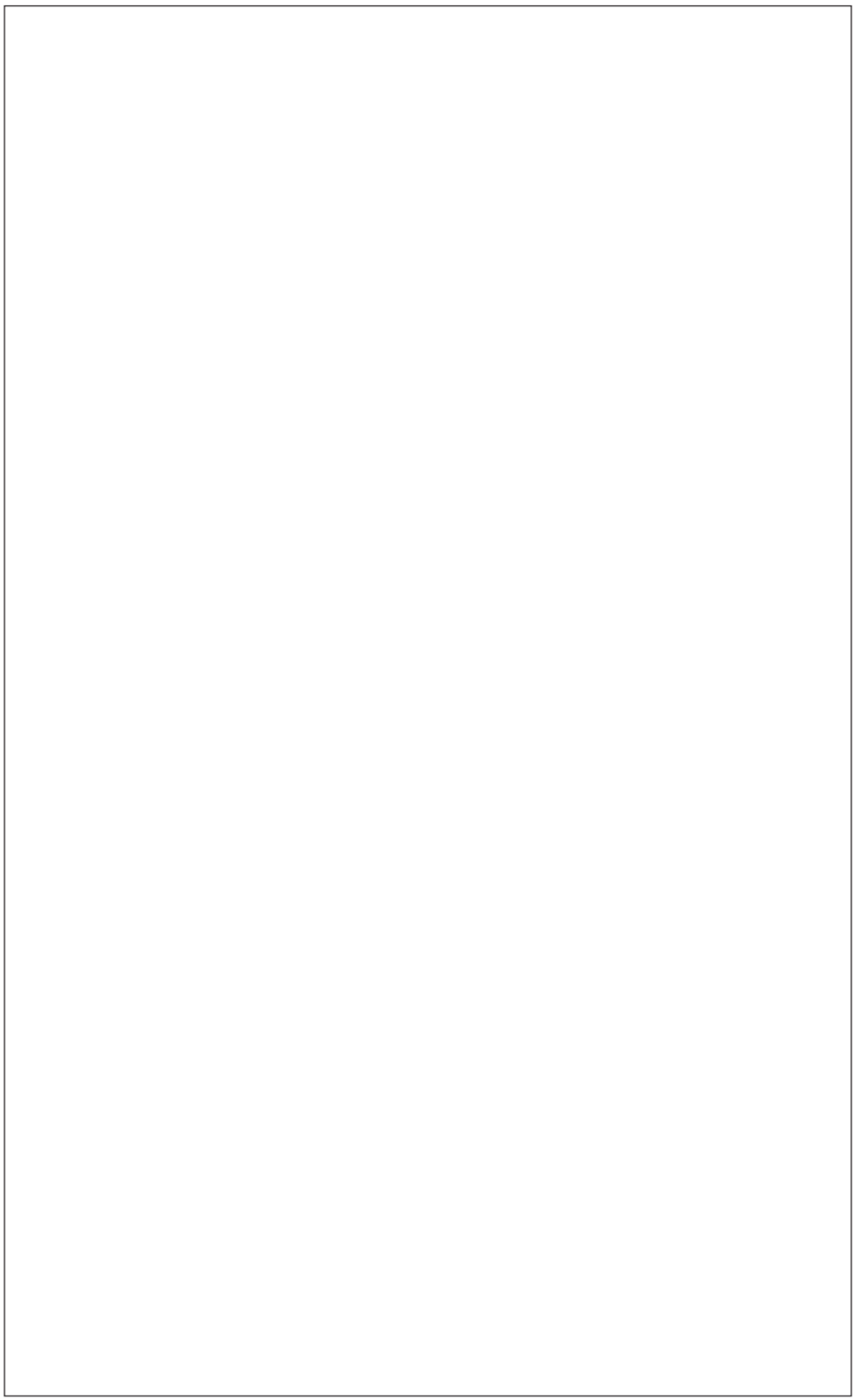
2. Transcribe it with a minor spelling or phonetic alteration into another phrase that is remarkably similar yet has a slightly different meaning.

3. Repeat point 2 until you forget where you started from.

4. Slowly transition back to the original sentence.



* Translator's note: The original, literally, says "a wise gear (made of cheese from Baggio and obtained through ballot by a page on May 2nd)"; but the whole line is a pun on rhymes — all these words end in *-aggio*, in Italian — becoming gradually more nonsensical as it goes on. Of all these terms, *severe* is the one I am the least happy with.



A tale about Swan, Fish, and Crab is tragic. All three of them, Swan and Fish and Crab wanted to pull a wagon so that it could roll smoothly along the road.

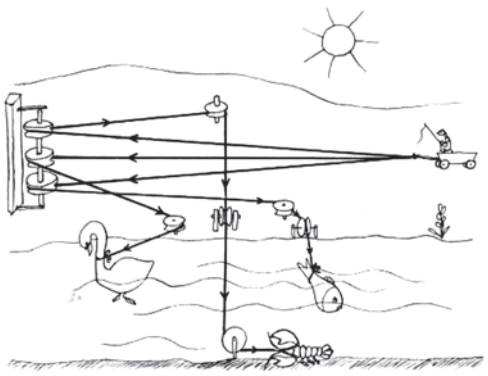
The fable about Swan, Fish, and Crab is a fable, because it shows a picture of the catastrophe to which Concord and Unity lead.

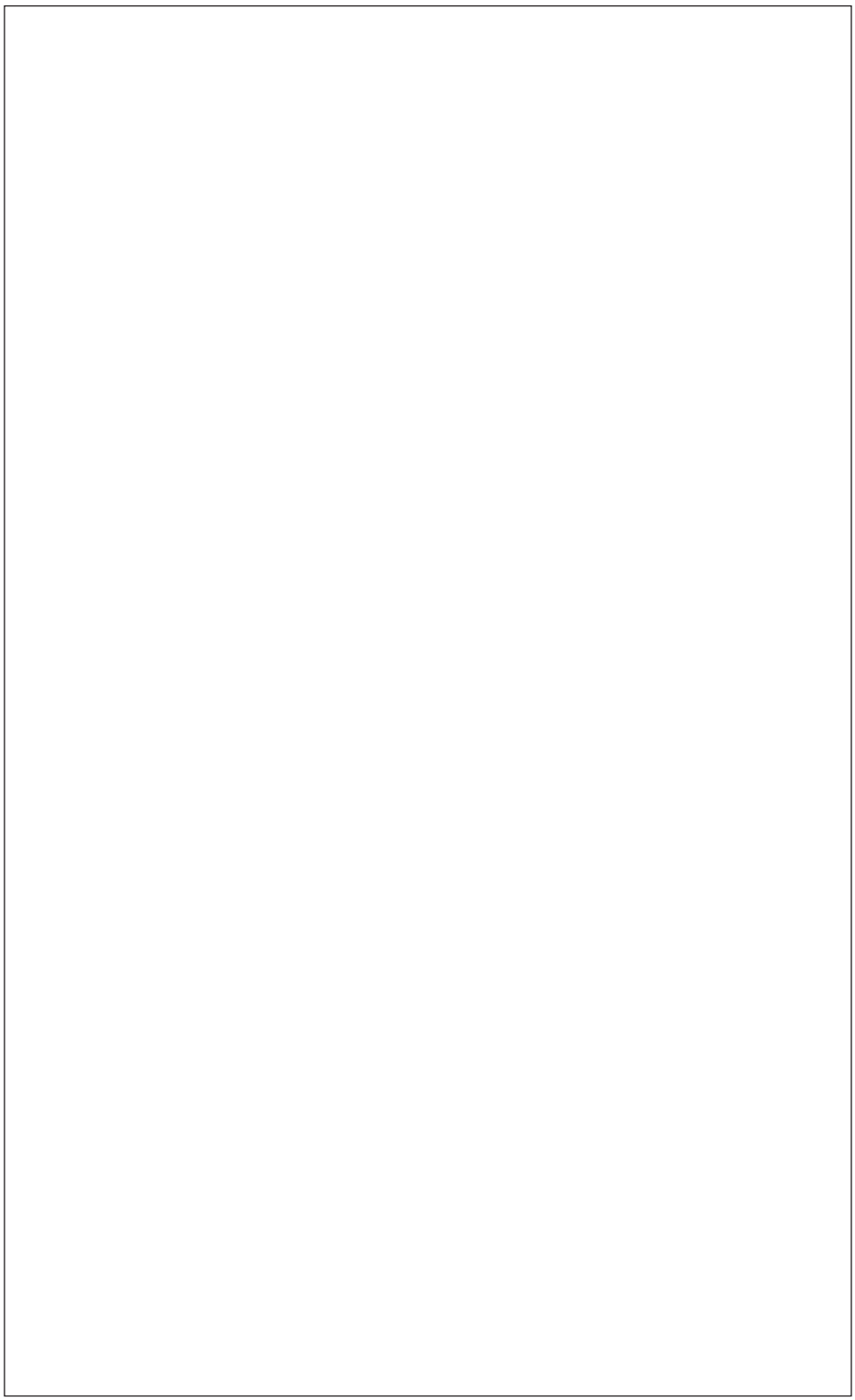
Swan, Fish, and Crab decided to pretend to be a horse, mule and camel. Swan, Fish, and Crab believed that their good intentions would suffice to move the cart. The cart fell into water.

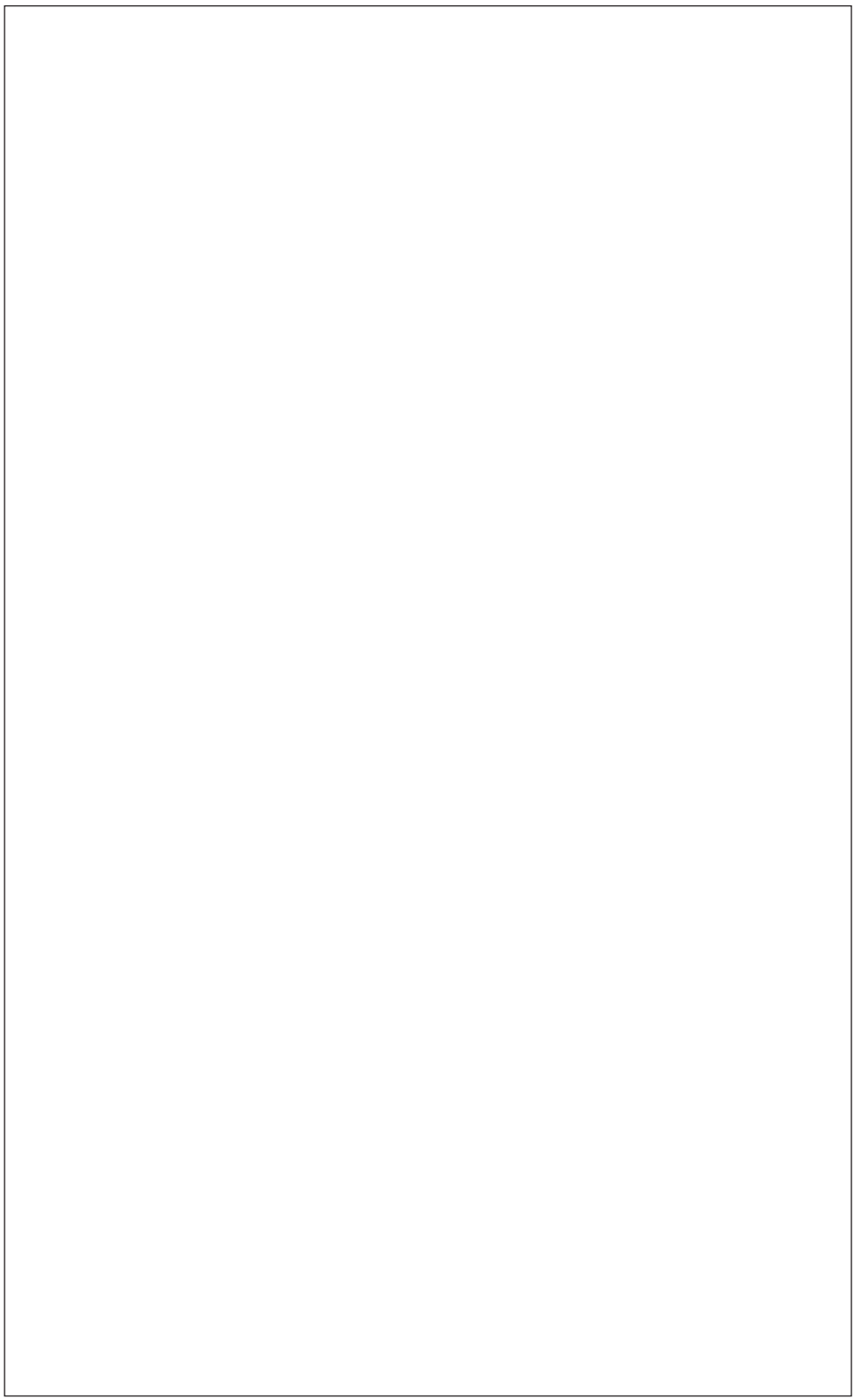
Good intentions suffice in case of Disagreement. In case of Disagreement there is always somebody who gets to a shaft first and, either left or right, the cart will move.

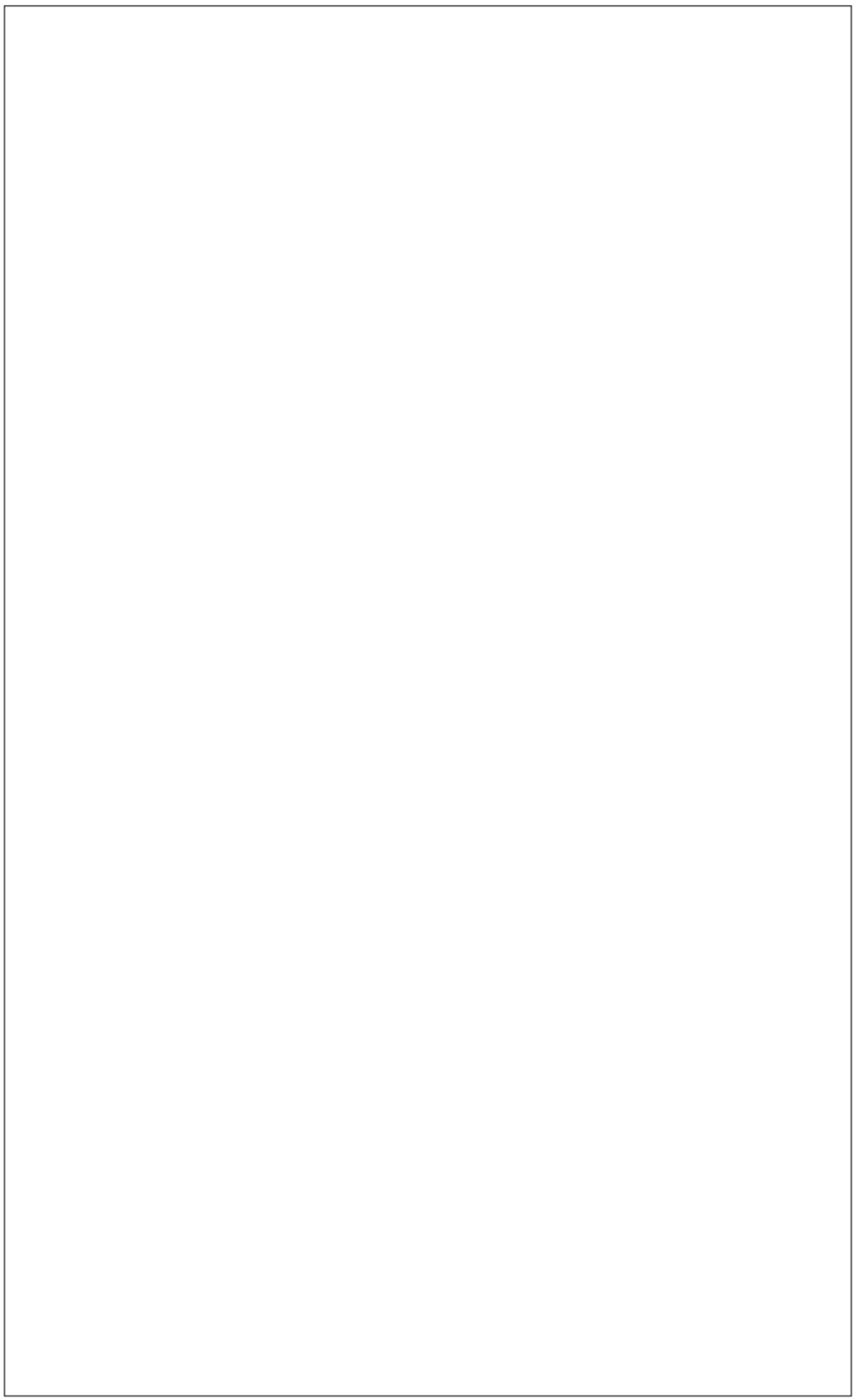
Good intentions will not do in case of Concord. Concord requires Reason, Intelligence, Sense of foreseeing, Lack of prejudice, Knowledge etc.—all that complicated system of pulleys, gears and strings thanks to which one knows where the cart is to go, can be set in motion, even though it is pulled in three different directions.

(Franciszka & Stefan Themerson)



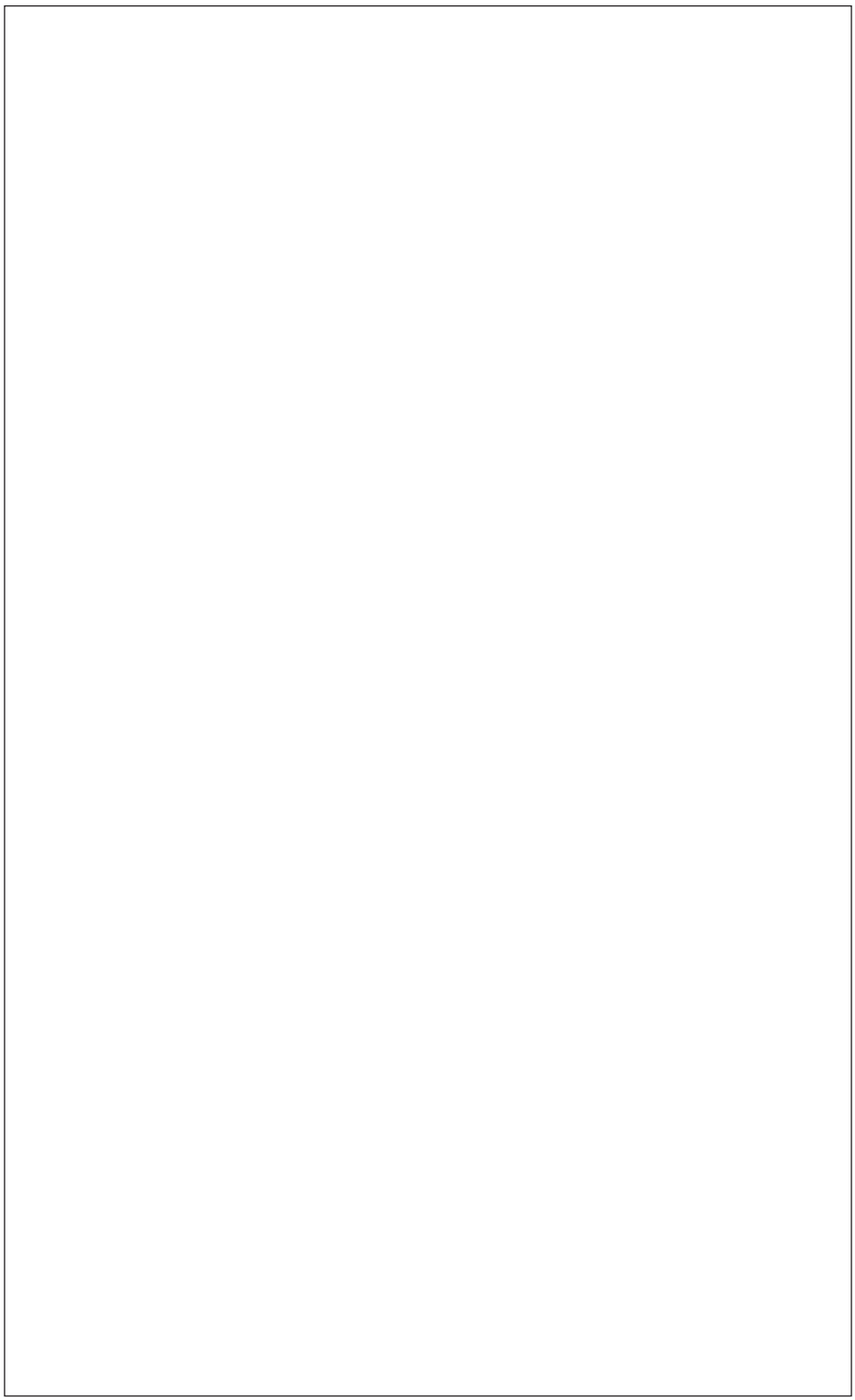


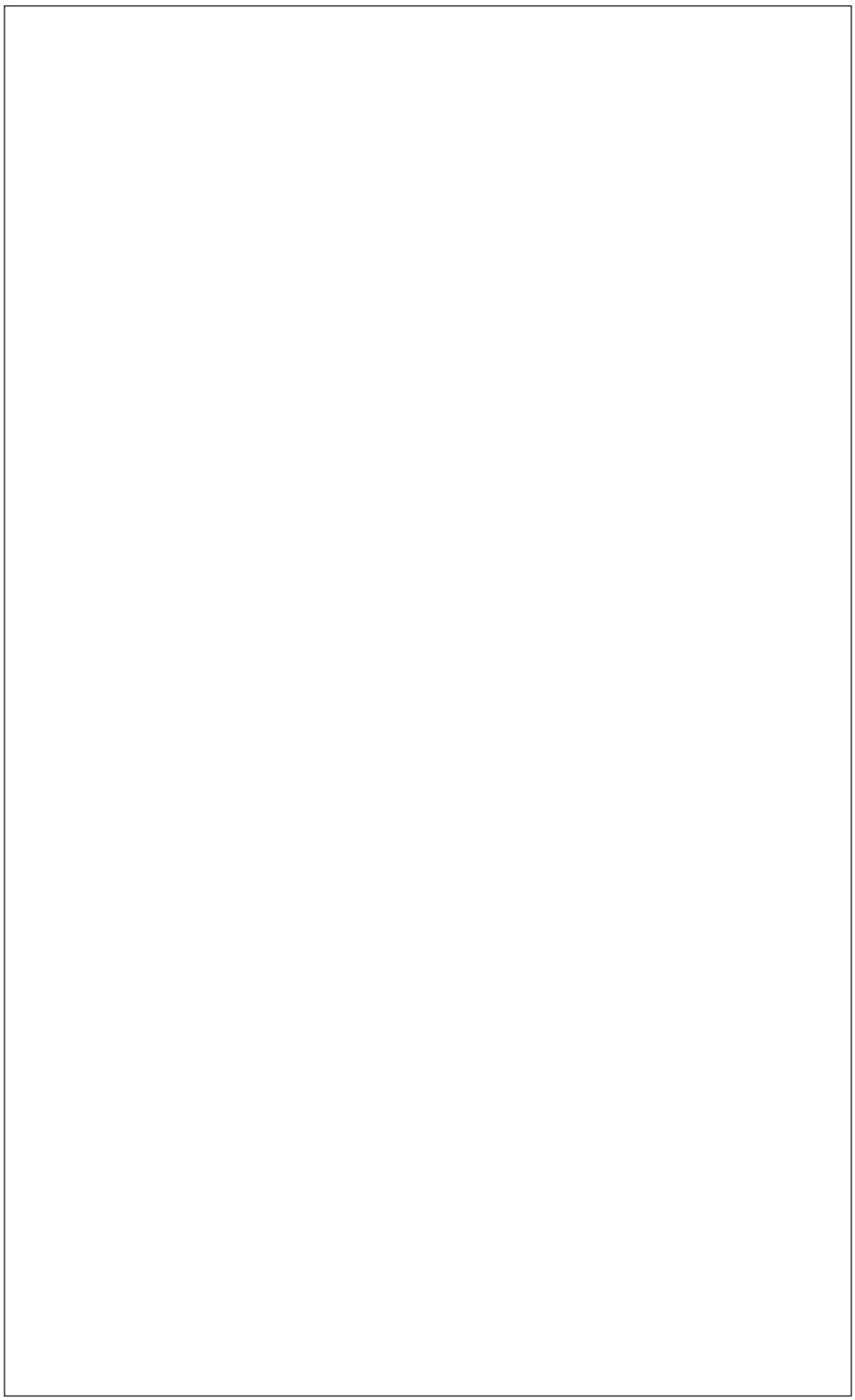




My friend's friend bought a house in Reggio Emilia. "The back yard has truffles," the previous owner whispered after the sale. Please don't tell my brother," he added, "I never gave him any."

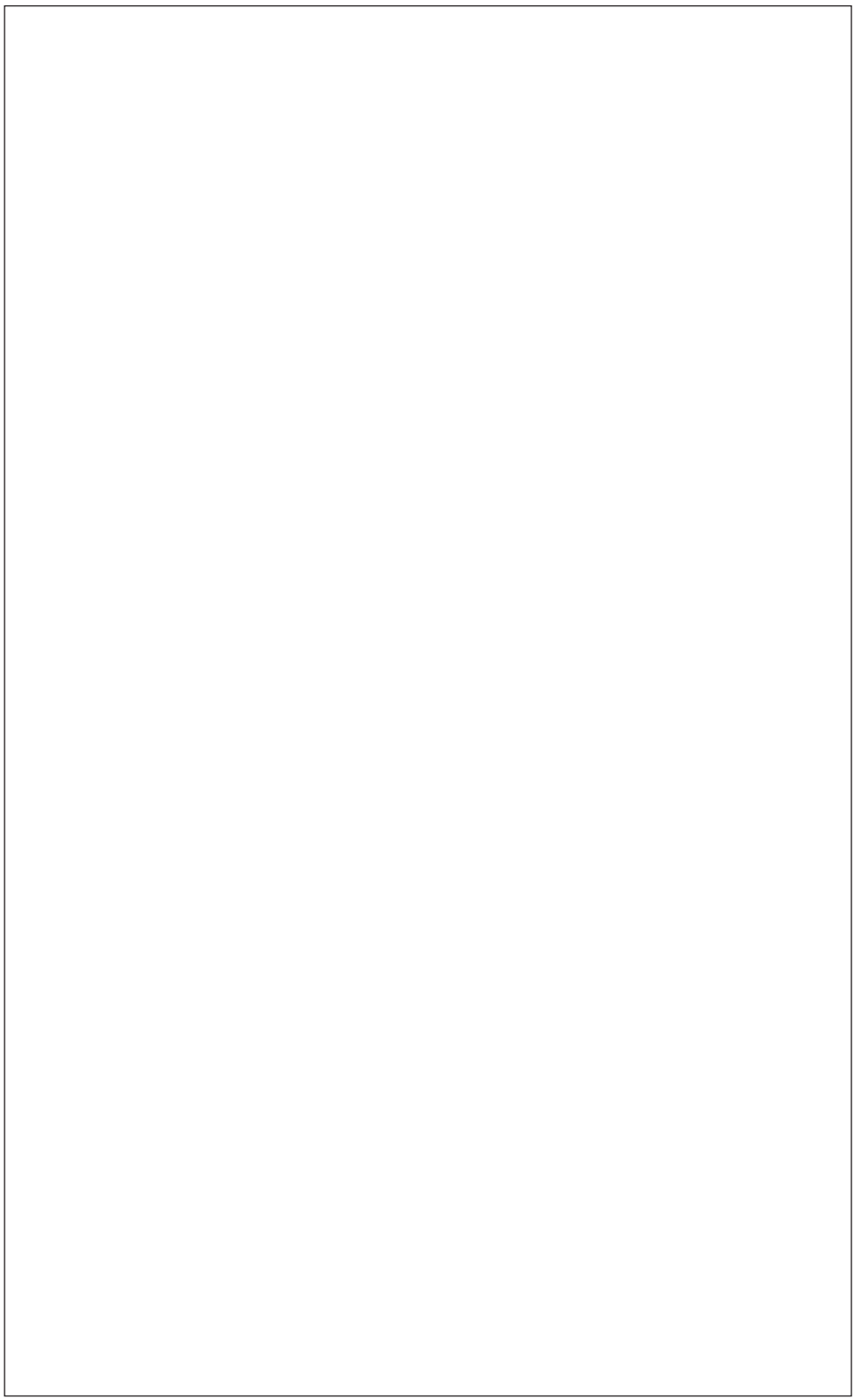
(Jason Fulford)

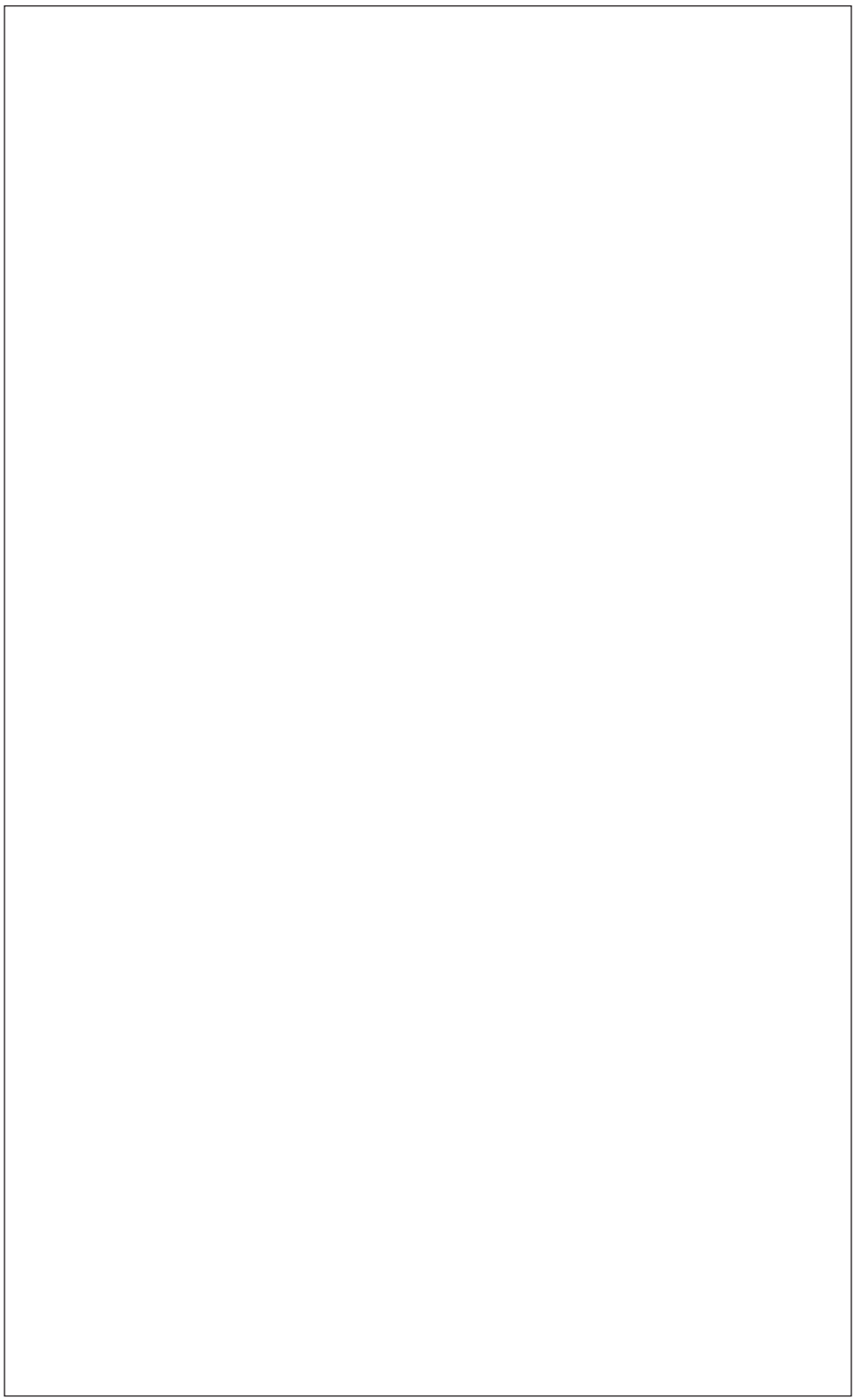




My mom's dog was what they call a Georgia Brown Dog, meaning she had no discernible breeding traits. Her real name was Truffles, but we called her Grim Reaper because she had a knack for spotting dogs that were ready to die, and finishing them off, including my aunt's dog Zooey, who could barely see when Truffles killed her on Thanksgiving.

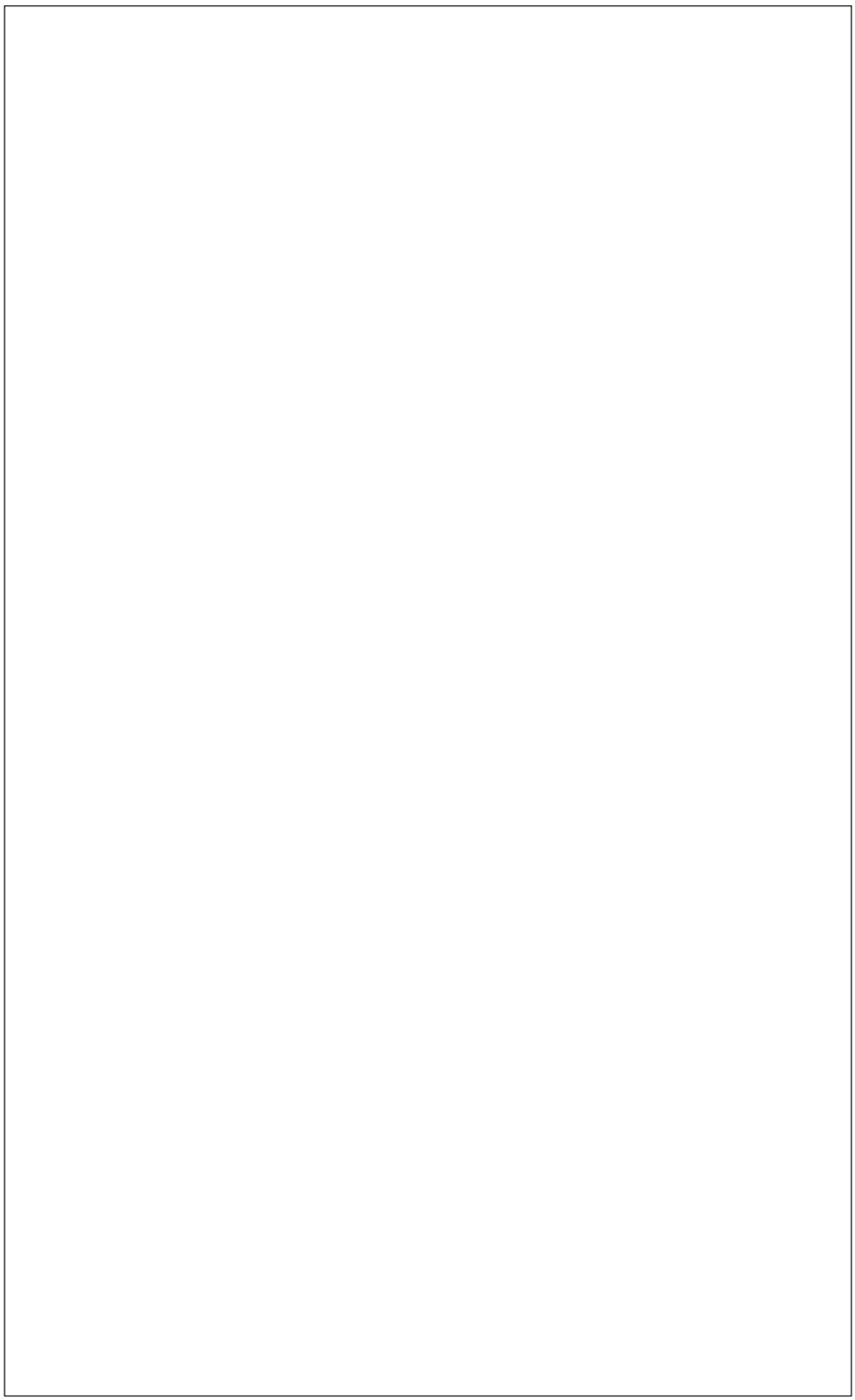
(Jason Fulford)

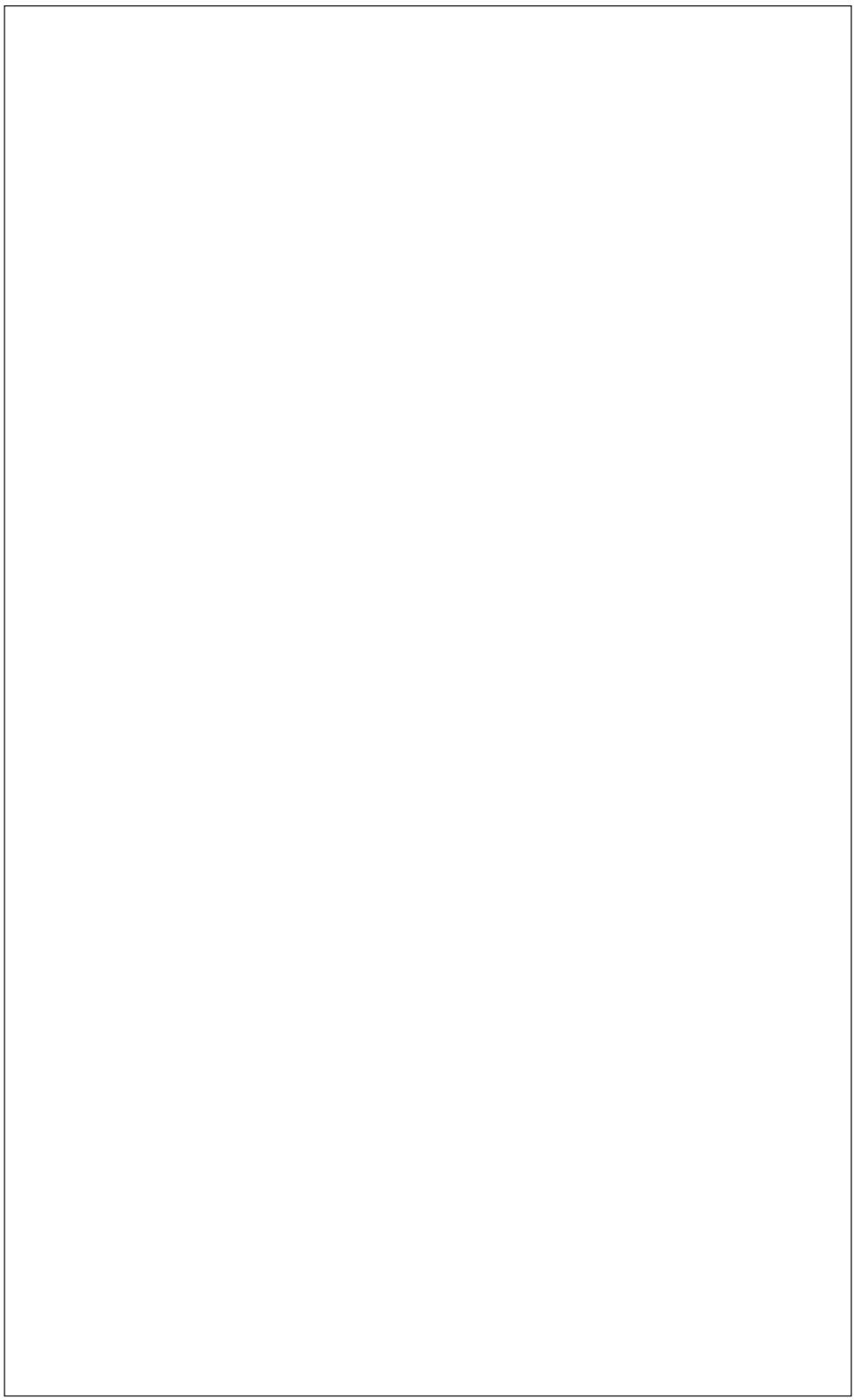


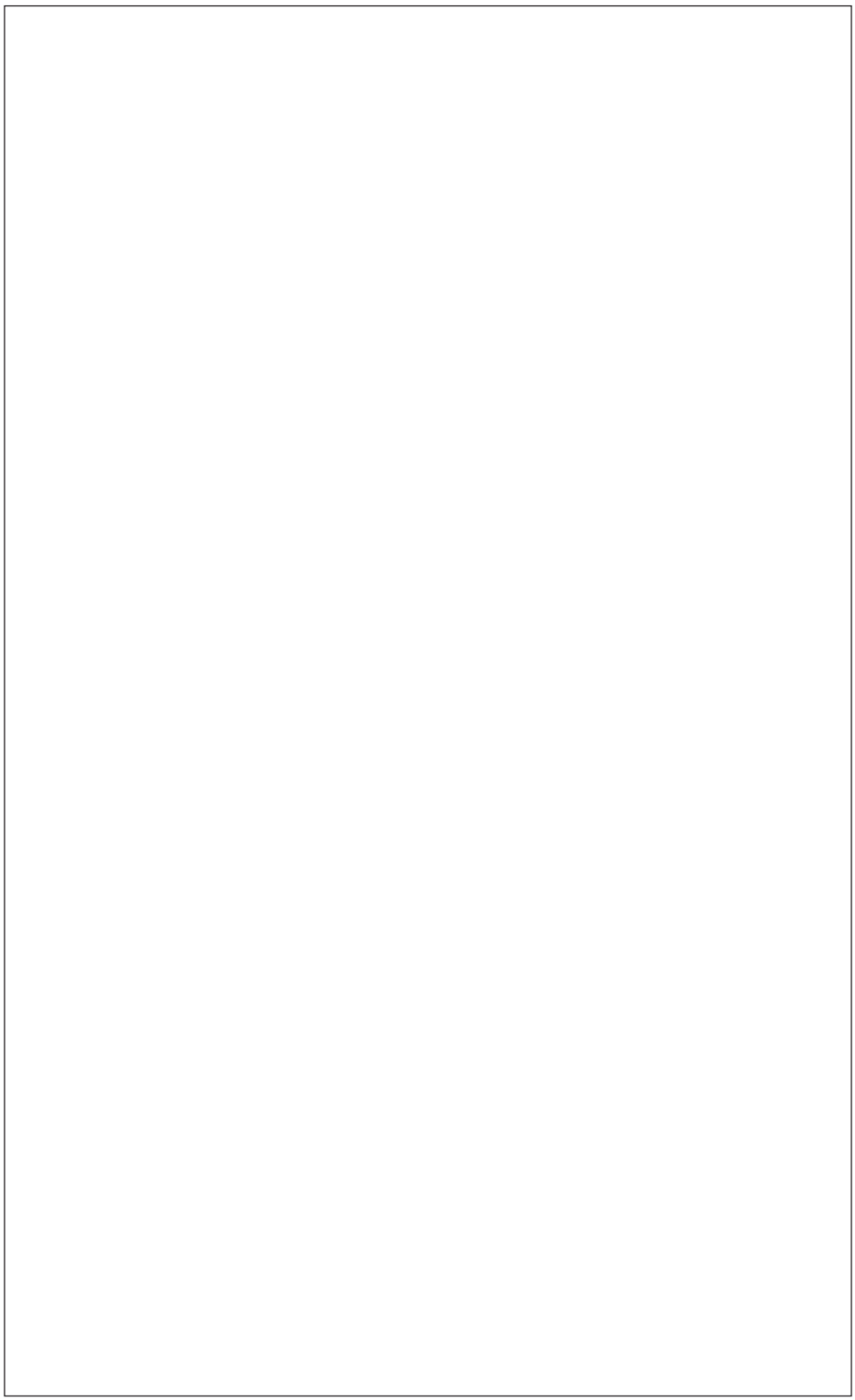


Another friend of mine used to work as a pastry chef in a fancy restaurant in New York City. Every November, a couple would come in with a huge truffle, worth at least $5000. The restaurant would hold onto it, and the couple would come in for dinner every night for a month to eat the truffle cooked into every course, including dessert.

(Jason Fulford)



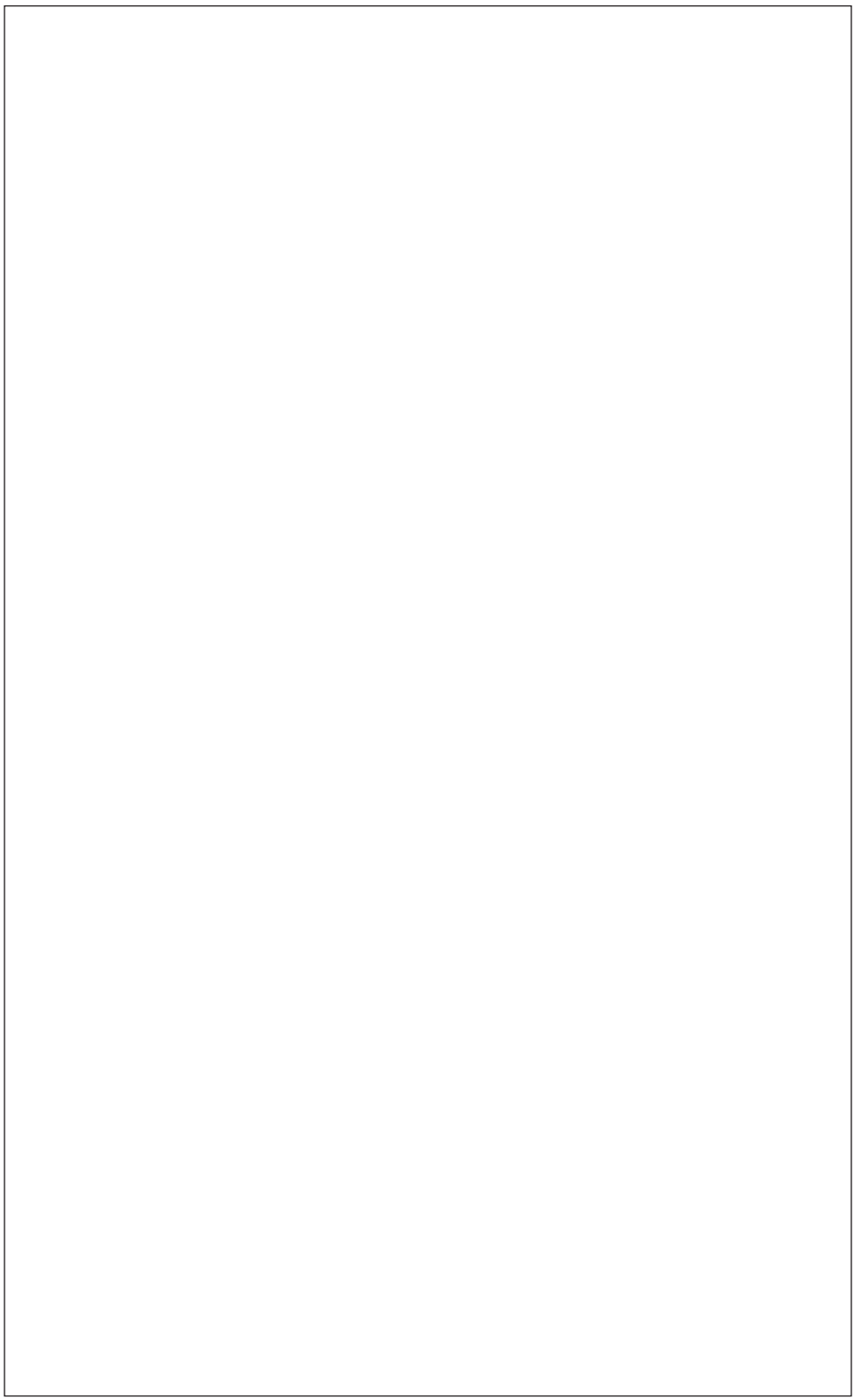




I was reminded, upon seeing Munari's Island of Truffles, of a recent apprehension of a misapprehension, some 30 years after being duped. Every summer of my childhood, my family went to Florida for a two-week vacation in New Smyrna, a low-slung, middle-class beach town where my grandparents had a condo and whose major landmarks, as I remember them, were Frozen Gold Ice Cream and Food Lion, a strip-mall-based grocery store that sold boogie boards and beach chairs on the sidewalk out front. Above all, my favorite activity of New Smyrna was a morning constitutional I made with my mom, just the two of us, where we'd select a building far in the distance, walk down the beach until we got there, then turn around. I liked these walks because I got my mother all to myself and because I could gather pristine specimen for my shell collection before the undisturbed sandy shore was pillaged by other shell-seekers later in the day. I'd gather cockles and conchs, cowry, limpets, moon snails, and nautilus, then identify them back at the condo with the help of a small field guide on shells of Eastern Florida. My shell collection was a point of pride, one I displayed on the living room bookshelf, putting the more ordinary shells in baskets and lining up the prettier ones, like the pink conchs or the whorl-bodied molluscs, so they could be admired individually.

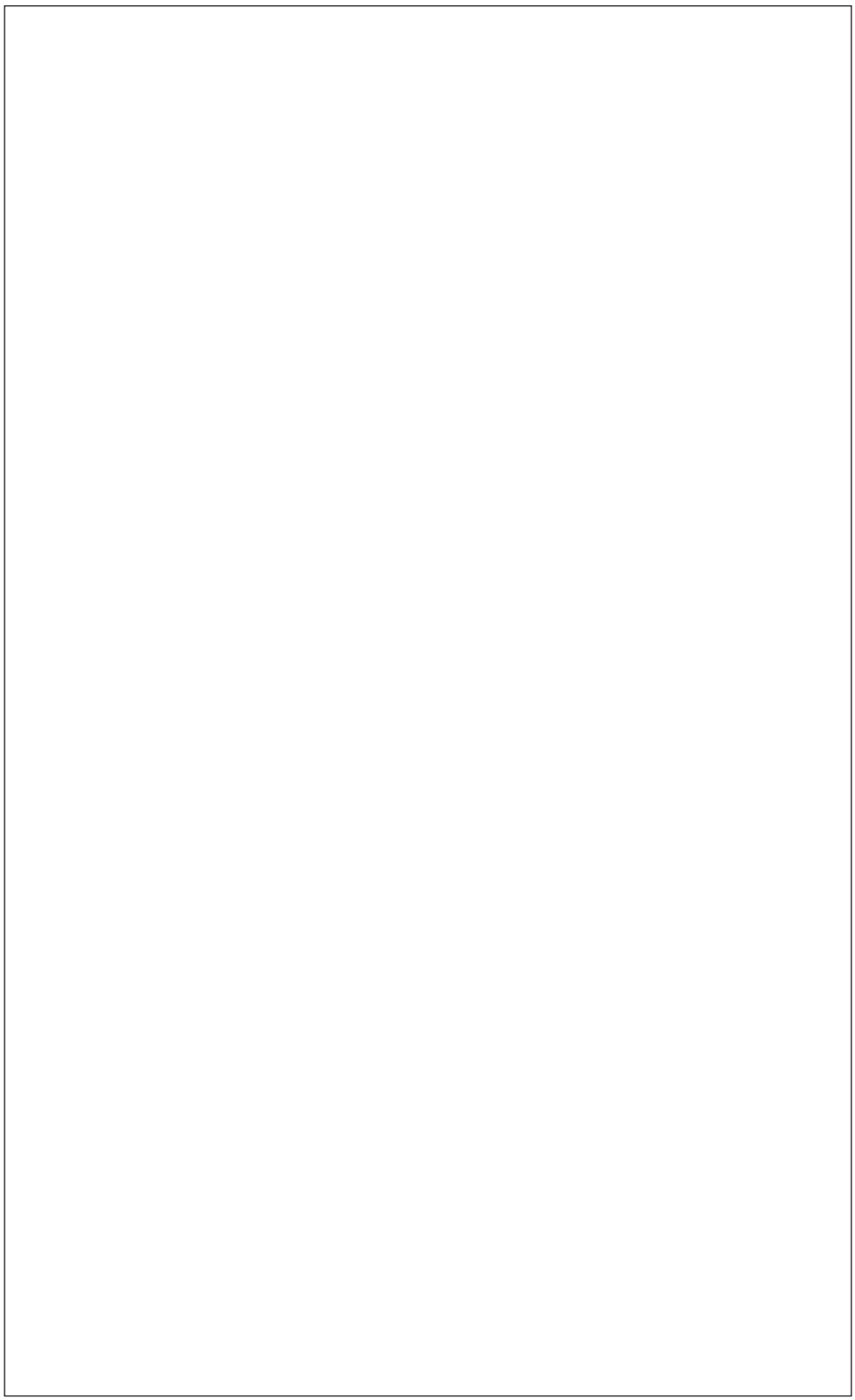
I visited New Smyrna beach this past fall for a family gathering. Since I was last there on vacation, my grandparents have died, my mother has died, and soon the condo will be sold because climate change, because maintenance charges, because four families, five grandchildren, and 14 great-grandchildren sharing one vacation property is more complex than a game of Jenga. I noticed the remains of my shell collection and said to an aunt how beautiful the shells were still. "Oh, your mother bought those at the beach store," she said. "She'd go out before your walk and place them so you'd have something good to find."

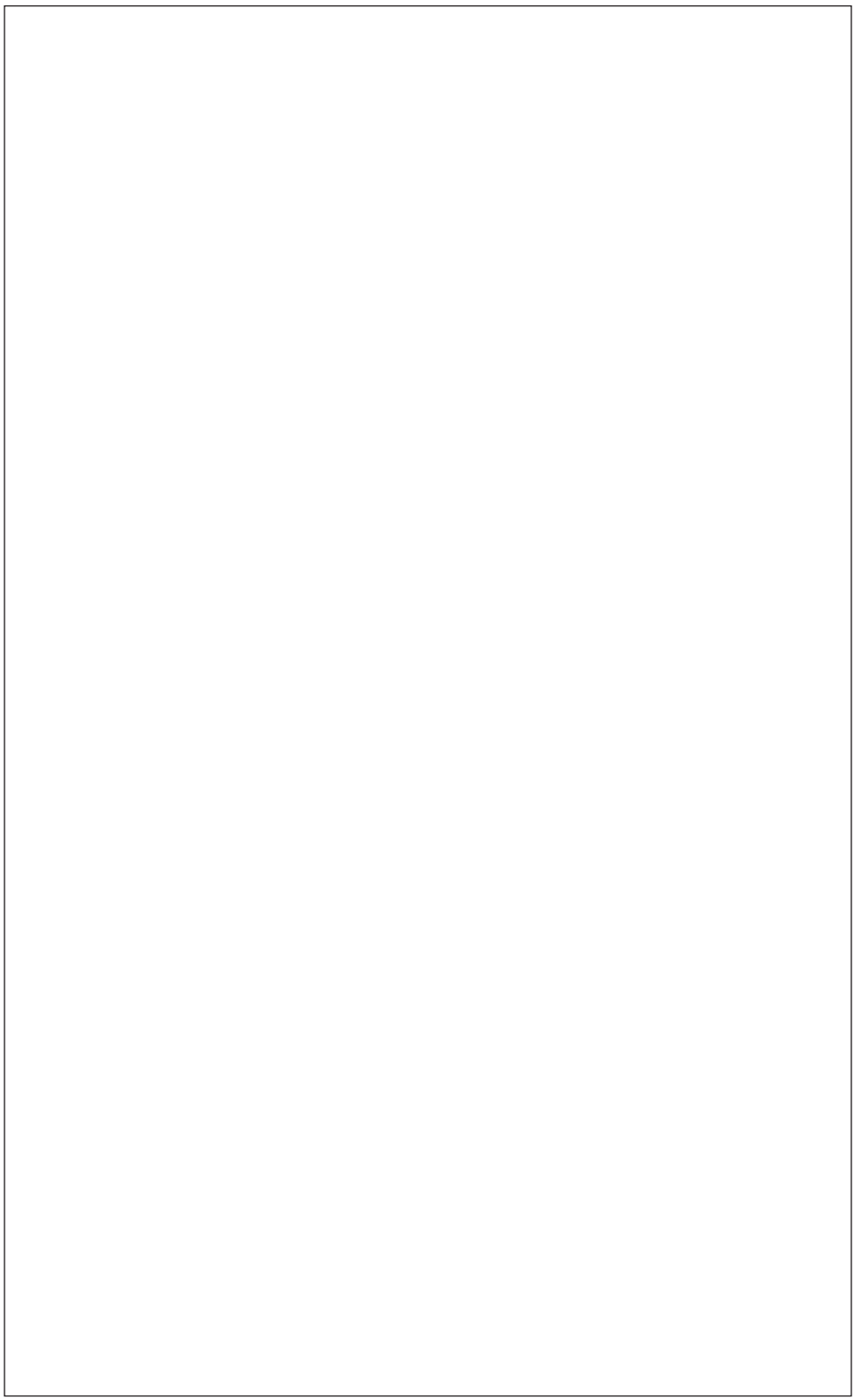
(Jenny Jaskey)



Tell it by the fireside or in a marketplace or in a movie [...] Almost any story is almost certainly some kind of lie. But not this time.

(Orson Welles)





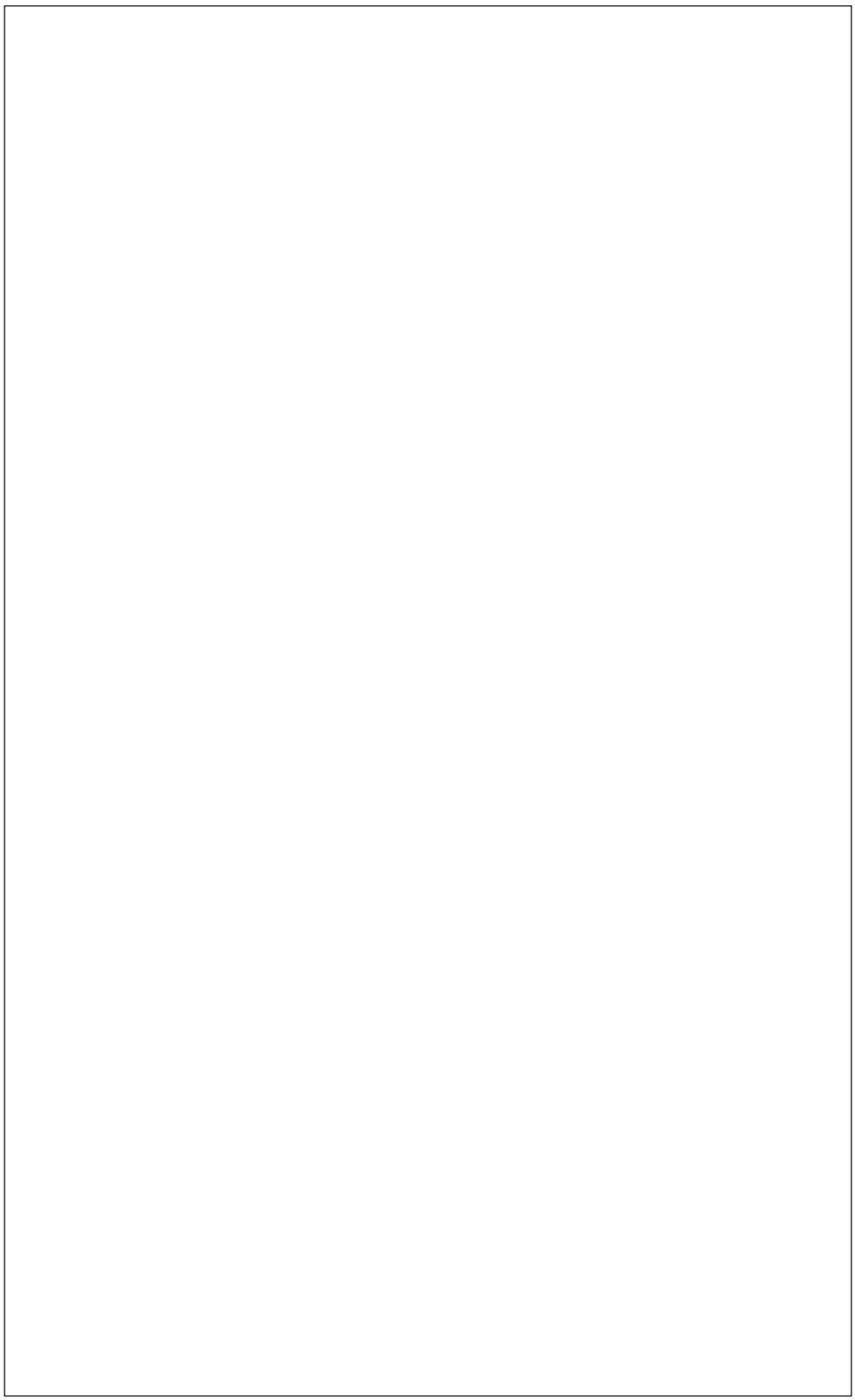
When I was a kiddo and my eyesight was perfect, I used to long for the day I'd have glasses because it seemed to me that those with specs essentially had two sets of eyes (one blurred, one crisp), and, consequently, an augmented or doubled reality. This is to say that I think a blurred real is no less real; a piece of writing misunderstood is no less valuable in that it creates a new piece of writing: one that belongs to neither author nor reader, but rather floats footloose in between. This is, of course, not what Munari is writing about.

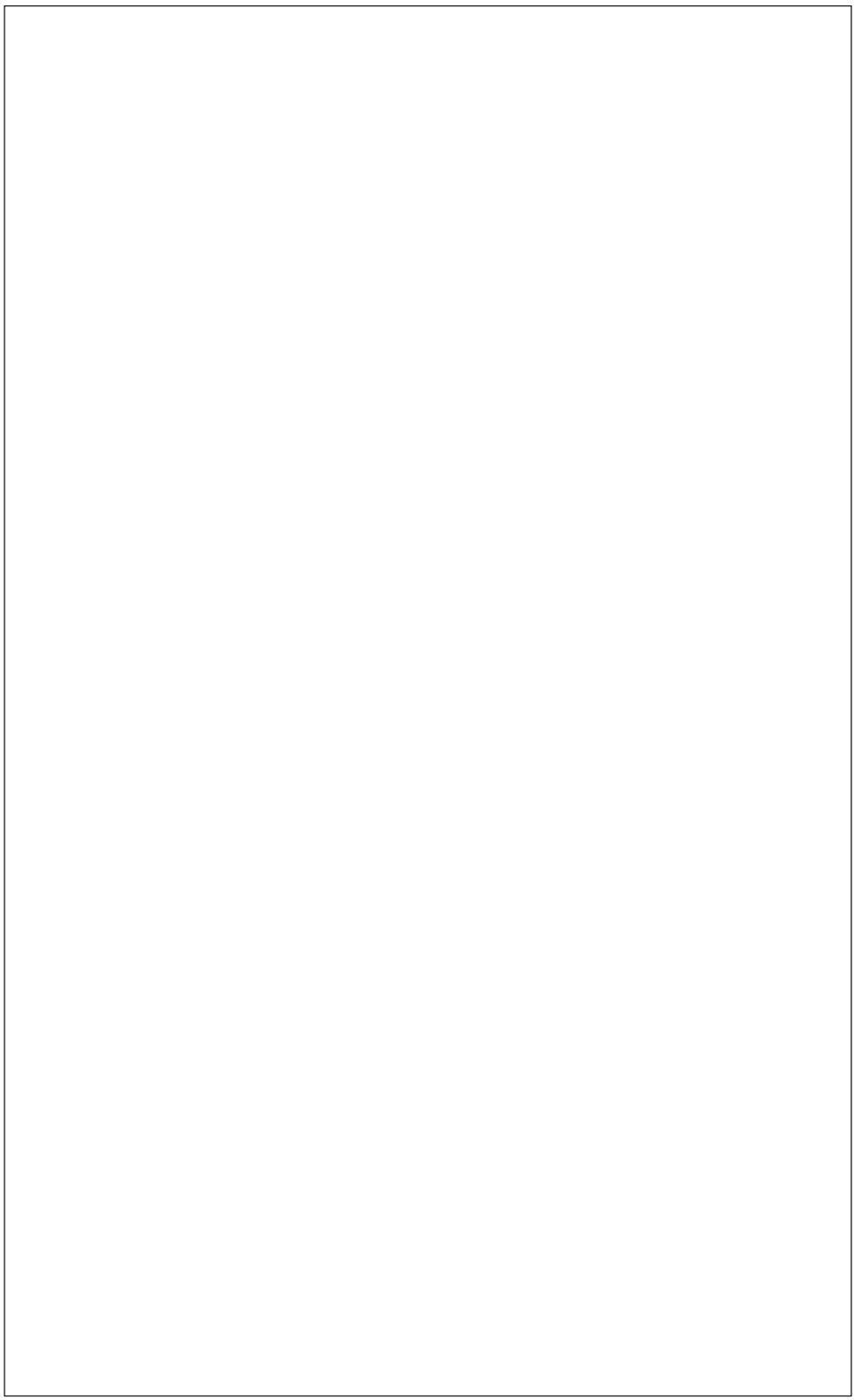
Now picture this: It's 3pm, mid-winter in Berlin, and the streetlamps are flickering on. The sound of snow is crisp under a woman's heels as she hurries through the large green doors of a school building. An American dancer is joining a dance school in Germany. She believes she is joining the ranks of elite dancers with exceptional ability, only to discover that the supernatural quality of the movement is in fact summoned by powerful witches. Her dance cohort mysteriously dies, one by one. She manages to gruesomely kill the old women and eventually escapes into the rainy night, smiling as the academy is destroyed in a fire.

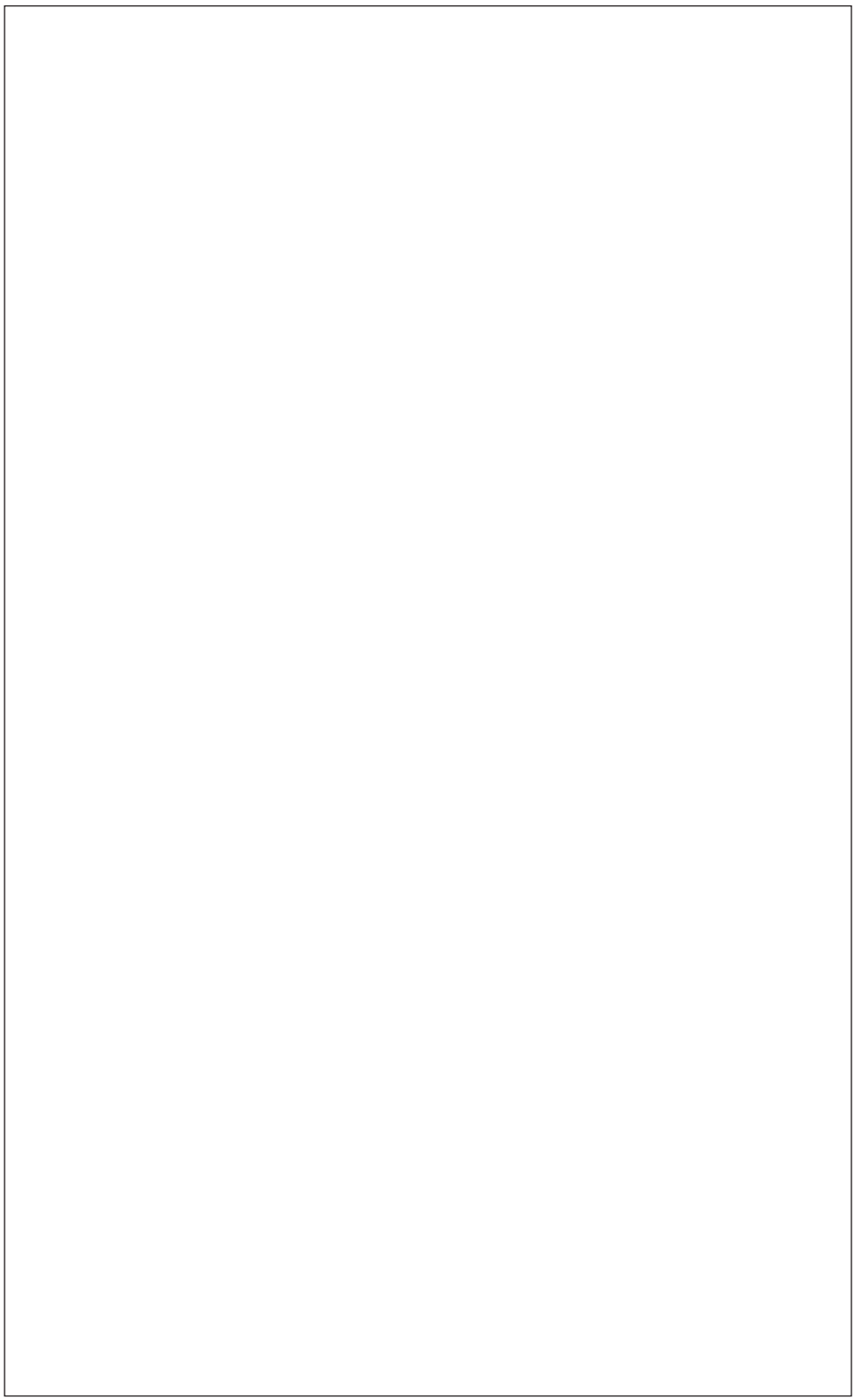
A family drives to the shore for a day on the beach. The mother, unnerved by an unspoken past trauma, keeps her children close; she seems unnecessarily on edge as the rest of her friends and even her husband enjoy the day. As night falls, the families return to their homes, only to find doubles of themselves standing in their driveways. The doubles, popping up everywhere, mirroring the world indiscriminately, begin to slaughter their originals. The mother ultimately finds herself in a raging fight with her own double, destroying her blow by blow, blurring the lines between victim and abuser, hunter and hunted. The family escapes, but as they drive off (to an unclear location), a smile curls on the lips of the driving mother, who may have awakened an ancient instinct, one perhaps not as defensible as she may think.

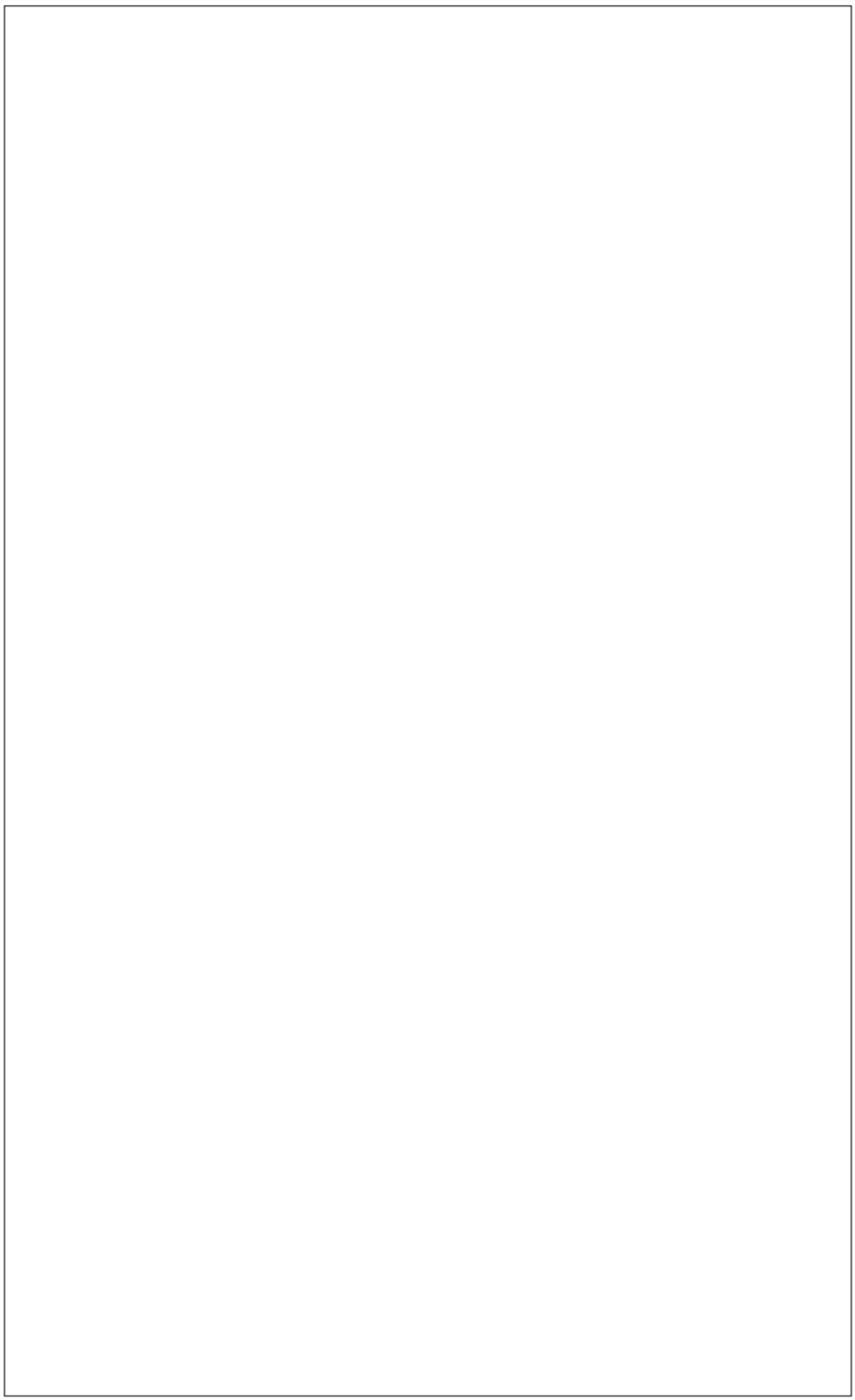
A pregnant woman endeavors to restore an old house. Her doorbell rings and a couple ask for help. Their stay turns into a funeral, which turns into a dinner party with more visitors streaming in. The party turns into a rave, the rave into a raid, the raid into a war where insurgents turn into governments, the government turns into the resistance, the resistance turns into a cult and the cult into a religion, until the house — trampled and finally dismantled by the hoards — burns to the ground; concluding that nothing is really fixed or perhaps ever what it seems. Obviously.

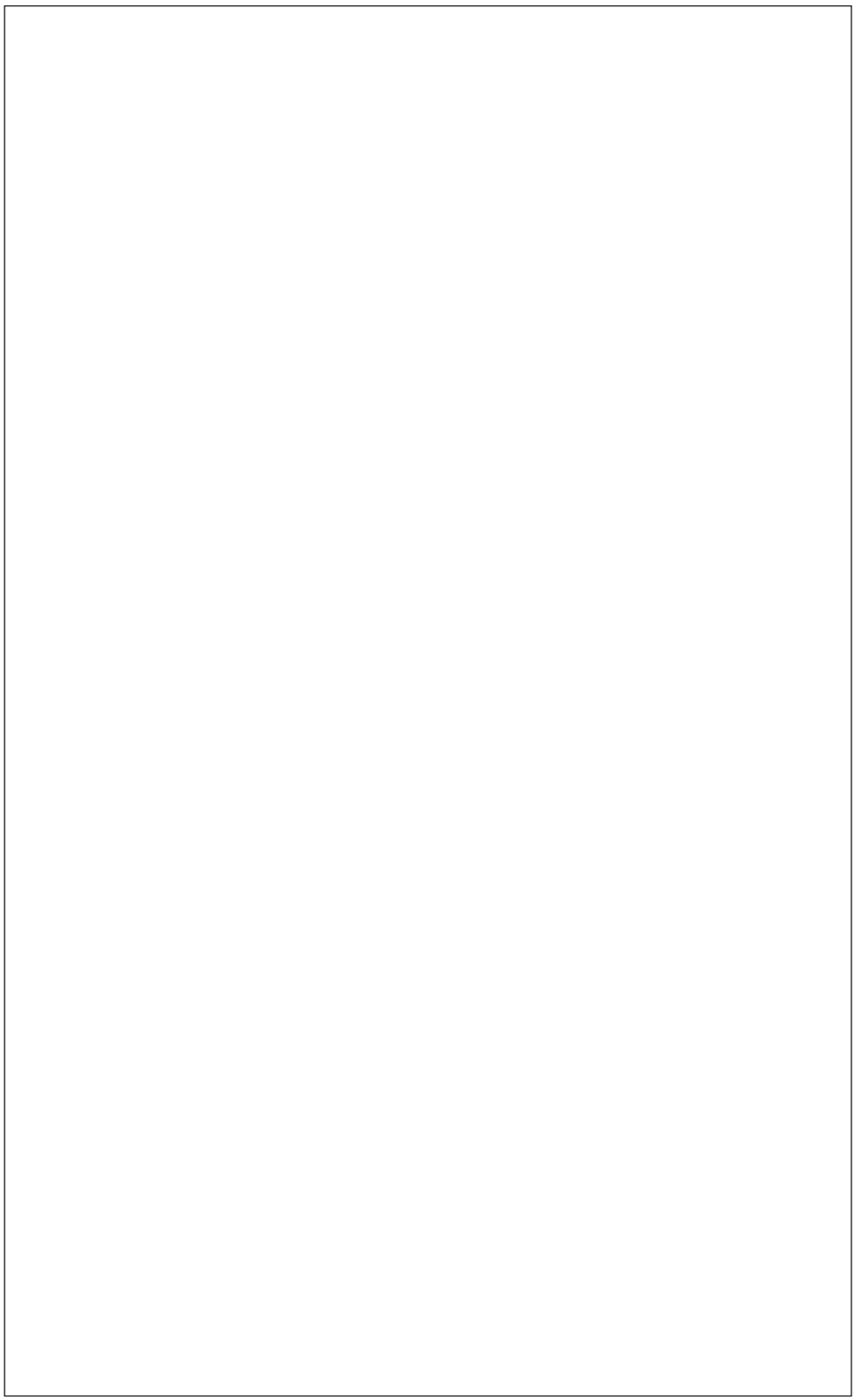
(Lauren Mackler)

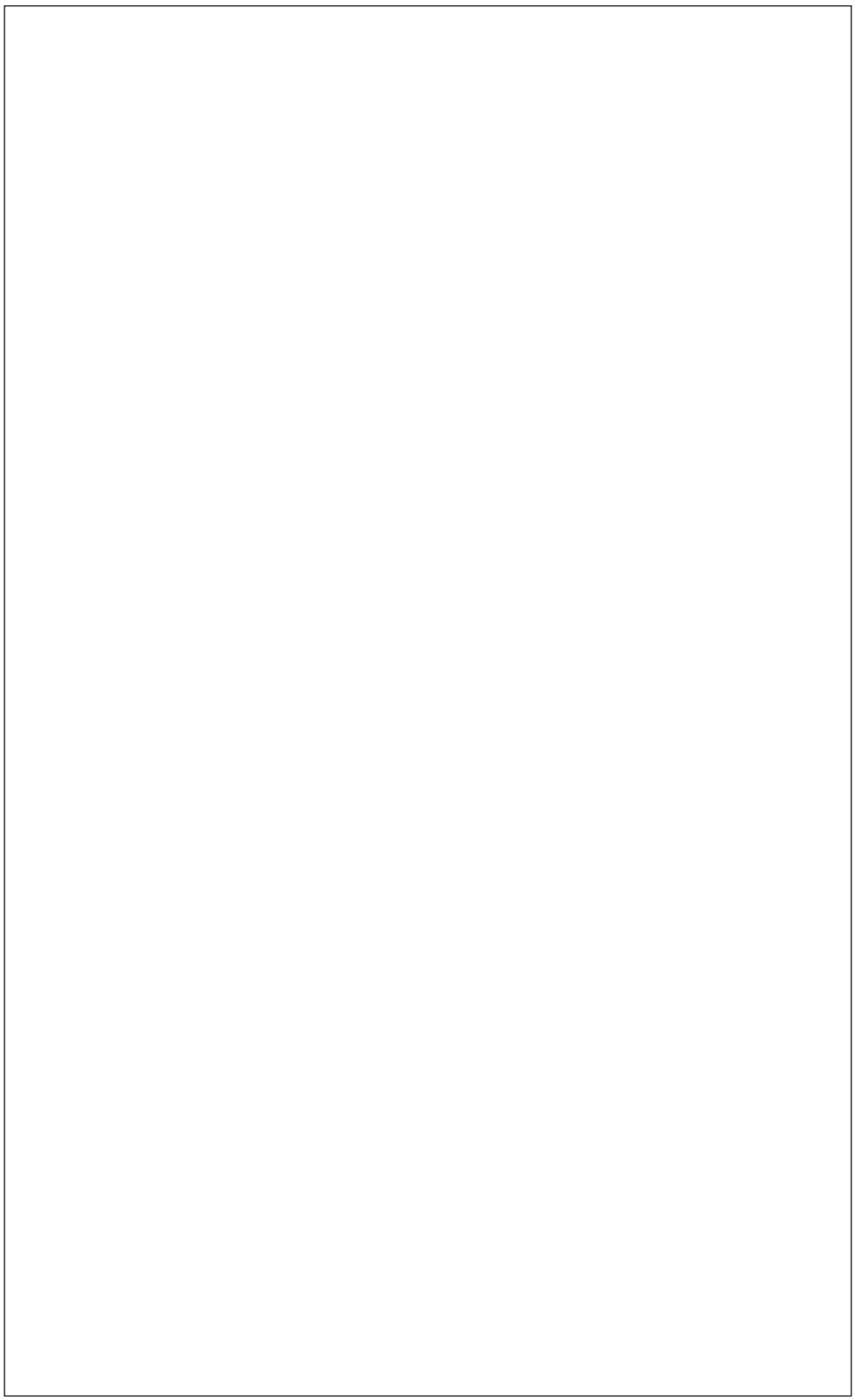






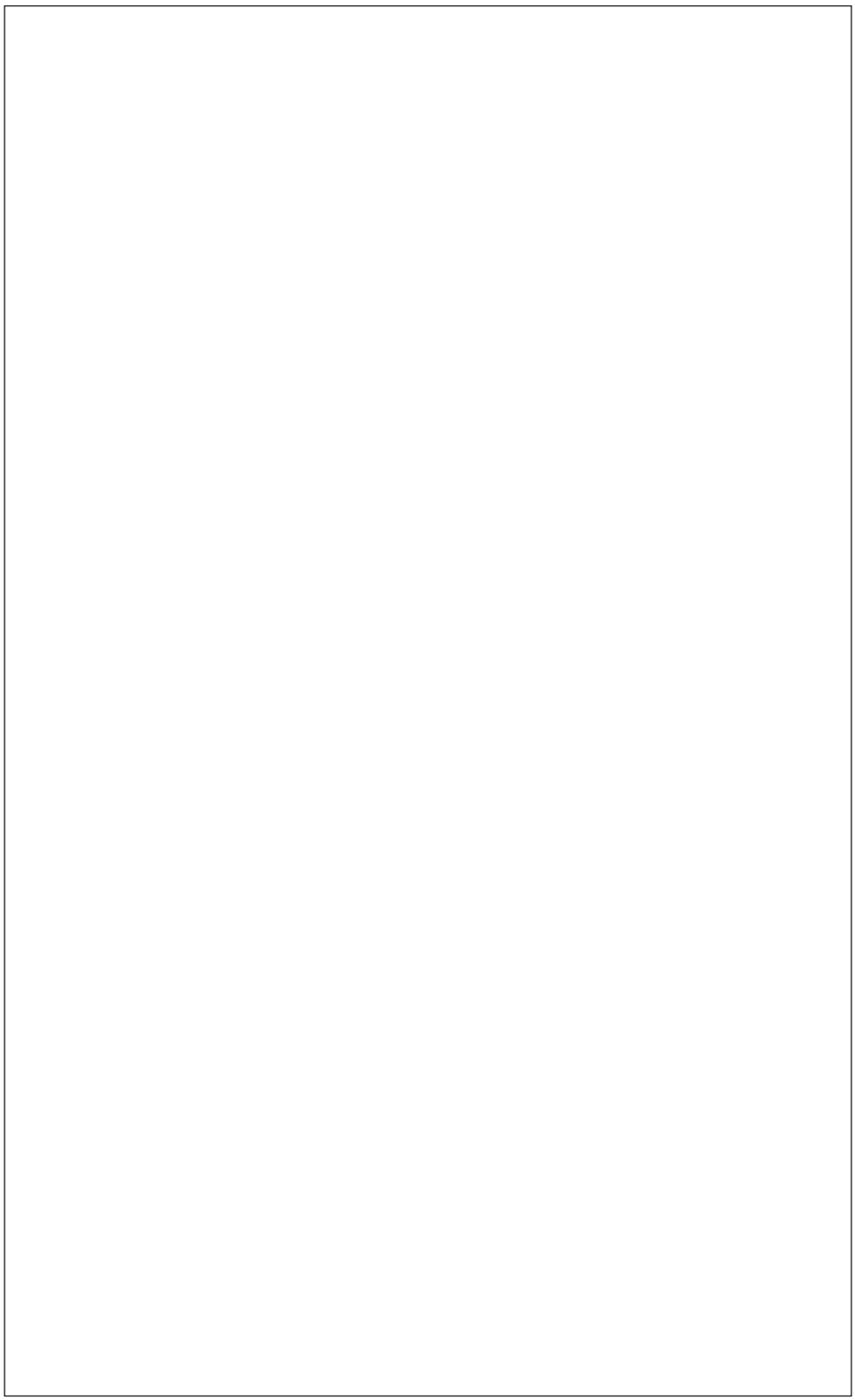






It seems to me that much of the effect of abstract painting is being able to see all of it, the full physical extent of it, before you, all at once. You understand the exact physical facts of the object: how big it is, its contours, its proportions, its shape, how thick it is, how it is made, how the paint is put on, thick or thin, opaque or transparent. And of course you also see it as a visual event or, to use a word that is wrong but useful, an image. You see it, in other words as you see a photograph, what it looks like. And all the material facts, the material extent, and the image are coextensive. They are present in one another, congruent with one another.

(Continued on page 82…)



Let us recognize the importance of not understanding a work of art. A work of art opens up that world of nonknowledge and helps to make sure we don't lose sight of it, keeping us curious and actively speculating.

According to Bruce Nauman, "Artists don't solve problems, they invent new ones." Joseph Beuys claimed that "Art isn't here to explain things." And Robert Rauschenberg stated "I could not live without confusion."

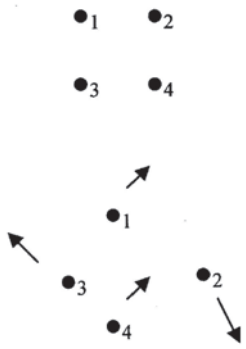
Bruno Munari, even more to the point, claimed:

Il più grande ostacolo
alla comprensione di un'opera d'arte
è quello di *voler* capire

Artists — like all of us — have the urge to understand the world, yet, in order to think new thoughts or to say new things, we have to break up all our ready-made ideas and shuffle the pieces.

An artwork can help us unlearn by taking something we have learned and understood, and puncture it, compromise it, complicate it — making a solution into a problem again.

In describing their process in the studio, for example, artists often talk about reaching the exhilarating moment when they stop knowing what a work is about, or when their own explanation doesn't exhaust a work they see before them. They feel it going elsewhere, taking flight, slipping out of their hands, as though they had made a solid into a liquid.



Cultural theorist Sarat Maharaj writes:

Maybe we could consider the practice of art as being an other kind of knowing, a kind of knowing that operates against itself — an always slippery yet confrontational process of daring to touch what can never be entirely known …

I tend to think that an artist does not know, at least not a priori nor in an absolute sense. An artist unstitches knowledges or unearths other uncanny or para-knowledges …

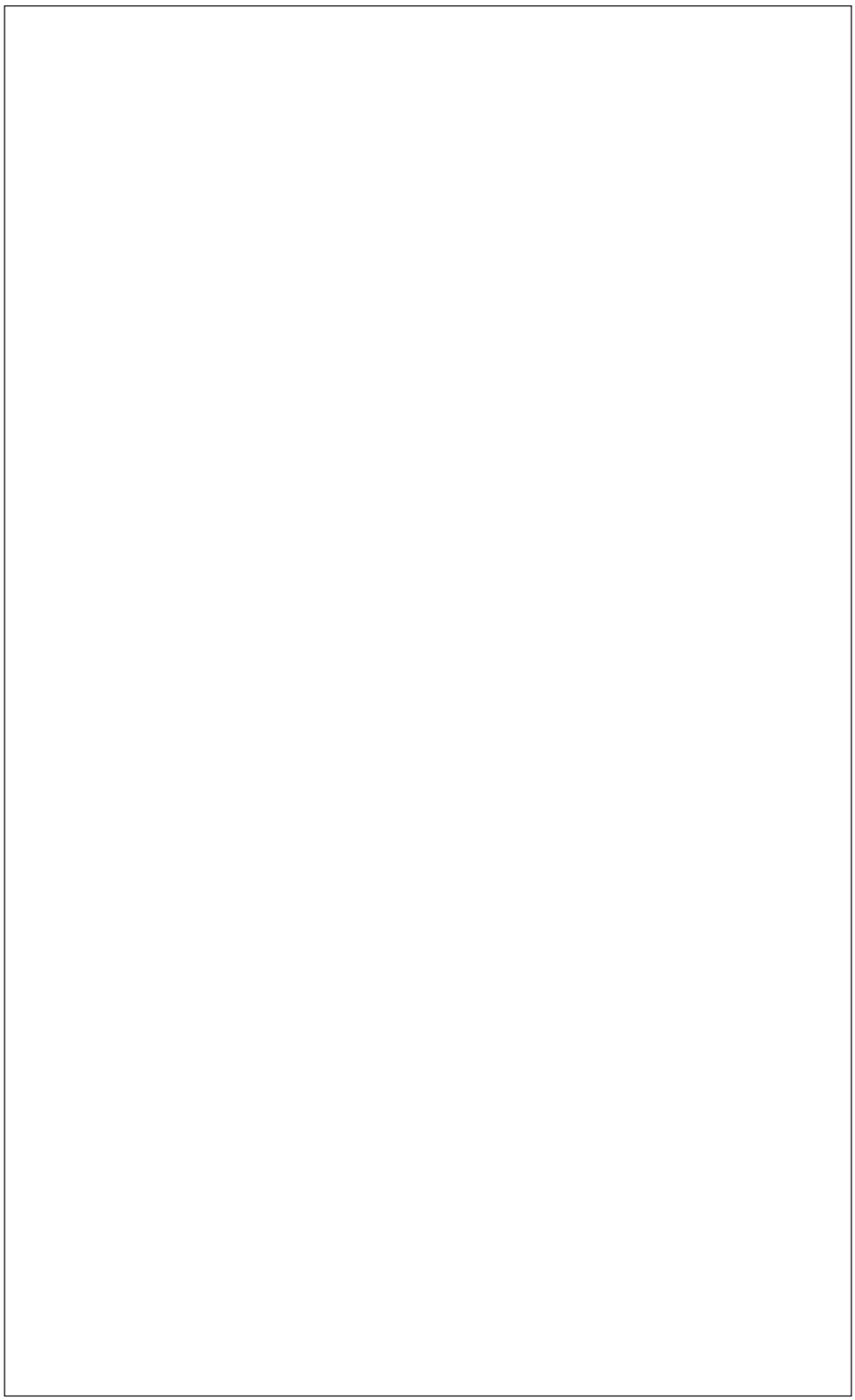
The artist has an unknowability: the ability to unknow.

As makers and thinkers of new things, many artists today consider part of their responsibility to be the disorganization of knowledge and information. In the traditional diagram of information theory, for instance, a transmitter sends a signal — information — over a channel

to a receiver. On its way, however, it encounters "noise," or "entropy," which is considered a natural inevitability.

Communication science is essentially an exercise in noise-management, and engineers strive to design transmission channels that prevent noise from obstructing the messages. In the field of information disorganization, however, noise is a friend, not foe. Art that inserts noise into a system of knowledge will, hopefully, succeed in breaking up its ready-made ideas and in reshuffling its pieces. What emerges is a noisy kind of knowledge, one that embraces the playful unruliness of the world. Research, in art, is a noisy research, where explanations are necessarily flimsy, provisional, and always subject to change.

(Anthony Huberman)



(Olimpia Zagnoli)

The first paperback edition of Munari's 1981 book *Da cosa nasce cosa: Appunti per una metodologia progettuale* (One thing leads to another: notes for a design methodology) has a scarlet cover with a black and white image of the tool reproduced above.

The image corresponds to a portion of the book dedicated to a taxonomy of tools, wherein Munari outlines a strategy for evaluating and classifying tools according to a number of predetermined categories — designer, manufacturer, dimensions, material, cost, durability, finish, weight, use, etc.

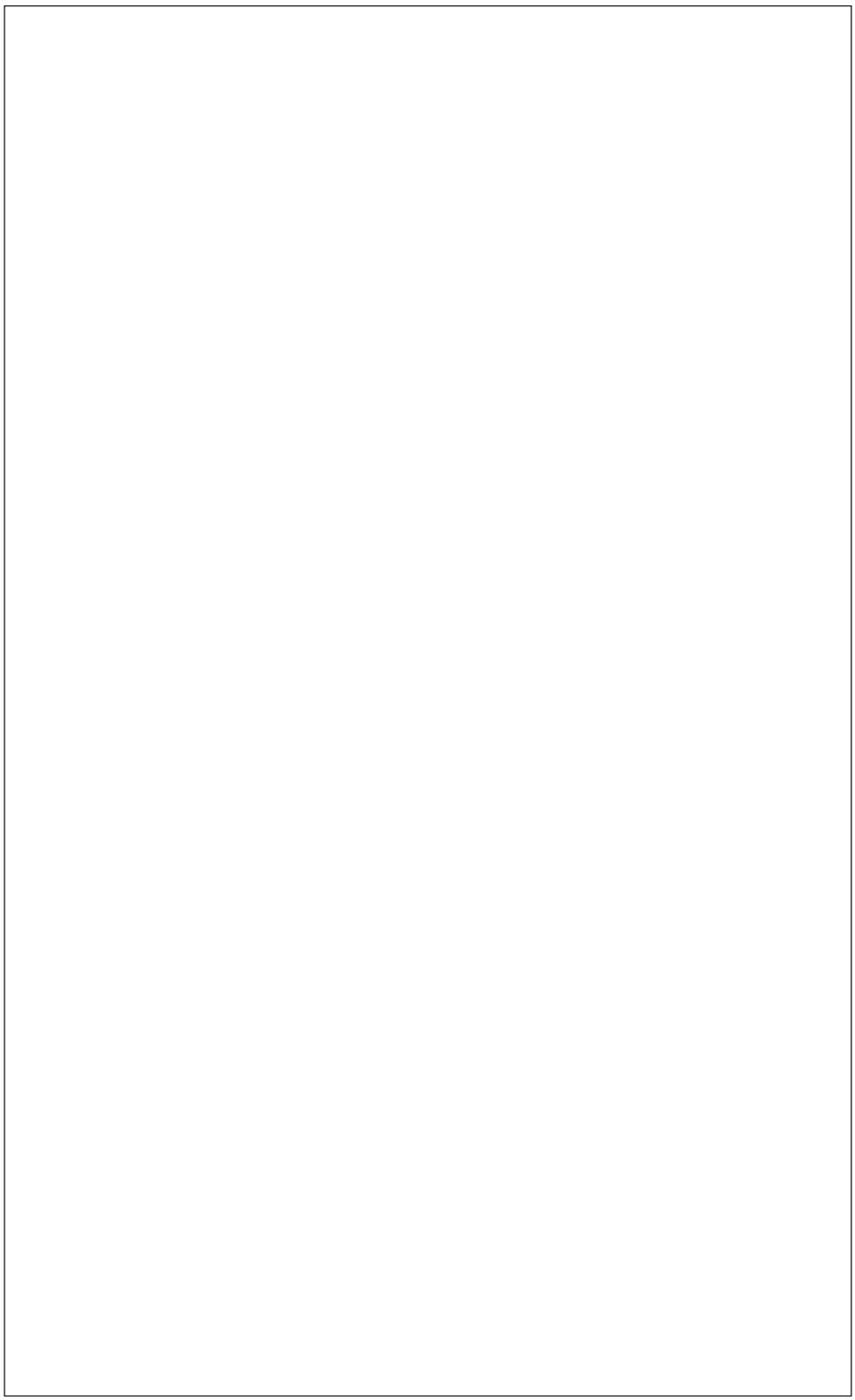
Under "use," Munari describes the hybrid tool, which combines the various implements that might be required in the set up of a window display — hammer, ax, pincer, screwdriver, and nail picker — into a single utensil perfectly suited for the window dresser who often finds himself having to work in small display cases.

I took my copy of *Da cosa nasce cosa* along with me one day when I was going to see my friend Ray, who is a collector, dealer and historian of old tools. Ray has his own informal taxonomy of tools organized on elaborate pegboard walls in the smaller of his two barns. Ray immediately identified the window dresser's tool as a pair of "fencing pliers" used by ranchers to repair wire fence. He took me out to the small barn and produced a tool that was, by all appearances, the exact make and model reproduced on the cover of *Da cosa nasce cosa*. With a large gentle hand, Ray lifted the pliers off the wall and demonstrated how it combined the various instruments required for the installation of wire fencing — pliers, hammer, screwdriver, staple puller, wire cutter, crimper, and hatchet — into a single hybrid tool. It was almost certainly manufactured in America and by his estimation, one of the first multi-tools ever made.

When I got home, I noticed a worn inscription on the tool that suggested it was made in Germany. I went online and sorted through dozens of vintage hardware vendors until I found a listing for a *Universalwerkzeug* that appeared to be identical to the tool I just bought from Ray. This time it was listed as a standard issue multi-tool used by a certain division of the German army for the repair of communications systems.

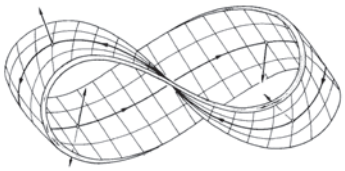
I rested the tool on the cover of *Da cosa nasce cosa*. It fit perfectly and I have only ever used it as a paperweight.

(Justin Beal)



Editors' note: The images on pages 42, 43, and 45 of the orginal edition have been replaced.

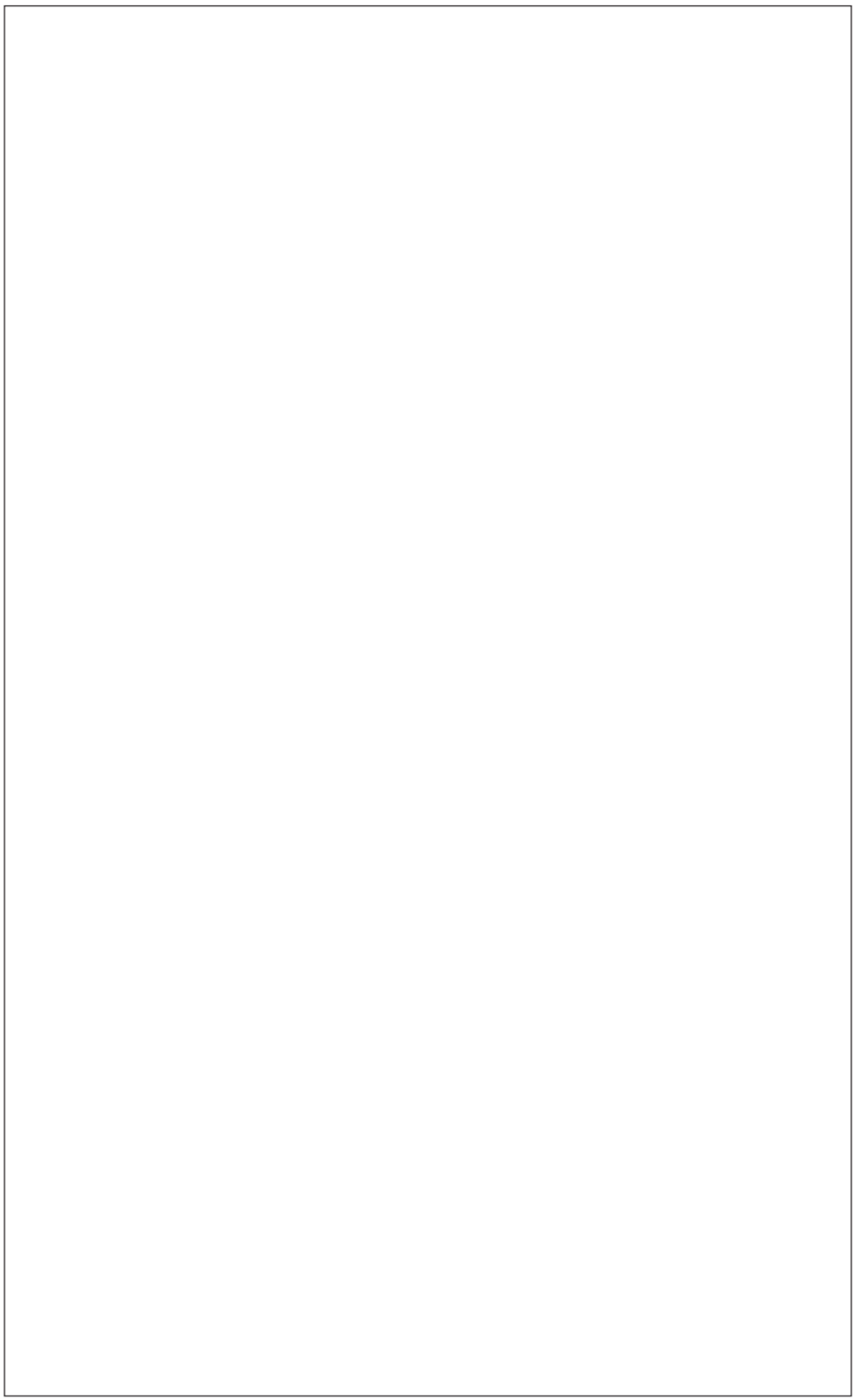
The 1947 *Concave-Convex* has an ambiguous, dynamic form, since its appearance keeps changing according to the point of view of the spectator. Its shape is produced by bending a square or rectangular wire mesh and fixing its corners on predetermined points within the mesh itself. The resulting volume looks like the topological objects characterized by non-orientable surfaces, such as Moebius's strip, but it is also close to more natural forms, such as fish, clouds, seashells, leaves.

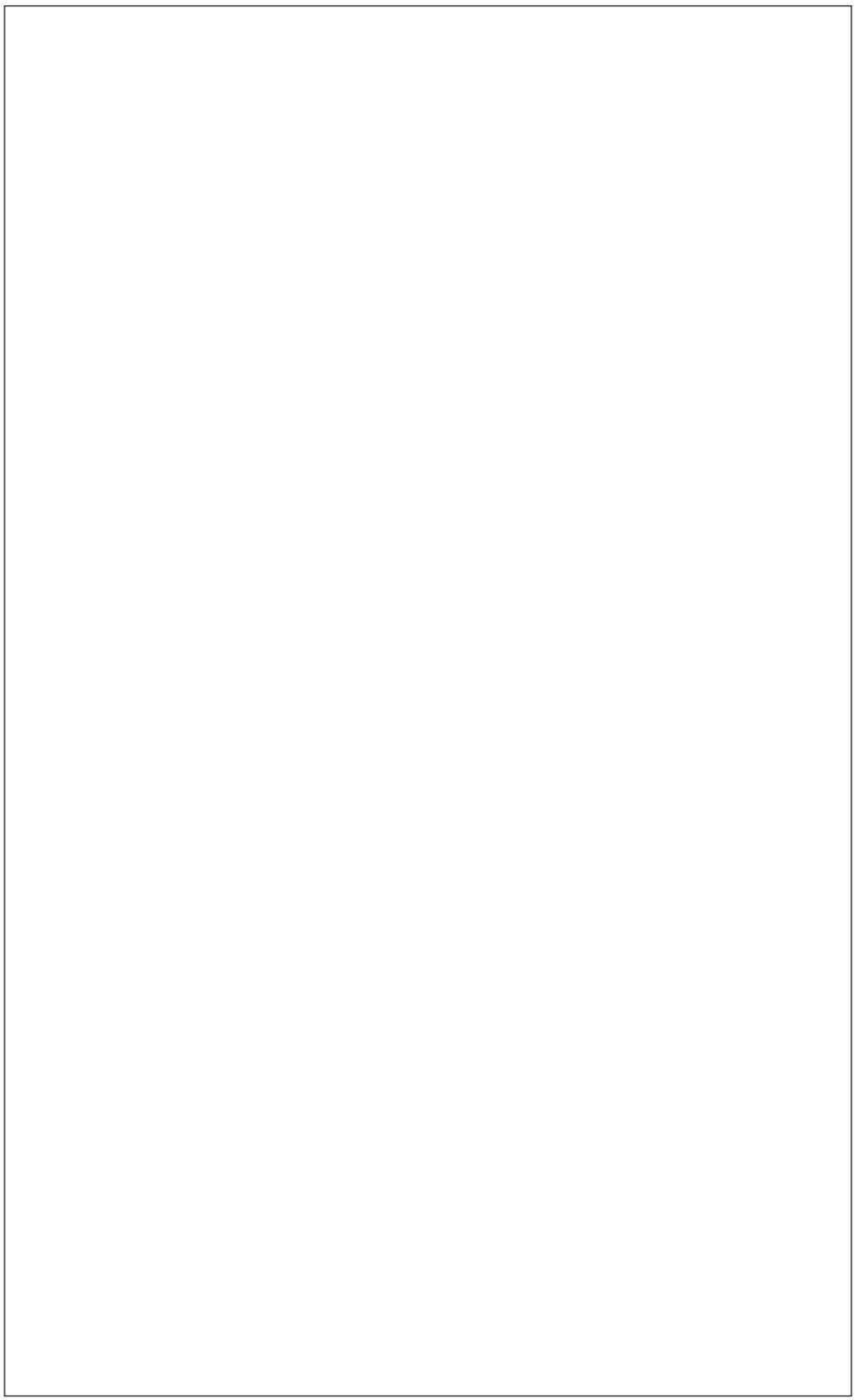


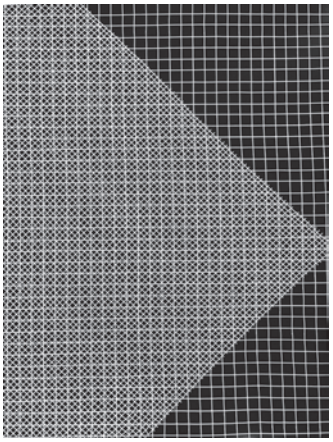
In this series of works Munari seems intent on distorting a geometrical form; such "distortion" is generated by an attempt to experiment with the limits of a material, and is never irreversible. *Concave-Convex* follows the same line of inquiry that led to the useless machines: more specifically, it develops the idea of an abstract composition moving in space, whose indefinite shape is a function of time.

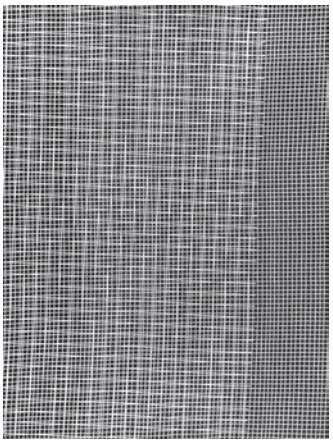
The object, a piece of industrial wire mesh, is only the means to create a space in which an image can transform. So *Concave-Convex* is not merely a mobile: rather, it is the blueprint for an environment in which the evolution of a form can be viewed. The work, originating from an industrial material, affords a degree of transparency that can be used to generate ever-changing abstract drawings, something like short movies. This work has something in common with László Moholy-Nagy's 1946 *Dual Form with Chromium Rods*, and can be considered a logical development of the useless machines. The possibility of linking several concave-convex works shows Munari's interest in a modular, almost fluid development of space. The notion of spatial growth seems to prefigure the soft, flowing, natural shapes of so much contemporary architecture.

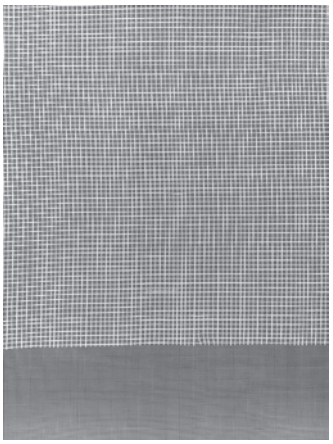
(Luca Zaffarano)









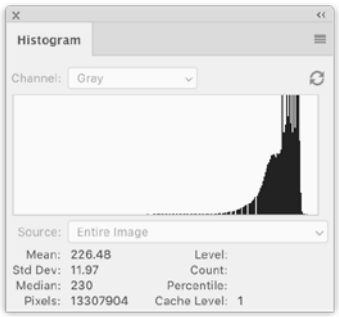


(Leonor Antunes)

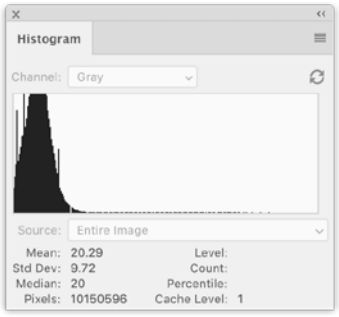
In digital imaging software, the histogram is a visualization of the distribution of color values across the individual pixels that constitute an image. The histogram is presented as a graph, with color values along its X-axis, and their relative representation in the image along its Y-axis. One of Adobe Photoshop's interfaces for changing the color in an image, "Curves," is displayed as a histogram with a linear overlay that can be manipulated by adding and adjusting control points on a Bézier curve. These manipulations, as the name of the tool suggests, smoothly redistribute the balance of color in an image. In this interface, however, the histogram is shown only for reference — no precise what-you-see-is-what-you-get control of the histogram is possible in Photoshop.

In multi-channel color images, interactions between color values are complex, but in a greyscale image the histogram is a simple, legible chart that an experienced software operator can intuitively relate to the visual appearance of an image.

If the histogram registers pixels tending to the right of its range, the image will be relatively light:

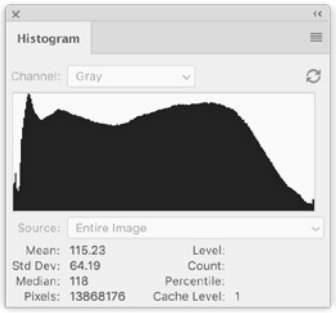


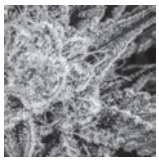
If it registers pixels tending to the left of its range, the image will be relatively dark:



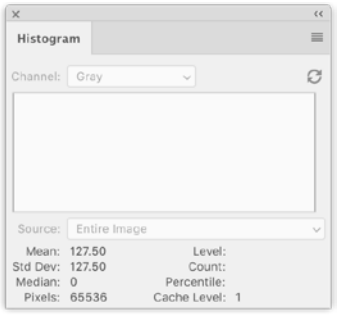
The overall range of the histogram represents the tonal variety of the image. The broader and deeper the histogram, the more greyscale values appear in the

image, and the more visually complex it is likely to be:





The histogram of a chessboard looks like this:



Only pixels at the two extremes of the greyscale range are represented: whites and blacks. The columns at the left and right of this histogram are as thin as they can be — they correspond to the value "0," pure white, and "100," pure black, on the X-axis.

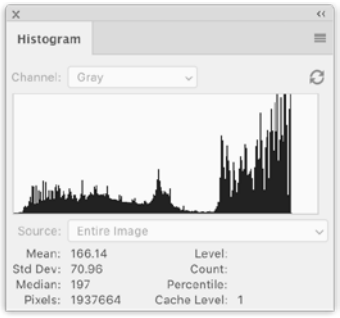
If half of the black squares are sorted to the left of the image, and half to the right, the image begins to resemble its own histogram, which is unchanged, because statistically the relative number of black and white pixels in the sorted image is identical to the original chess-board image.

Sandpit is a JavaScript image processor developed by Simon Knebl and I at HfG Karlsruhe. Sandpit treats the histogram as a meta-image and enables manipulation of its graph for purely visual purposes, while maintaining its effective relation with an original image.

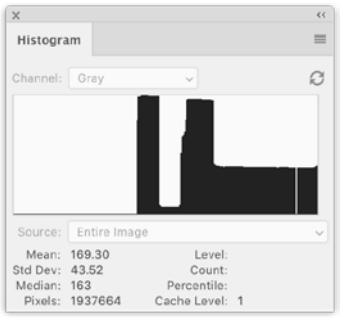
To demonstrate, here is a section of one of Bruno's negative-positive sketches. It looks like a building with two tall chimneys:

Here is an image found on a stock photography website that has a similar composition, Battersea Power Station:

Here is the histogram of that image:



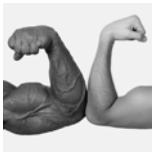
Here is the histogram again, altered in Sandpit to resemble the sketch:



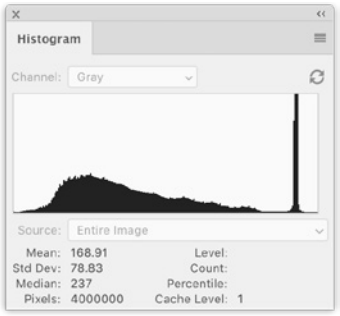
Here is the consequence of that manipulation for the power station image:

Here is a section of another negative-positive sketch by Bruno. It looks like two bent arms:

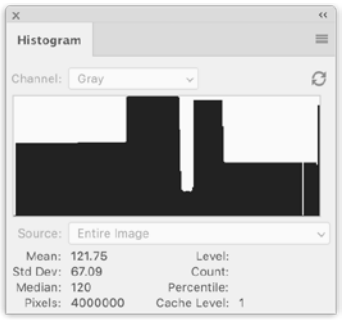
Here is an image found on a stock photography website that has a similar composition, two body-builders:



Here is the histogram of that image:



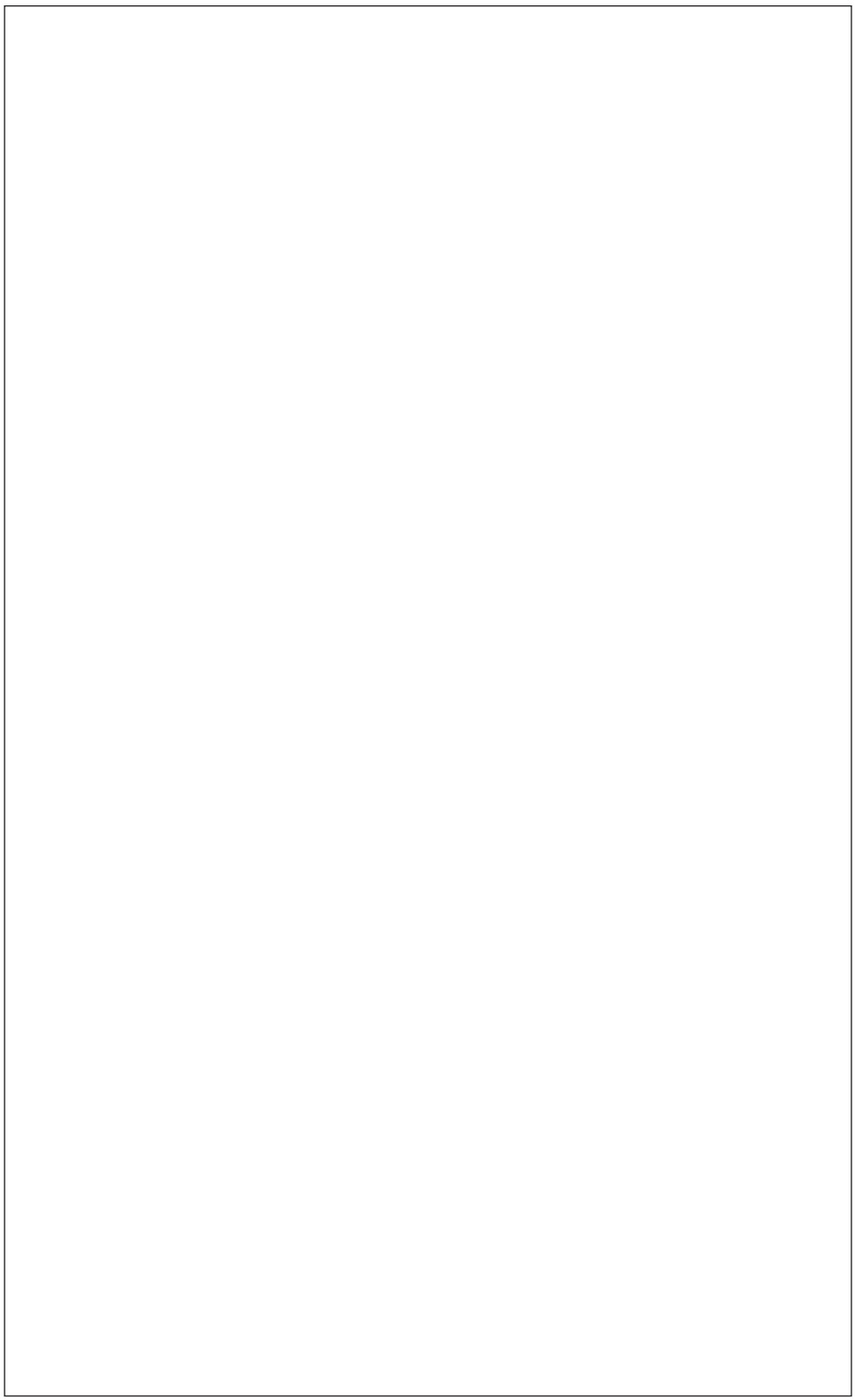
Here is the histogram again. It has been manipulated in Sandpit to resemble Bruno's composition:

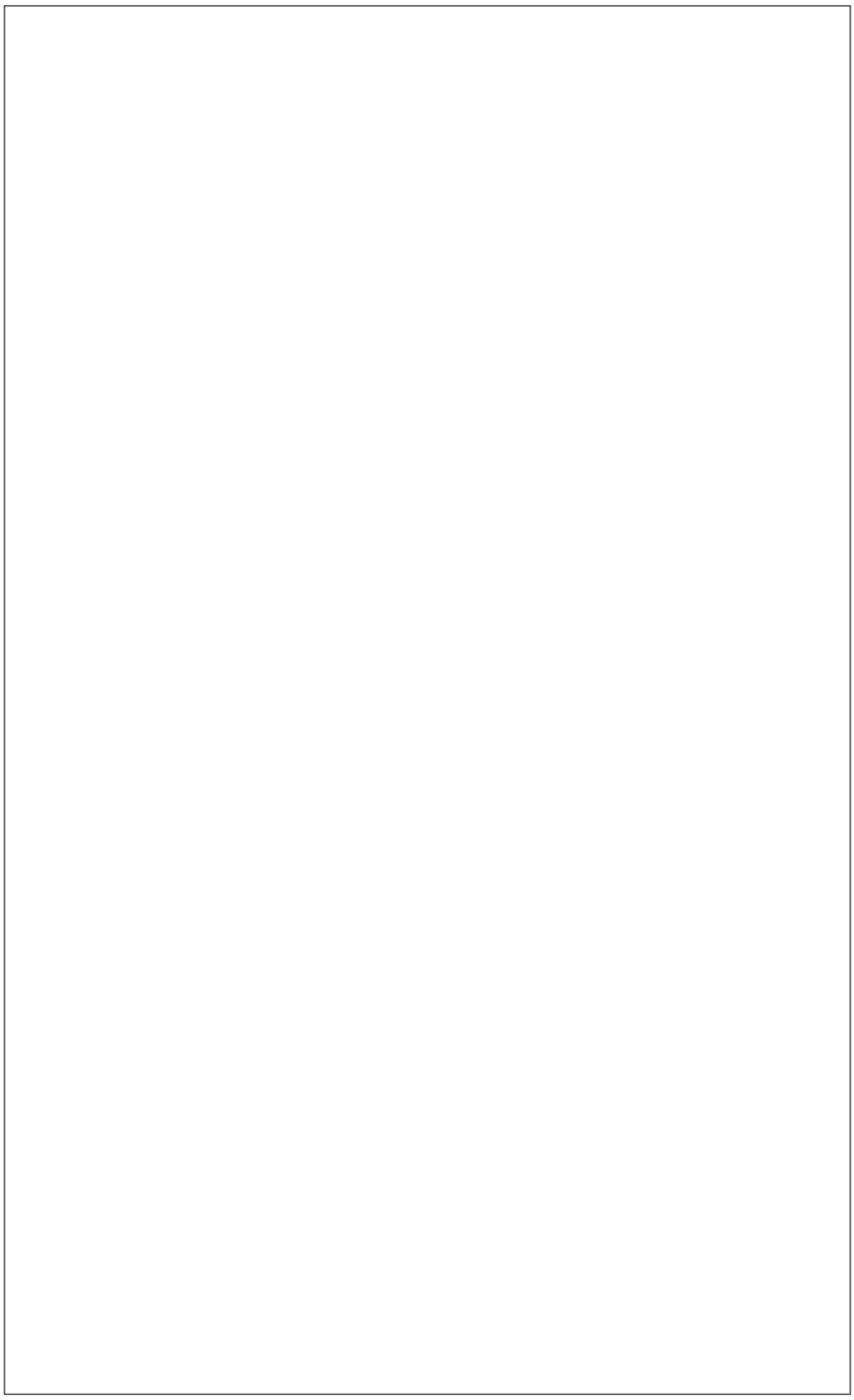


Here is the consequence of that manipulation for the body-builders:

An image that looks like itself *in the abstract.*

(James Langdon)

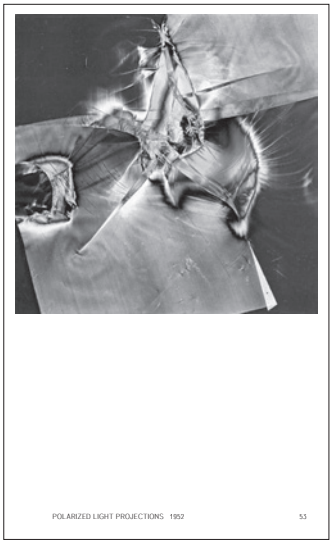




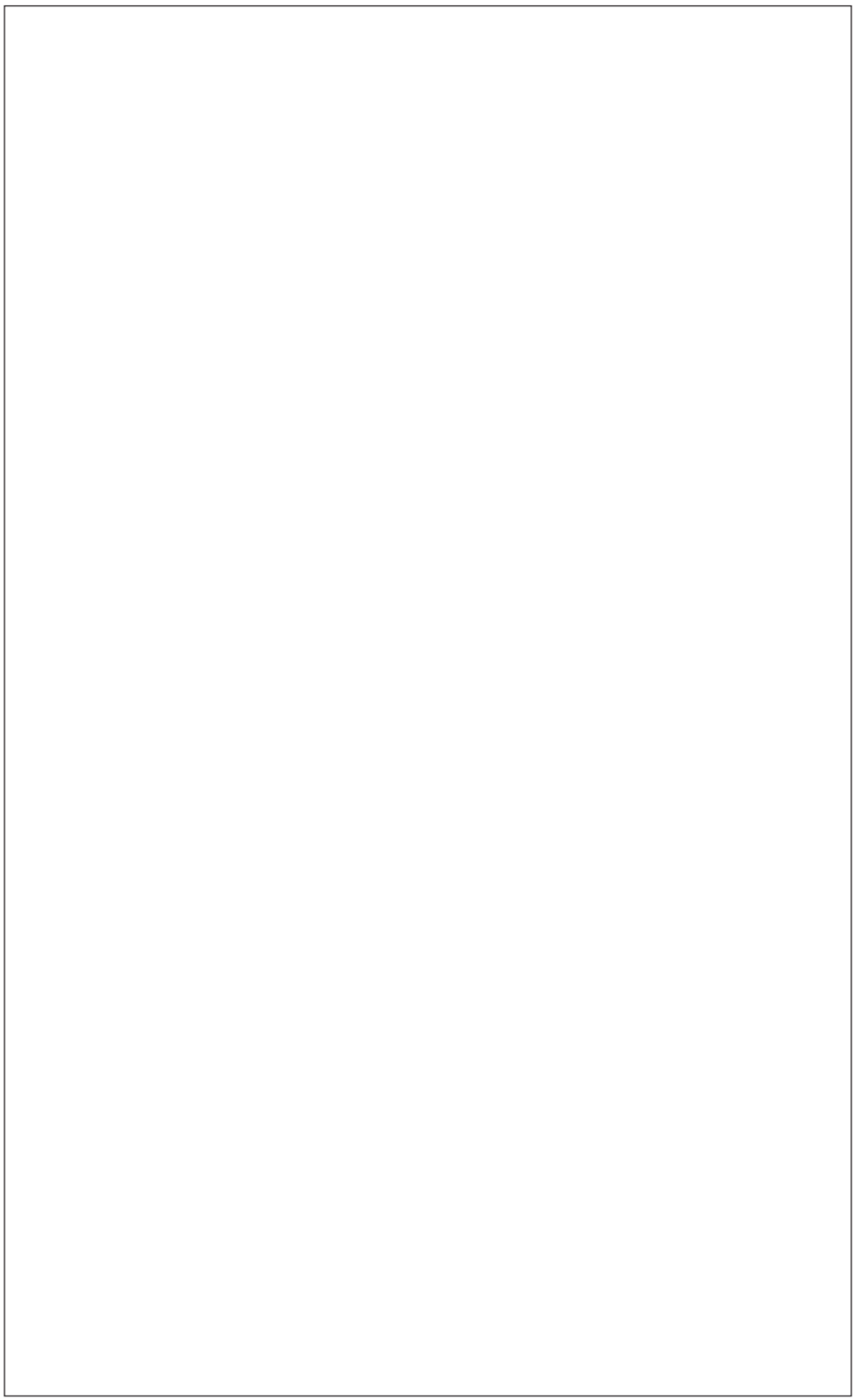
Since I started to be bothered — not much, luckily — by cardiac fibrillations, I also started looking at these "arrhythmic machines" differently, more empathetically. Their frenzied, aimlessly lout moves make me think of the row told by Macbeth, for whom life is like "a poor player, / That struts and frets his hour upon the stage / And then is heard no more. It is a tale / Told by an idiot, full of sound and fury, / Signifying nothing." One would expect them to stop progressively, as the energy ends or suddenly, for a spring failure, a bit like my life, to which I would then ask the same question I would ask these little machines: "… And so what?"

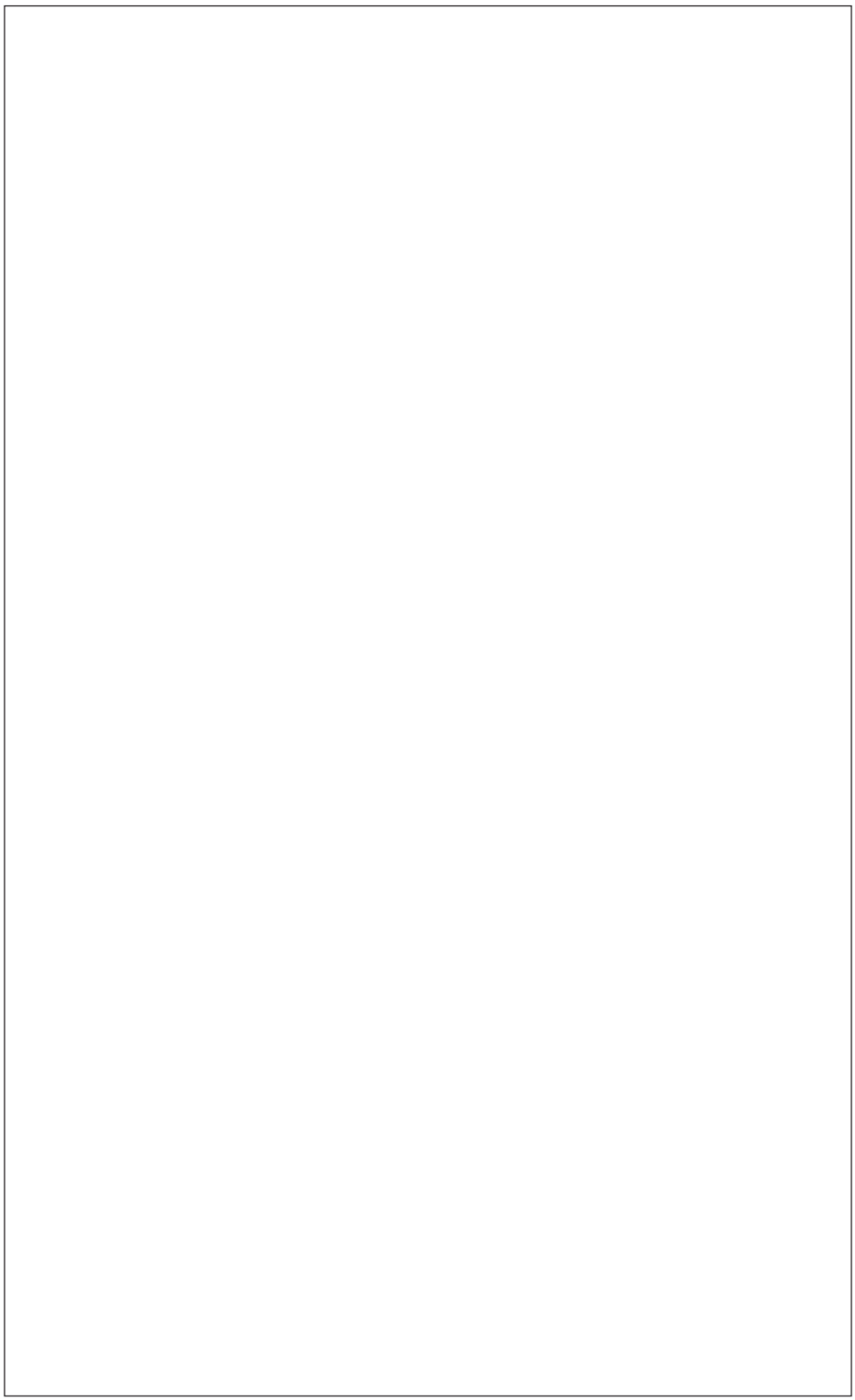
But I don't want to sound too auto-biographical (and pessimistic) and I want to go back to the art vocabulary with a memory that ignites a series of critical considerations. The object that in my mind comes closest to these "arrhythmic machines" is Jean Tinguely's fountain in Basel. Those machines, which shovel up the water or spray it like a drunk who can't piss straight, come from the same thoughts and same irony that moved Munari. After all, they knew each other, they knew the world around them and they knew that the world needed some kind of signal, a funny warning that could debunk "the magnificent and progressive fate" (G. Leopardi, *La ginestra*, 1836) of modernity. Confronted by the myth of technology — that Munari loved, but in a different way, and by the idea of infinite progress, one needs wonder where all this noisy ado is driving us. Munari himself was part of this excitement when in his Futurist period he befriended Marinetti and the entire gang of hardcore believers in the future — whatever that might be, as long as it was mechanical (let's not forget Munari's "Manifesto of Machinism" from 1938). Nothing more maieutic, then, of a machine that goes mad or that rebels against its programmed, unchanging rhythm. In the end, Munari was similar enough to Charlie Chaplin — uh, modern times!

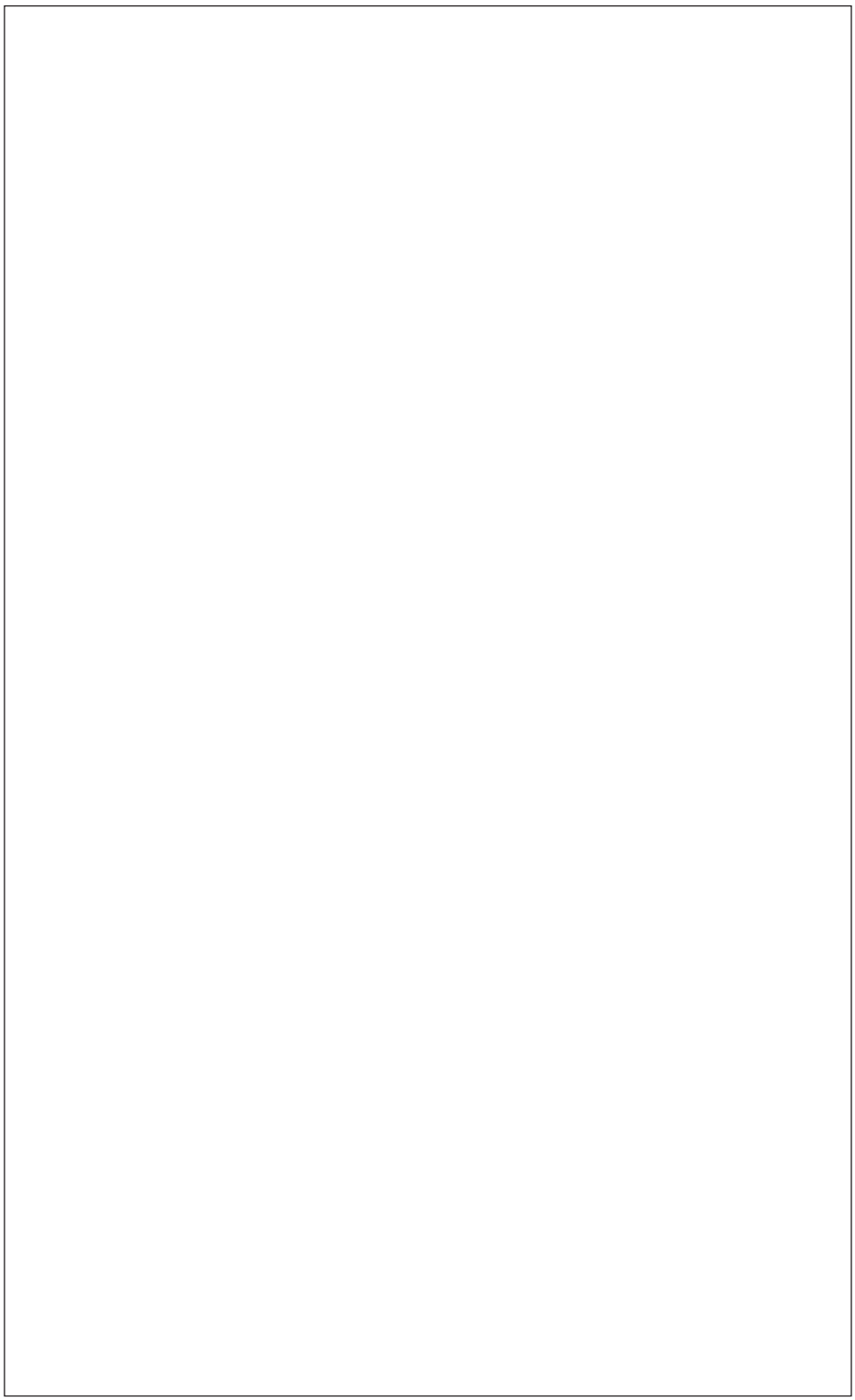
(Marco Meneguzzo)

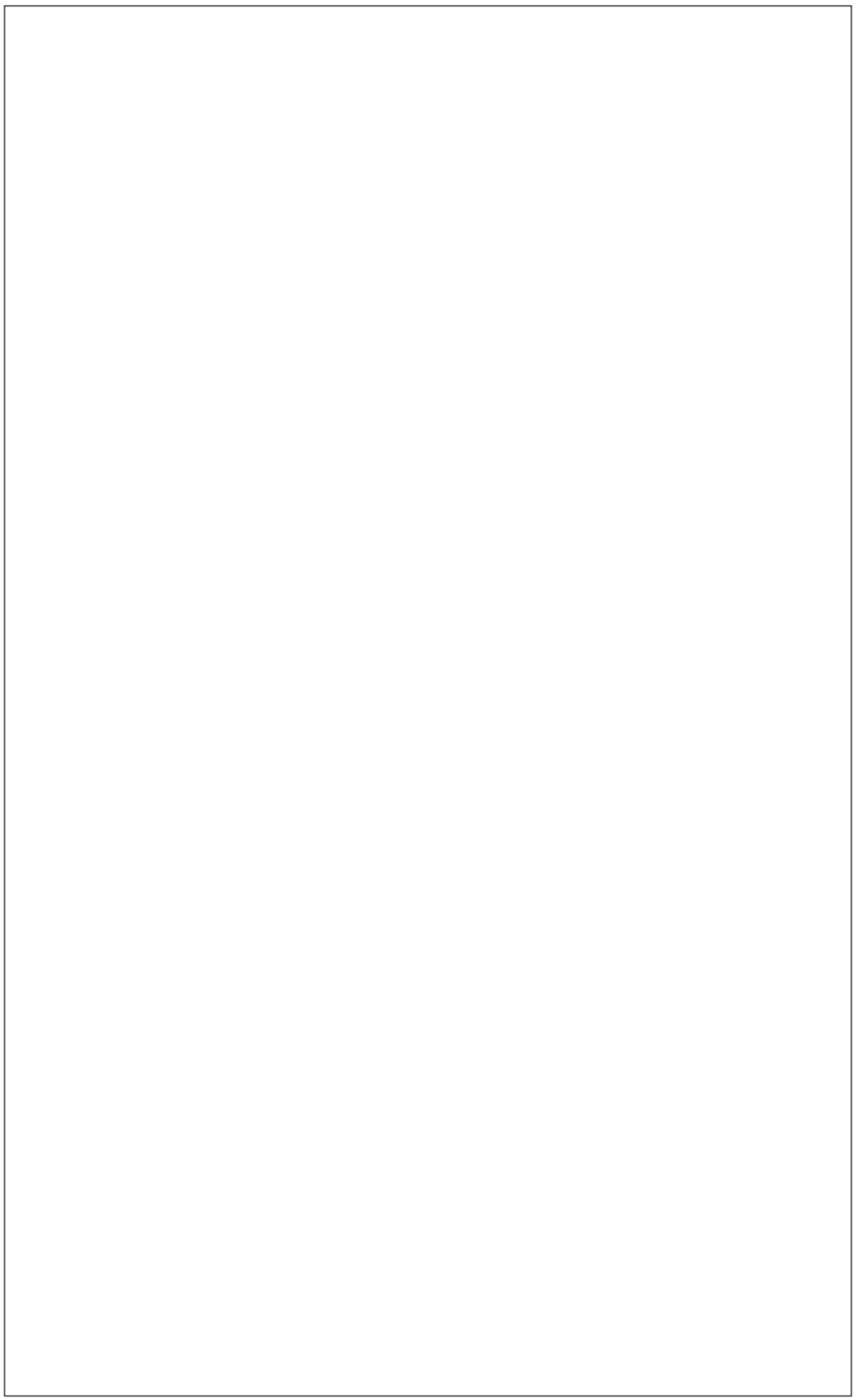


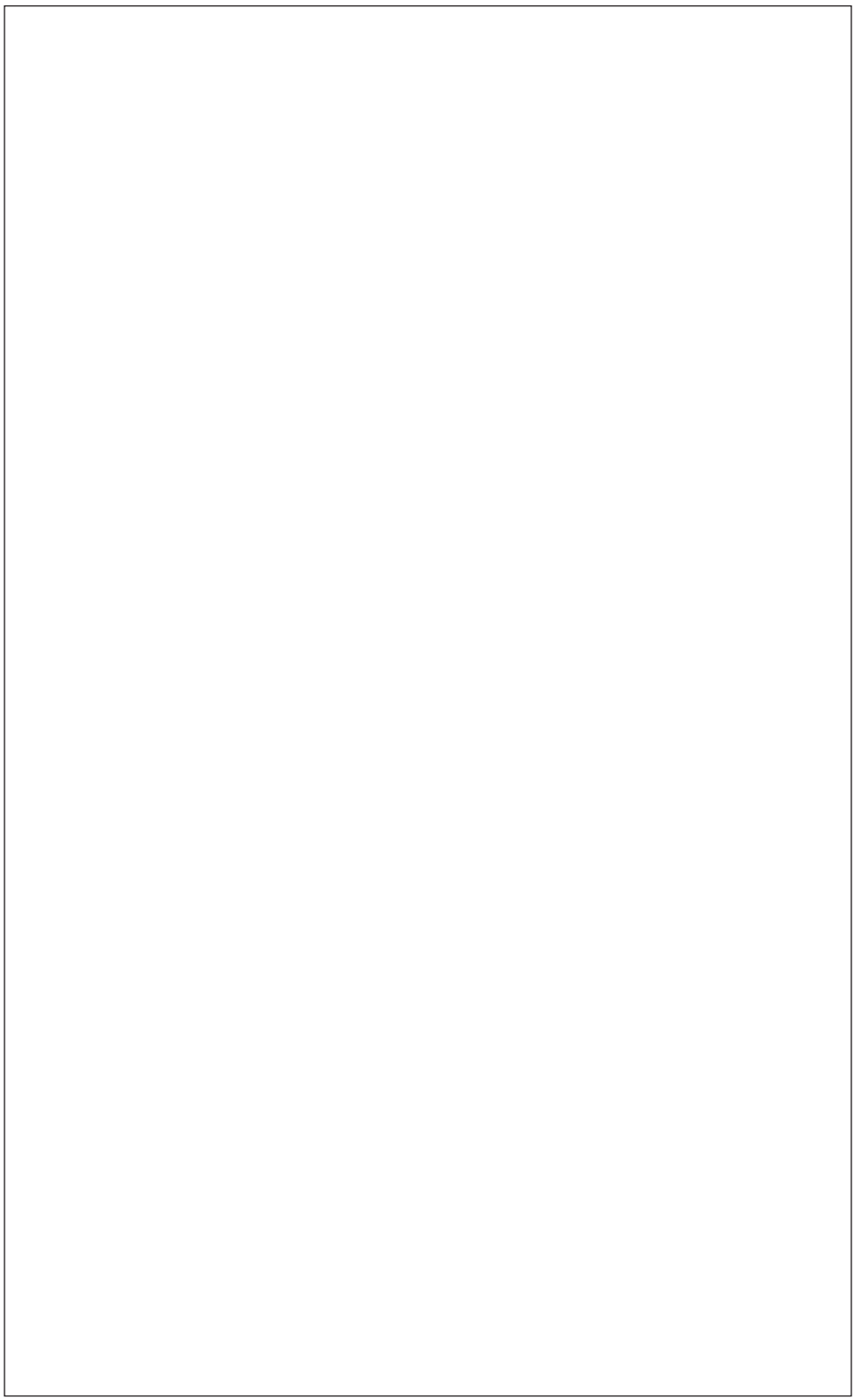
Editors' note: In the original edition of *Codice ovvio*, page 53 contained the book's only color image — a polarized light projection from 1952, printed on coated paper with a blank verso, and inserted between signatures. To keep down the cost of the present volume, we have omitted it here, but the image above gives some idea of its effect: the original is mostly blue with bright yellow and vermillion in the center.











The editorial process that led in the autumn of 1971 to the publication of *Codice ovvio* by the Einaudi S.p.a publishing house in Turin, originated around March 1970. Bruno Munari as a graphic designer worked closely with the art historian and critic Paolo Fossati. Both Munari and Fossati, with different roles, were collaborators of Giulio Einaudi.

In the Einaudi Archive at the State Archive of Turin, there is a section devoted to the authors and collaborators of the publishing house where documents concerning Munari fill two large folders, with more than a hundred sheets that run from 1942 to 1980. Munari worked for Einaudi mainly as a graphic designer and, in a few cases, as curator of some children's book series the 1970s.

Munari's correspondence with Fossati documents the editorial process of *Codice ovvio*. In a letter dated March 18, 1970, Fossati notified Munari of the decision by the editorial committee to publish a book committed to displaying his research:

Dear Munari,
I've talked to Einaudi and the colleagues of the publishing house about the project of a book on your work, according to the intention you had specified: naturally, their reaction was pleasant and completely positive. We have just to define the details together, studying materials you hold, to decide everything. Tell me when, after Easter, you can meet me an afternoon, in your studio in Milan.

From this brief letter, we learn about the strong will of the publishing house to print *Codice ovvio* and of Fossati's commitment also in reaching the artist in Milan. After a couple of letters in the summer of 1970, Munari sent a letter requesting Fossati's direct participation in the selection and organization of the transmitted material, also showing a keen interest in a mutual professional exchange. A letter from July 16, 1970 reads:

Dear Fossati,
I've sent you a package of several texts where you can choose according to your needs. The texts are two types: one detailed and clarifying an idea or a method, another one slightly joking and sometimes ironic to present exhibits that could otherwise be boring, or to present a gift object of which the receiver does not know the use, or to demystify certain aspects of art that no longer have any reason to exist in our age (I suppose). Or to inform someone who does not know, about what he should know, without offending him, or rather kidding as of little importance.
I am curious to know how you will work with those materials and I'll be very pleased if I can learn something useful for my next texts. When do you think it will come out? at the end of the year? I would ask you to make a photocopy of the texts you are interested in and to send me all materials (keeping for you the travel sculpture of which I have other copies) as I have unique copies of invitations and books (*Fotocronache*, *Forchette*). Thank you very much, I'm at your disposition for any descriptive material and, of course, for the cover.

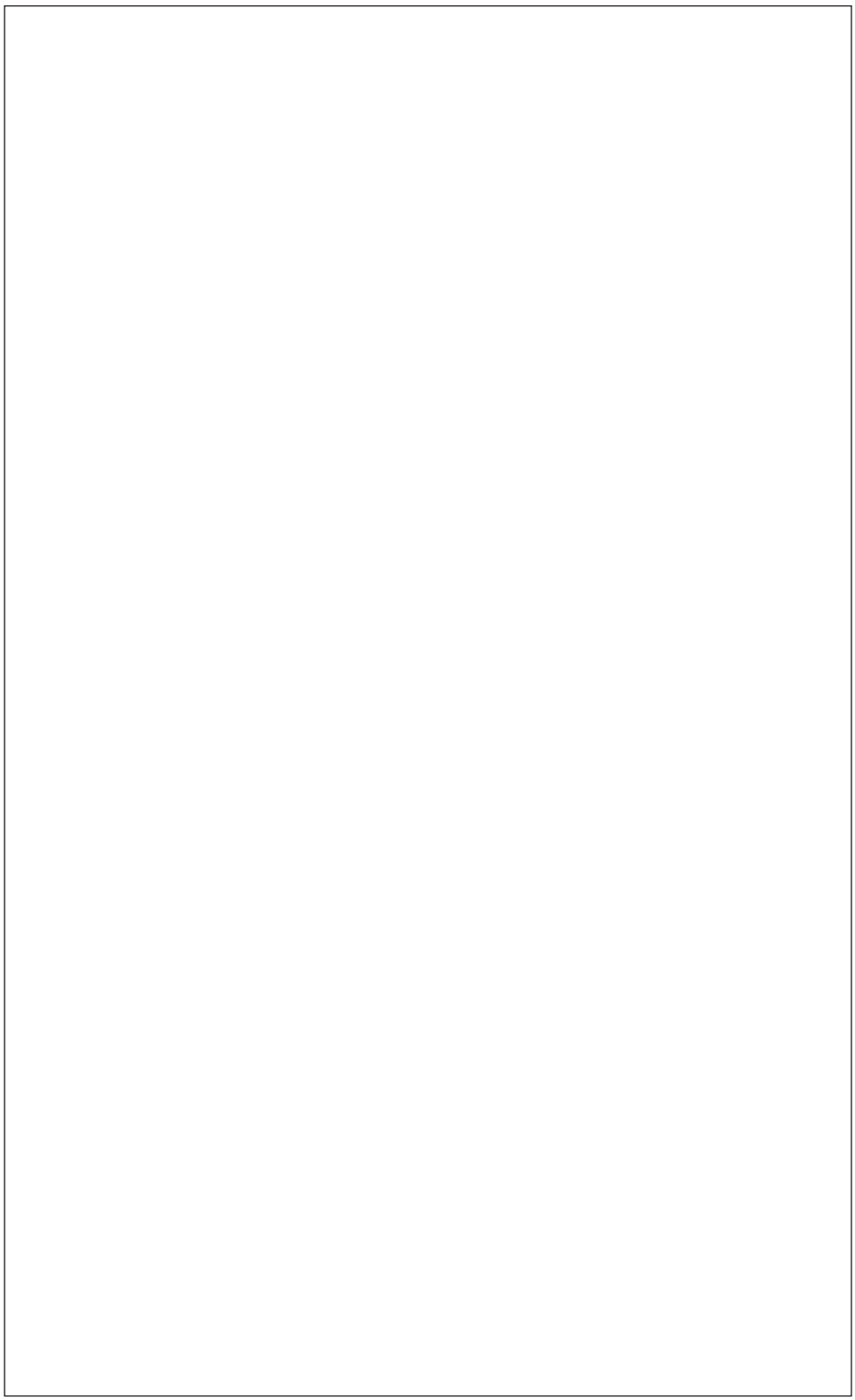
Fundamental in this letter is Munari's intention, with his work, to argue with the contemporary art system and he therefore indicates the purpose of *Codice ovvio*.

In March 1971 the title had not yet been agreed on. Einaudi business manager, Roberto Cerati suggested the name and surname of the artist as a title; furthermore, Fossati does not seem to foresee any critical intervention by third parties. It is clearly Munari's choice and a letter from July 1971 by Munari sent to Fossati reveals the title for the first time: *Codice ovvio*. We also find out about an artwork collage intended as a gift for the scholar:

Dear Fossati,
I've sent you the last six pieces for the *Codice ovvio*. The collage *Ricostruzione tecnica di un oggetto immaginario* (Theoretical reconstruction of an imaginary object) must be reproduced in black.
If you allow it, by this collage I'd like to pay homage to you, for your collaboration on my book.

Munari's gift to Fossati is reproduced here.

(Giovanni Rubino)



In his book *The Muses*, Jean-Luc Nancy defines the word "vestige" as "the trace of a cause" — which isn't quite the same thing as a direct image of a cause. It's an infra-thin distinction, to say the least, but Nancy magnifies his thinking with two simple examples. First, the smoke of a cigarette rather than the cigarette itself (or its ash). And second, the footprint left by a shoe rather than the shoe (or foot or leg or body) of the person who made it. Both are clearly patent traces of latent actions. And because an essential aspect of any trace is that it's a step removed, always in the process of evaporating or dissipating or fading, it can never be wholly grasped.

The chapter in which this is discussed is called "The Vestige of Art." Elliptically and essentially, I think what Nancy is getting at is that the vestige of art *is* art. In other words, true art is more an indirect trace of a cause than a direct representation of some thing.

I like to think that there is an approach to art-making, or designing — or to use the more general and so in Munari's case more accurate term "form-giving" — that yields similar results. Such an approach might in fact be better described as form-taunting… This is what Munari did, I think: he taunted the form out of daily life.

(Stuart Bertolotti-Bailey)

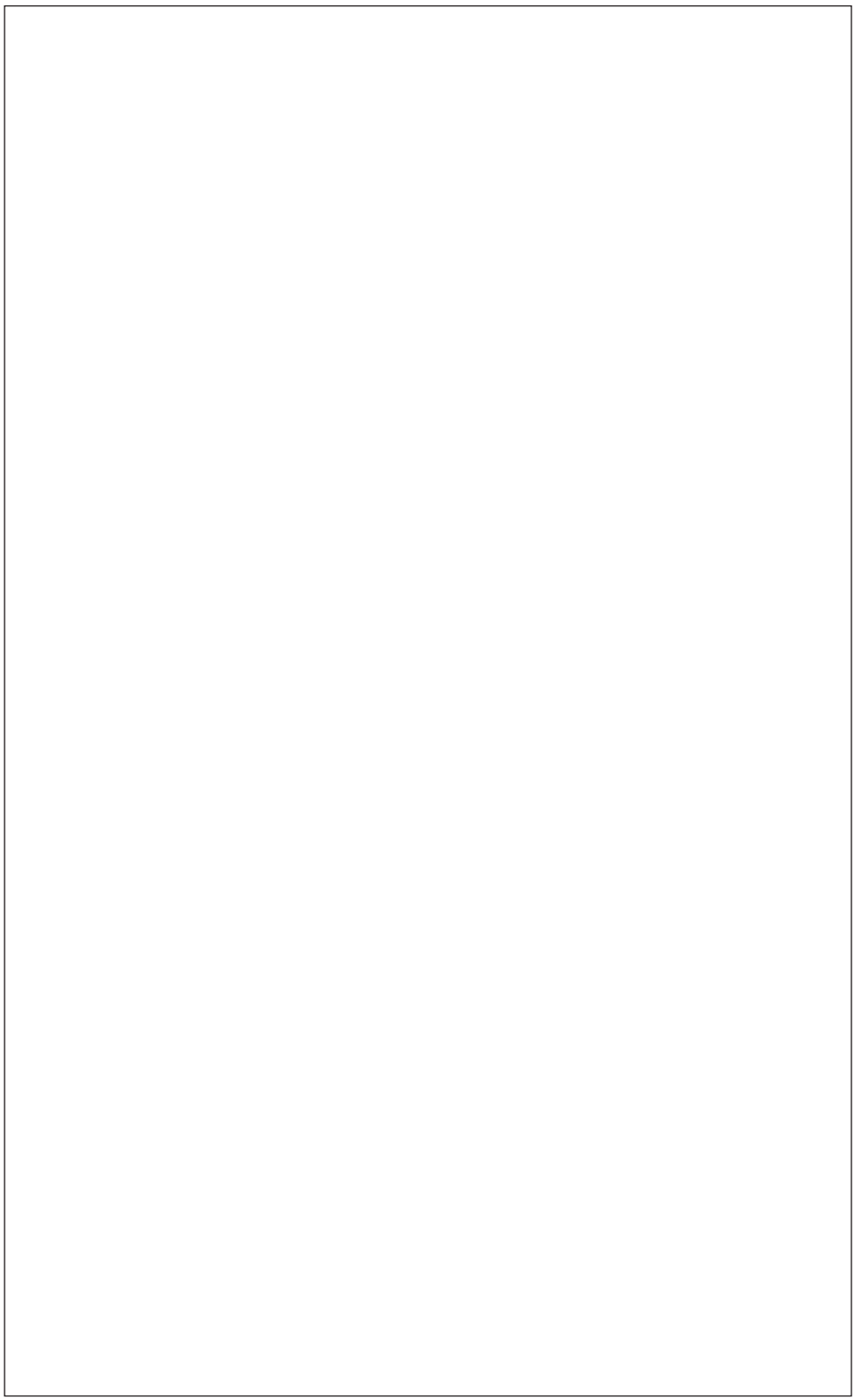
Who even makes ashtrays these days? By the vagaries of health and home decor, a fixture of leisurely consumption has been relegated to the novelty status that awaits obsolescence. The ashtray, and its corresponding miasma of urbane vice, is now as anachronistic as the bookmark and the fixed line telephone. So much dirty clutter or quaint nostalgia, outmoded by self-care and Marie Kondo. Cigarette smoking is, decidedly, a dying habit. Public health campaigns have denormalized cigarettes, now sold in packaging with a Helvetica Bold warning — the aesthetic experience of buying rat poison.

As a regulated habit, both culturally and spatially, smoking is relegated to huddled corners, glass cubes at airports. Hardly anyone smokes in that cloister of social life, also awaiting supposed extinction, the user-operated car. Automakers have phased out ashtrays and lighters since the mid-1990s, lack of consumer demand dovetailing with health concerns and public safety. Smokers are even subject to Stalinist revisionism: the Bibliothèque Nationale de France, for instance, airbrushed the cigarette from Jean-Paul Sartre's mouth in the publicity materials for the exhibition marking the hundredth anniversary of his birth in 2005 (complying, tangentially, with a law banning tobacco advertisements). The technification of smoking — as vaping — adds to this the convergence of the cigarette, the mp3 player, and the laser pointer. The e-cigarette is smokeless and ash-less, minimal, and gadgety. As the dirty accessory of a life-shortening addiction, the ashtray is becoming, not surprisingly, a morbid curiosity.

The ashtray used to solve a practical problem that increasingly no longer exits: the "voluntary production of tobacco ash," that as Munari explains, began in 1560, when the French ambassador Nicot presented Catherine de' Medicine with tobacco seeds. The messy by-products of decadent sophistication, ash and cigarette filters — the most common source of urban litter — had to be temporality stored before being summarily thrown away. "One would need to hide it in some sort of box," Munari writes, "with a slit for ashes and everything." My apartment is full of a variety of them. A little yellow majolica — which Munari thinks particularly pleasant — on my desk, too small not to scatter its ash; an oversize ceramic brown cube on a side table, next to another Kondo-defying stack of books; a bluish-green pyrex square, nearly translucent, in the kitchen; the small metallic singing bowl in the garden filling with butts and dead leaves. This collection reflects the inability, these days almost a moral problem, to control a smoking habit that I both entirely loathe and enjoy. Bought in second-hand shops, or somehow passed on from family, ex-partners, and friends, they are all lowly examples compared to Munari's simple and ingeniously functional solution.

Designed for Danese in 1957, Munari's *Cubo* combines smoking's post-war coolness with its design equivalent. *Cubo* is made from two simple elements: a single piece of bent aluminum nesting inside an open cube of melamine The former is designed so that the angle of one end allows the ash fall to inside, while the other is bent back on itself, overlapping to hide the contents and block their odor. Easily removable, the design is minimal, efficient, designed to prevent an assault "on the eye and nose." Nearly a decade later, Donald Judd would begin to produce a series of minimal brass and rolled steel cubes (anecdotally, sometimes depositories for random litter). Standard units fabricated by Berstein Brothers in Long Island City, New York, these cubes lost function as they rose in scale (noting the relation, isomorphic and otherwise, artist Julião Sarmento reconstructed Munari's ashtray with the dimensions of Judd's cube as a public sculpture in Venice.) In place of a design object, smoking today entrains incantatory self-discipline. Allen Carr's Easyway method, for instance, "has been helping people with addictions and issues ranging from smoking, alcohol, weight, drugs, sugar, caffeine, debt, gambling and even fear of flying." The smoking cessation plan, which involves seminars and smoking while reading a book about smoking cessation, was created by the former 100 cigarettes-a-day addict and is endorsed by celebrities from Ellen Degeneres to Bill Wyman. "You carry on smoking until you're ready to stub out your final cigarette," it claims. The question is where?

(João Ribas)

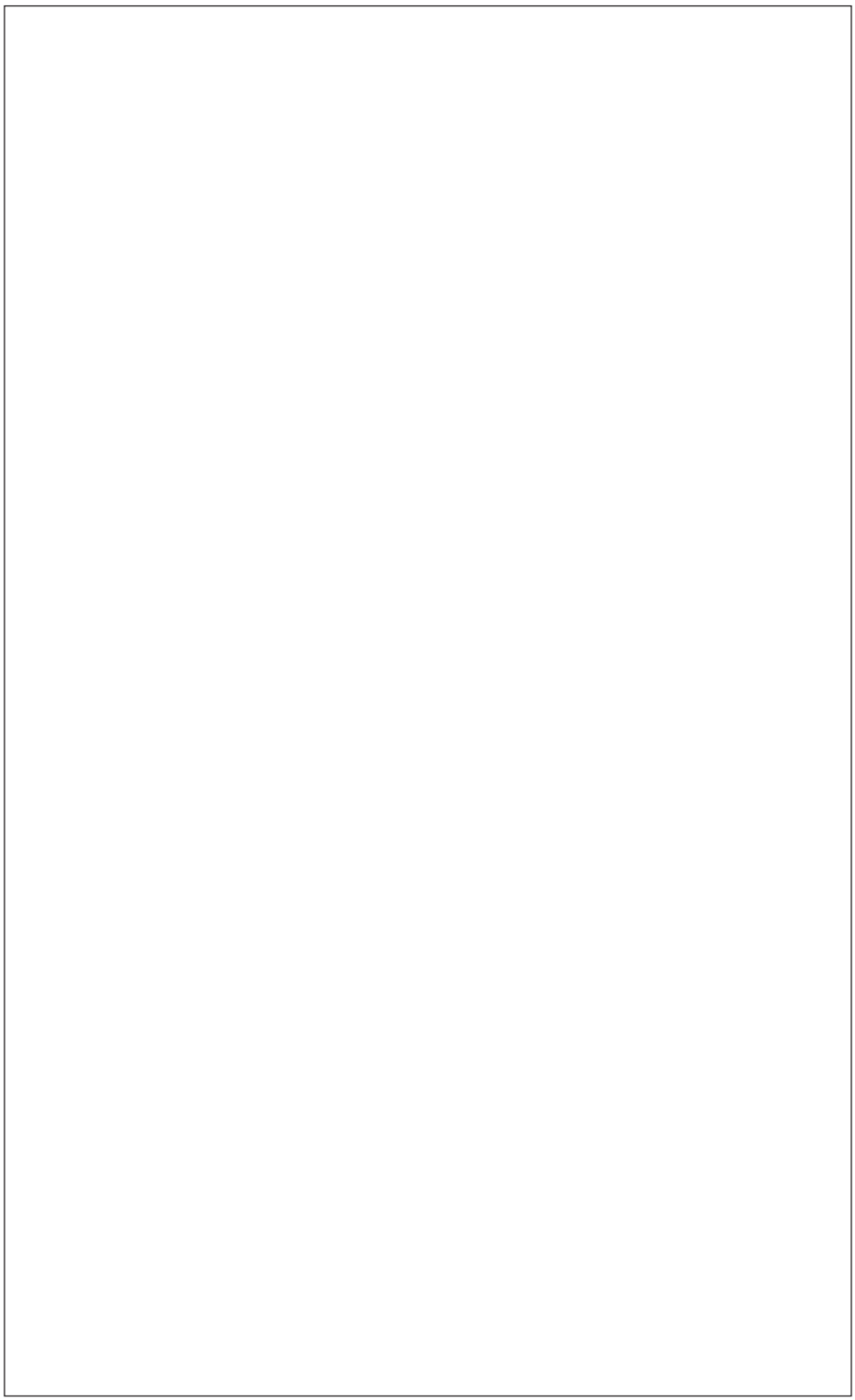


My father didn't go to art museums. He prefered to lean on a fire hydrant for hours and watch the world glide by.

My dad might have loved Munari's travel sculptures, but he also might have said it was low hanging fruit. That all one really needs to do is shift one's perception and see life as a performance brimming with culture and beauty. That imbuing a folded piece of paper with meaning is just the tip of the iceberg.

I was in Parma recently. Sometimes when I travel I pretend I am leaning on the hydrant with my dad. We saw a young couple. A boy and a girl both dressed in denim. He wore a jean jacket too small, she wore one too large. They walked holding hands. His wrist exposed by the short sleeves, her fingers barely visible from the cuff her coat. We saw a parade of new mothers exercising in a park, doing squat thrusts while pushing strollers. We saw an old man on a train platform fluffing the meat of his sandwich just so.

(Tamara Shopsin)



Arturo Carlo Quintavalle: Are the travel sculptures from 1958 perhaps based on Bauhaus ideas? Or the rereading of psychoanalytical texts such as the Rorschach test, or perhaps you were deliberately evoking the iconology of child's play?

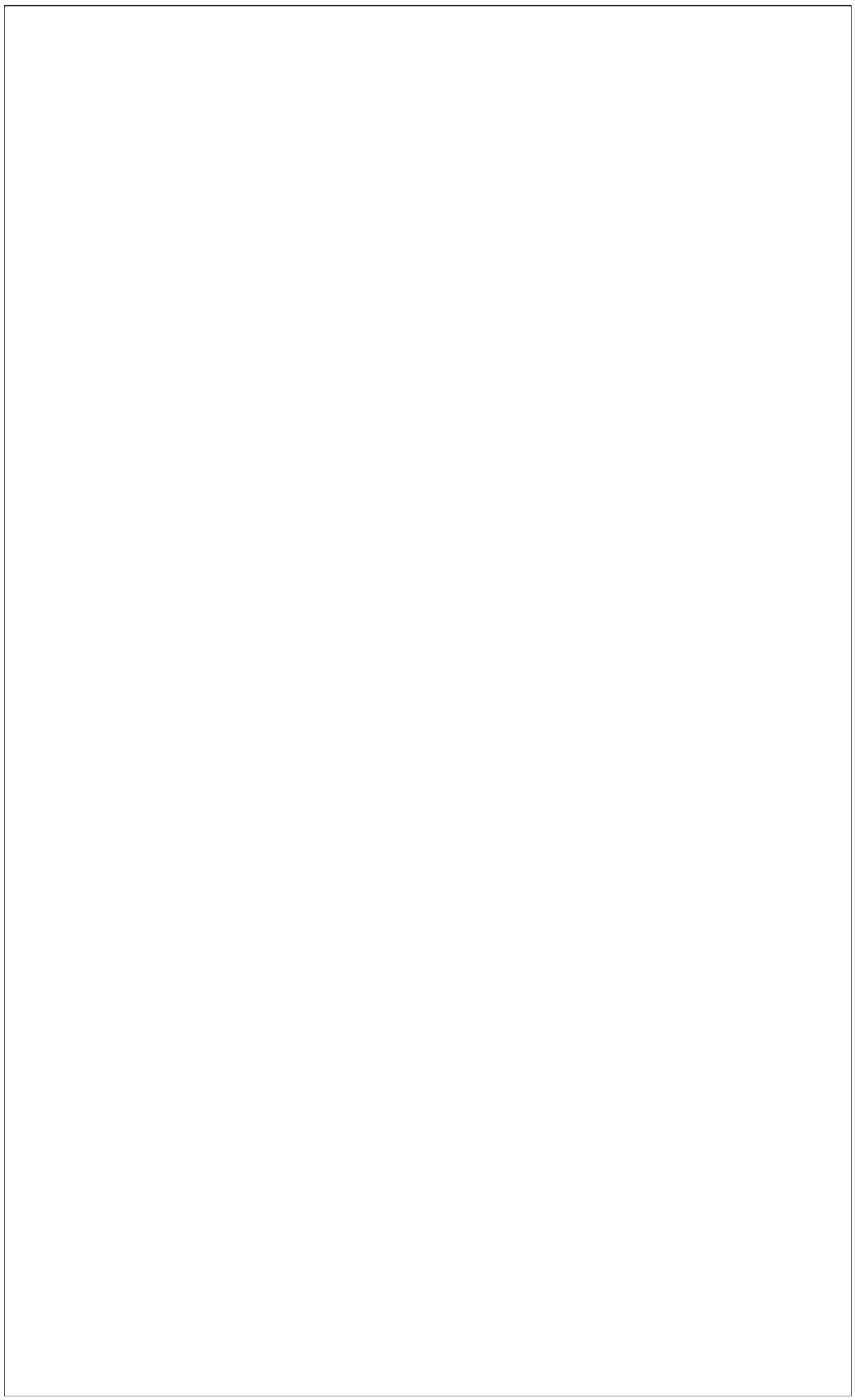
Bruno Munari: The travel sculptures were thus named to demythologize bronze or marble sculptures. In actual fact a sculpture may be defined as anything that takes up a three-dimensional space through planes or forms that fit together. There is clearly a sense of irony, which, like in judo, takes down your opponent by increasing their strength. After all, is a sculpture made of bronze more important than the same sculpture made of plaster? Is a silk painting worth more than a painting on hemp? And who actually created it?

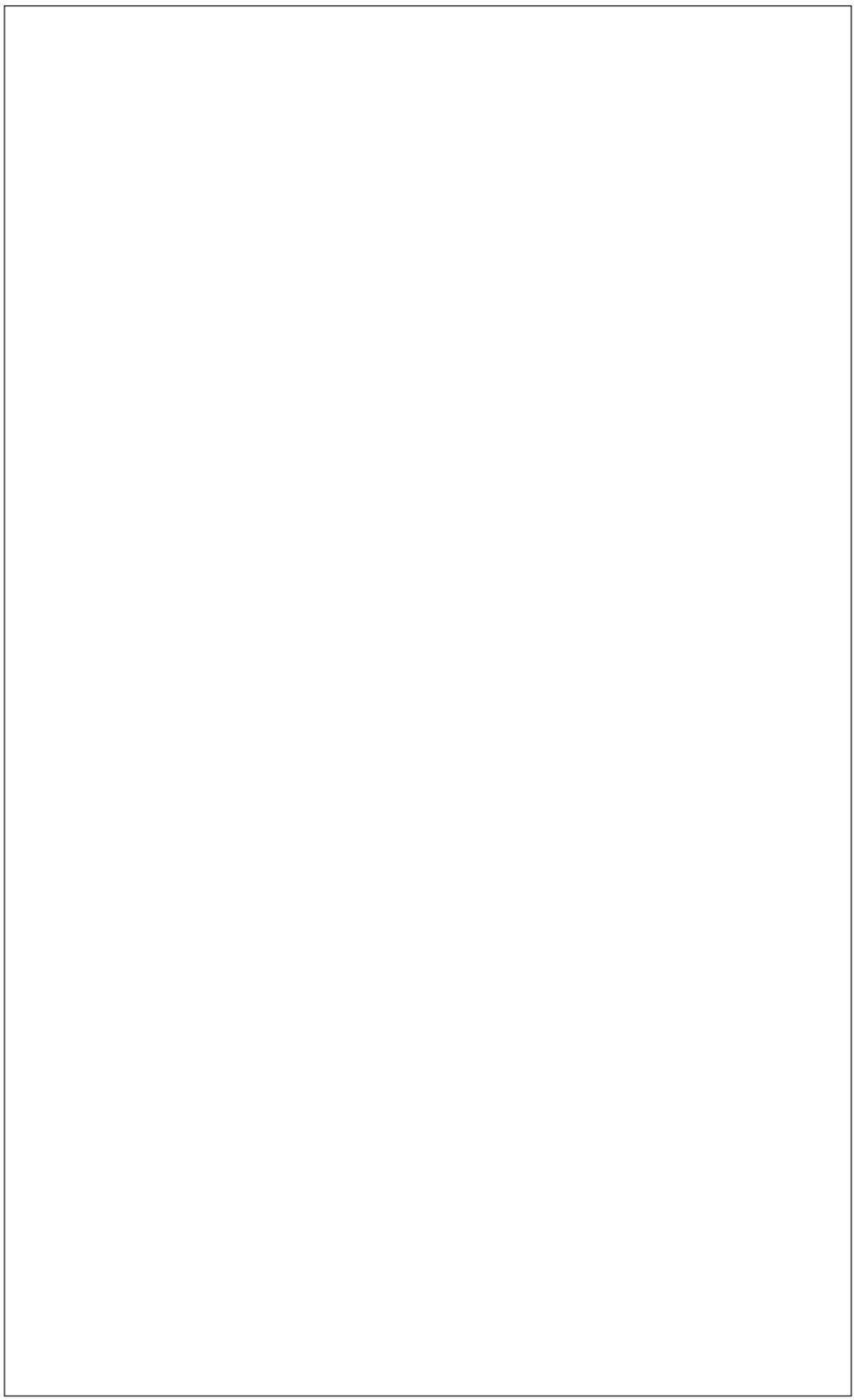
(Arturo Carlo Quintavalle)

I once heard the comedian-musician John Hegley say that he covers TVs in hotel rooms he stays in with pictures his child has drawn or painted, safe in the knowledge that no possible image from the infinite realm of images can ever come on the TV which would be better than the artwork.

(Michael Crowe)

Editors' note: The images on pages 64 and 65 of the original edition have been replaced.



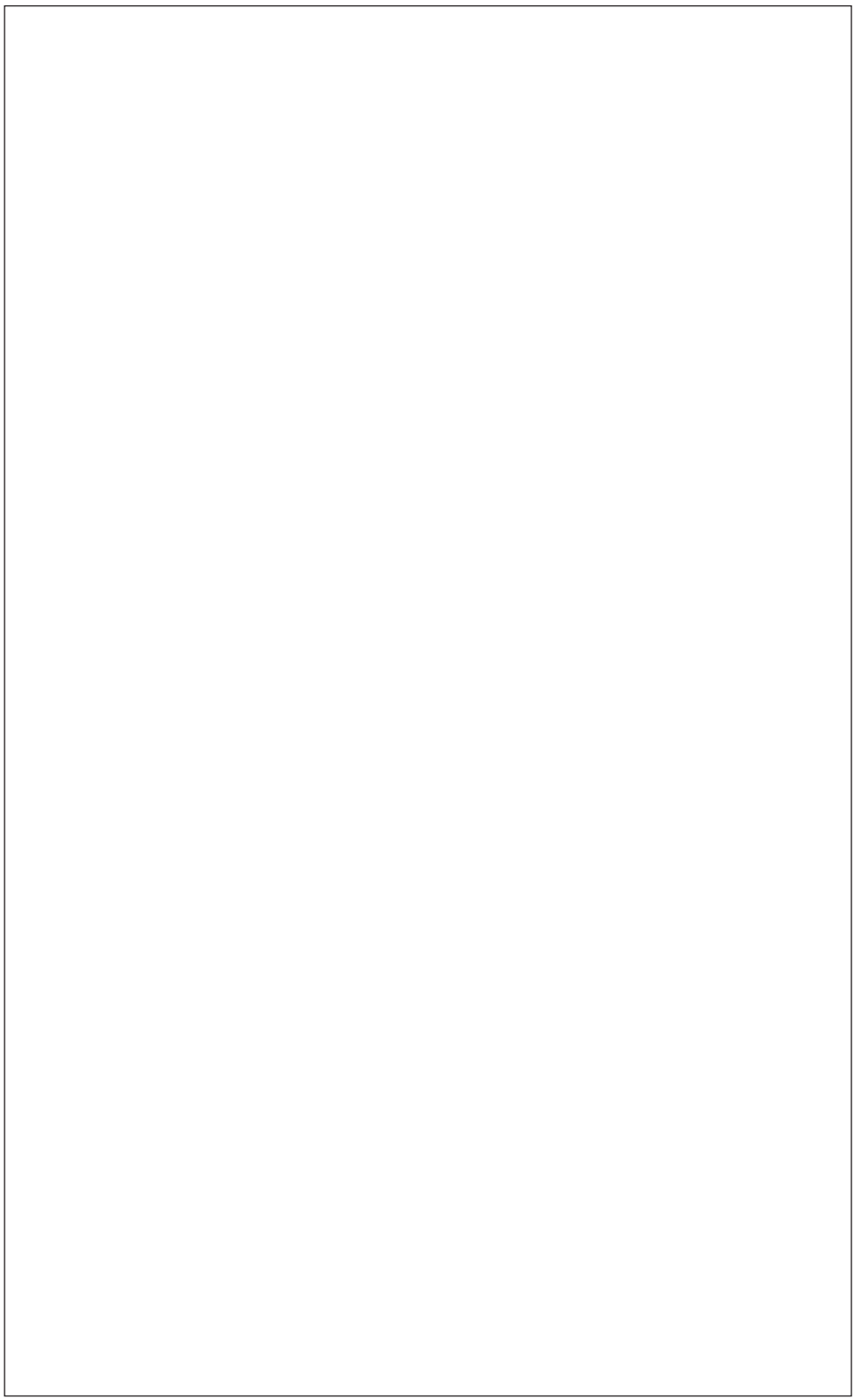


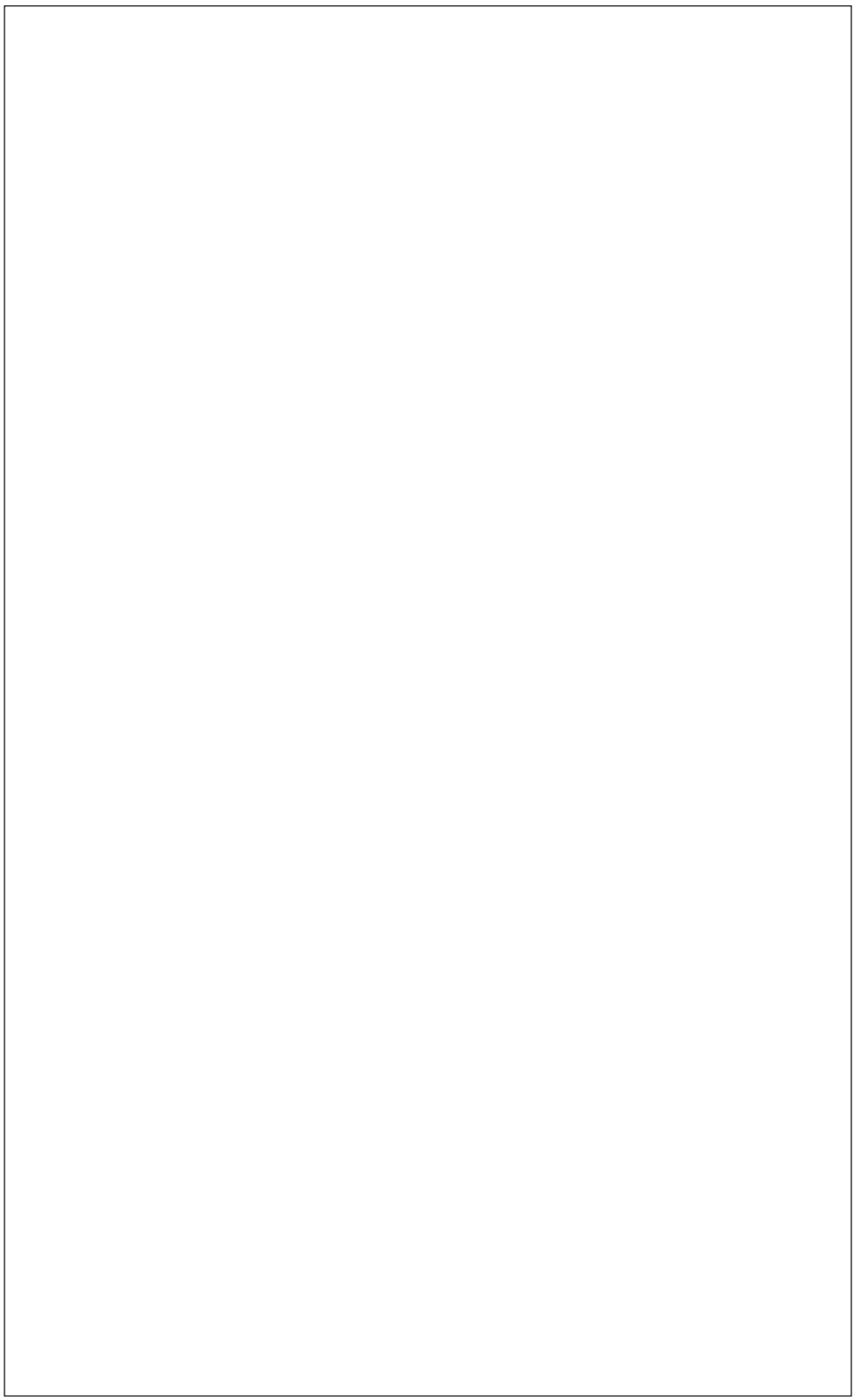
1. TRAVELING: Before this translation I often wondered if the *sculture da viaggio* would become, in English, the traveling sculptures. Here they are travel sculptures I suppose because they are made for travel, which they are, and yet of course this still implies that they also travel, and quite a lot. A lot of the sculptures of the world do in fact travel, and it is always unbelievable to me how much of the life of a sculpture with a moderate level of success is in fact its traveling life, and the enormous means and labor that are deployed to allow it to be. In the midst of a supposedly globalized world, it is actually phenomenally expensive and complicated to get things to go places, and anyone who has worked in exhibition-making knows how the transport of artworks is painfully often the largest chunk of the budget. At the end of the day, it is not even a question of who gets paid better or worse between artist, curator, technicians, cleaners, institutional employees. It is always the transport company that gets the biggest chunk of money. In fact sculptures often spend their lives traveling, and only stop doing so when they have sort of stopped being relevant or alive in some ways, at which point they get buried in a storage somewhere (if they are lucky), in order to wait, perhaps, for a new chance. So traveling, a condition of artworks, perennially being packed and unpacked, going in and out of boxes, in and out of vans, trucks, trains, planes, in transit. And that is another reason to love the *sculture da viaggio*, as they so condense issues that really important to artworks and artists and yet often unspoken. For example also the fact that working as an artist means carrying a lot of things, and spending unreasonable amounts of time in hotel rooms, more often than not sad, despicably decorated hotel rooms. Munari's works might not be made for artists, but they are so useful to them!

2. INSTRUCTING: Instructions are related to dedications in the way that they look towards a time to come, are made for the future. There is something a little bit hypothetical in this leap of faith towards a future reader, an audience that is yet to exist, the potential passer-by, the public yet to be, a destiny in the waiting. In this promise the beauty of instructions lies in its capacity to mediate: on one side Munari and his glasses, his table, his pile of books, his friends, the photographer, his thoughts and experiences, on the other side others, the public, the social, the world, politics. Of course any instructions are often ignored, but their mere presence testifies to the possibility of a conversation with how the object came into being, how to take it into the future (or not). Instructions for use of an artwork are not just about these particular ones needing actually handling, as all artworks need handling in some ways. And the artist is not always there to explain how, in fact I know for a fact that my work only works, or at least works a lot better when I am there to make it work, and yet I will not always be around to do that, and will die while my work will not, on the other hand, self-destruct (unless I organize this!). So how useful to have instructions for the life of the thing, to at least start living with it.

3. FUNCTION: Travel sculptures, he says, are objects with an aesthetic function. I believe that an aesthetic function is also practical however, that aesthetics are practical, material, physical and social. In fact Munari's instructions for use directly contradict him and demonstrate the practicality of the sculptures' role: they make space habitable. They do this by inserting themselves into a context and furnishing it, i.e. adding that layer of padding for people to feel comfortable, the conditions that make space fit for human habitation. Altering existing conditions. And that I believe defines a pretty good social function for art in general.

(Céline Condorelli)





A (fictional) conversation between Bruno Munari and Leo Lionni, moderated by Elodie Royer & Yoann Gourmel, Brentano's Bookshop, New York, November 25, 1960, 7pm:

Elodie Royer & Yoann Gourmel: Tonight we are very happy to welcome two artists, graphic designers, and, among their many other hats and activities, authors of children's books. Your work has been exhibited together a number of times in Europe and a few years ago, in 1954, Bruno Munari, you presented your Direct Projections in Leo Lionni's studio, here in New York. Leo, you have just published your first children's book, entitled *Little Blue and Little Yellow*. How did you approach it?

Leo Lionni: Let me tell you about this little miracle! It was a day when I was supposed to take my two grandchildren, Pippo and Annie, from New York City to Greenwich. Pippo was five years old, and Annie was all of three. To get them into a cab was no great problem, and neither was it difficult to guide them through the hurrying crowd at Grand Central Station. We were early and the car was almost empty, and in no time the two little angels had been transformed into two devilish little acrobats jumping from seat to seat. I realized that unless I did some fast creative thinking this was going to be one hell of a trip.

I opened my briefcase, took out an advance copy of Life, showed the children the cover, and tried to say something funny about the ads as I turned the pages, until a page with a design in blue, yellow, and green gave me an idea. "Wait," I said, "I'll tell you a story." I ripped the page out of the magazine and tore it into small pieces. I took a piece of blue paper and carefully tore it into small disks. Then I did the same with the pieces of yellow and green paper. I put my briefcase on my knees to make a table and in a deep voice said, "This is Little Blue, and this is Little Yellow," as I placed the round pieces of colored paper onto the leather stage. Then I improvised a story about the two colors, Little Blue and Little Yellow, who were bosom friends and went on a long hike together. One day they played hide-and-seek in a forest and lost sight of each other. Desperate, they searched everywhere—in vain. Then suddenly, behind the fattest tree of the forest, they found each other and embraced happily, and when they embraced they became Little Green.

By that time the children were transfixed, and I noticed that the passengers who were sitting within hearing distance had put down their papers and were listening too. So for their benefit I had Little Green go to the stock exchange, where he lost all his money. He broke out in yellow tears and blue tears, and when he was all tears he was Little Blue and Little Yellow again and their stock rose twelve points. The children applauded, and some of the passengers joined in.

Bruno Munari: What a great story! What happened then?

LL: When we got home I took the children to the studio and showed them how to transform an idea into a real, little book. I found a blank dummy, chose some pieces of colored paper, turned on the radio, and sat down at my desk. Finally I more or less retold the story I had improvised on the train. I played with the positions of Little Blue and Little Yellow on the page to suggest what they were doing or how they felt: when they were sad they would be a the bottom of the page, when elated high up. When I introduced them I placed them in the center of the page, and when they were looking for each other they were placed in or close to the corners, as if they were anxious to move to the next page in their search. In a few minutes, the book was finished, and the children shouted: "We made a book! We made a book!"

ER & YG: This story shows to what extent your work draws from situations of everyday life, which is also true for you, Bruno.

BM: Yes, I always say that knowing children is like knowing cats. To enter the world of a child (or a cat) the least you must do is sit down on the ground without interrupting the child in whatever he is doing, and wait for him to notice you. It will then be the child who makes contact with you. Quite simply. And children's books are the same. They should have a very simple story, as simple as the child's world is: an apple, a kitten (young animals are preferred to fully grown ones), the sun, the moon, a leaf, an ant, a butterfly, water, fire, time (the beating of the heart).

ER & YG: Isn't time a difficult concept for a child to understand?

BM: You should read to your children the text that I wrote that starts with: "Your heart goes tick tock. Listen to it. Count the beats: one, two, three, four… When you have counted sixty beats a minute will have passed. After sixty minutes an hour will have passed. In one hour a plant grows a hundredth of an inch. In twelve hours the sun rises and sets, etc."

LL: I completely agree with Bruno, this book, *Little Blue and Little Yellow*, that deals with complex concepts such as identity and diversity in a very simple way is almost an act of co-creation with my grandchildren.

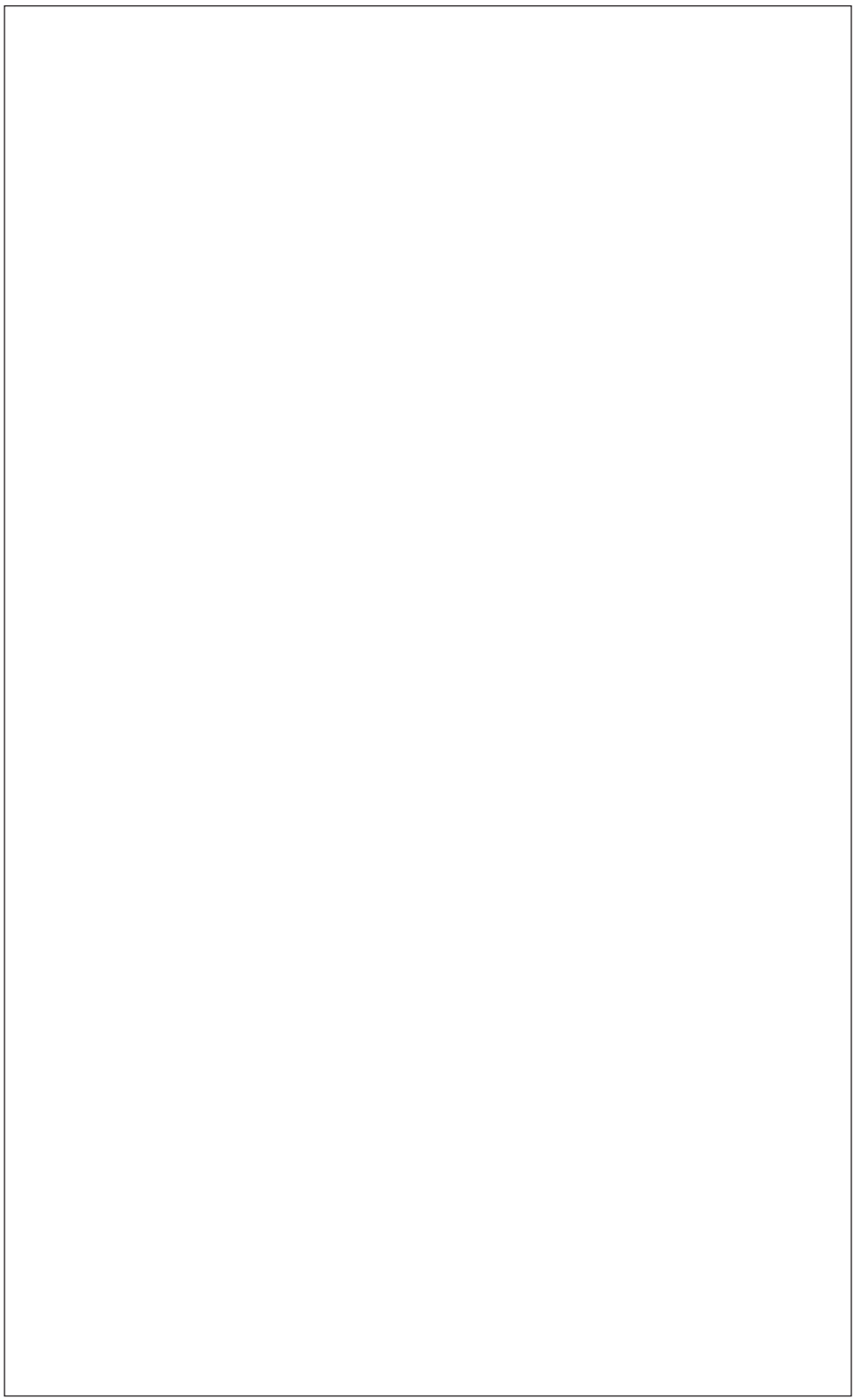
ER & YG: It is interesting to note how with both of you the space of the studio is constantly "moving." In a train, on the floor, in a group, with children, etc. If one considers the studio space as the invention of a place, we could say that for you two it is located in a space-time called "creativity." Bruno you have often said that this place is right at the heart of your practice.

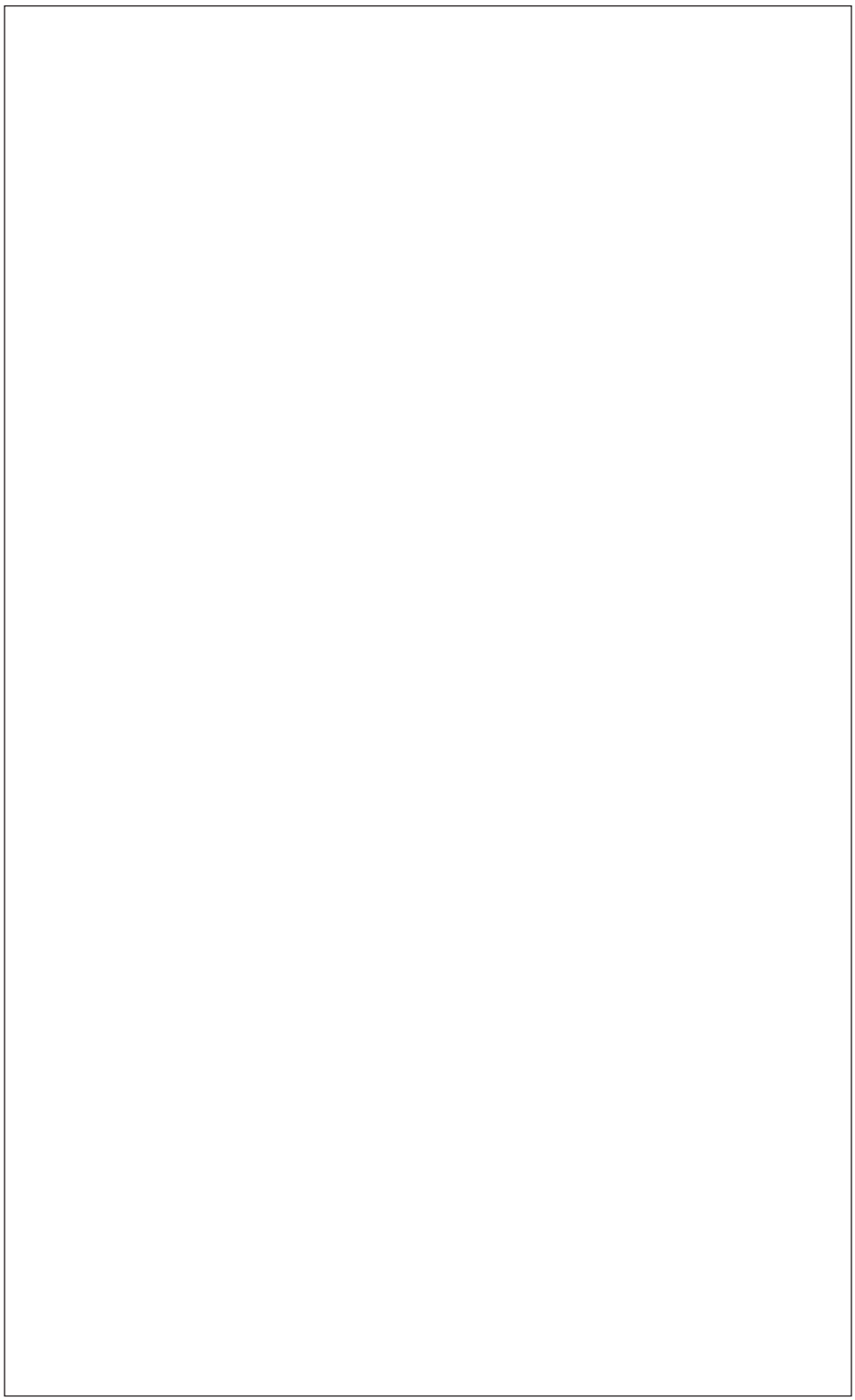
BM: Designing is easy when we know how to go about it. Everything becomes simple when we know what method to apply to resolve a particular problem. And life supplies an infinity of problems, simple problems that seem difficult because they are unknown, or problems that appear intractable. Faced with a project that is housed in rules, certain people feel stifled in their creativity. "How can I express my personality?" they ask. "Are we all mad? Robots? All leveled, all identical?" And they start at square one of the path toward good design. It takes a lot of effort to understand that some things come before others. Creativity is not synonymous with disorderly improvisation, an approach that is still the best way of confusing young people, who soothe themselves with the illusion that they are free and independent artists. The steps of the conceptual method are made up of objective values that become useful instruments in the hands of creative designers.

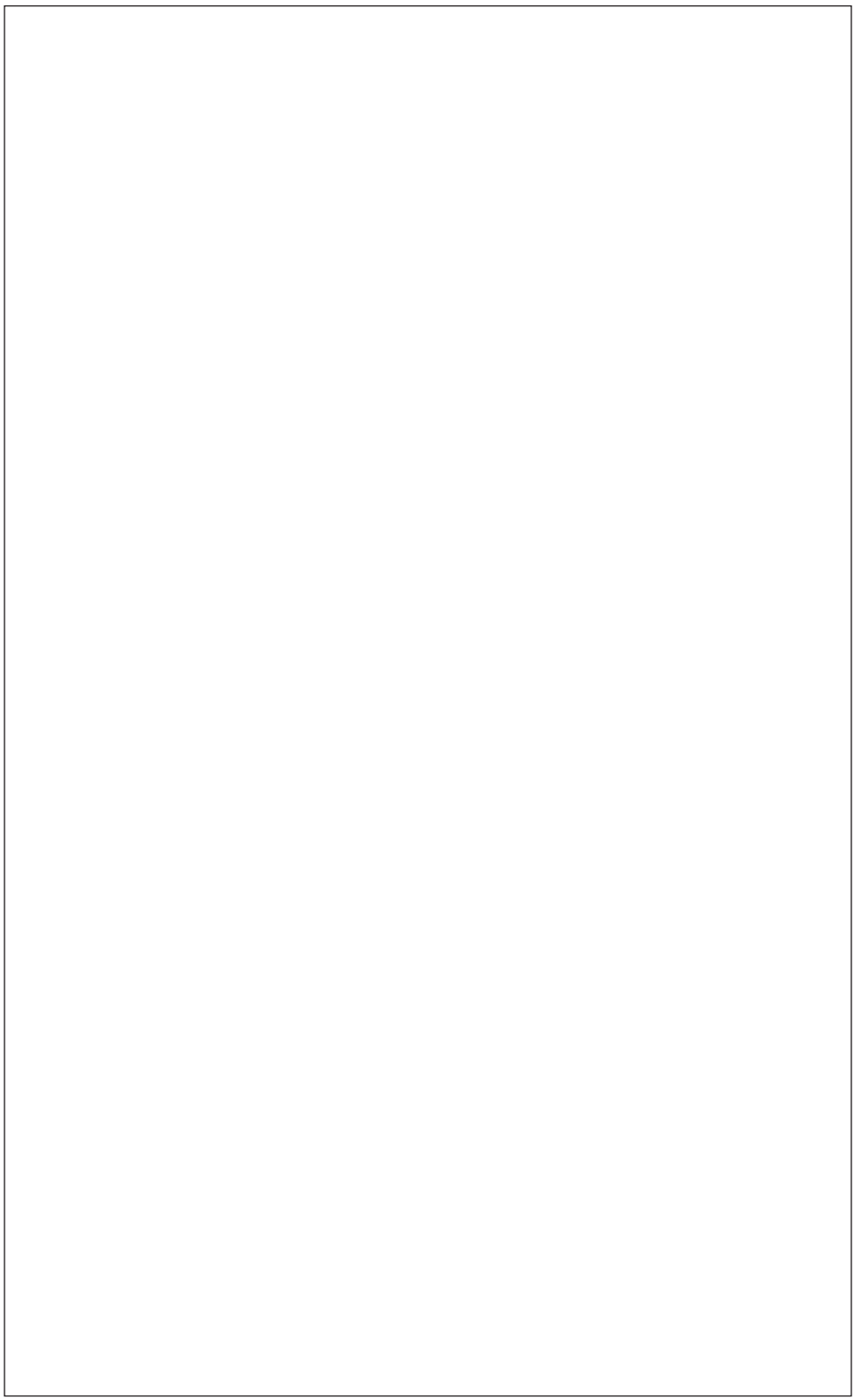
ER & YG: How can objective values be recognized?

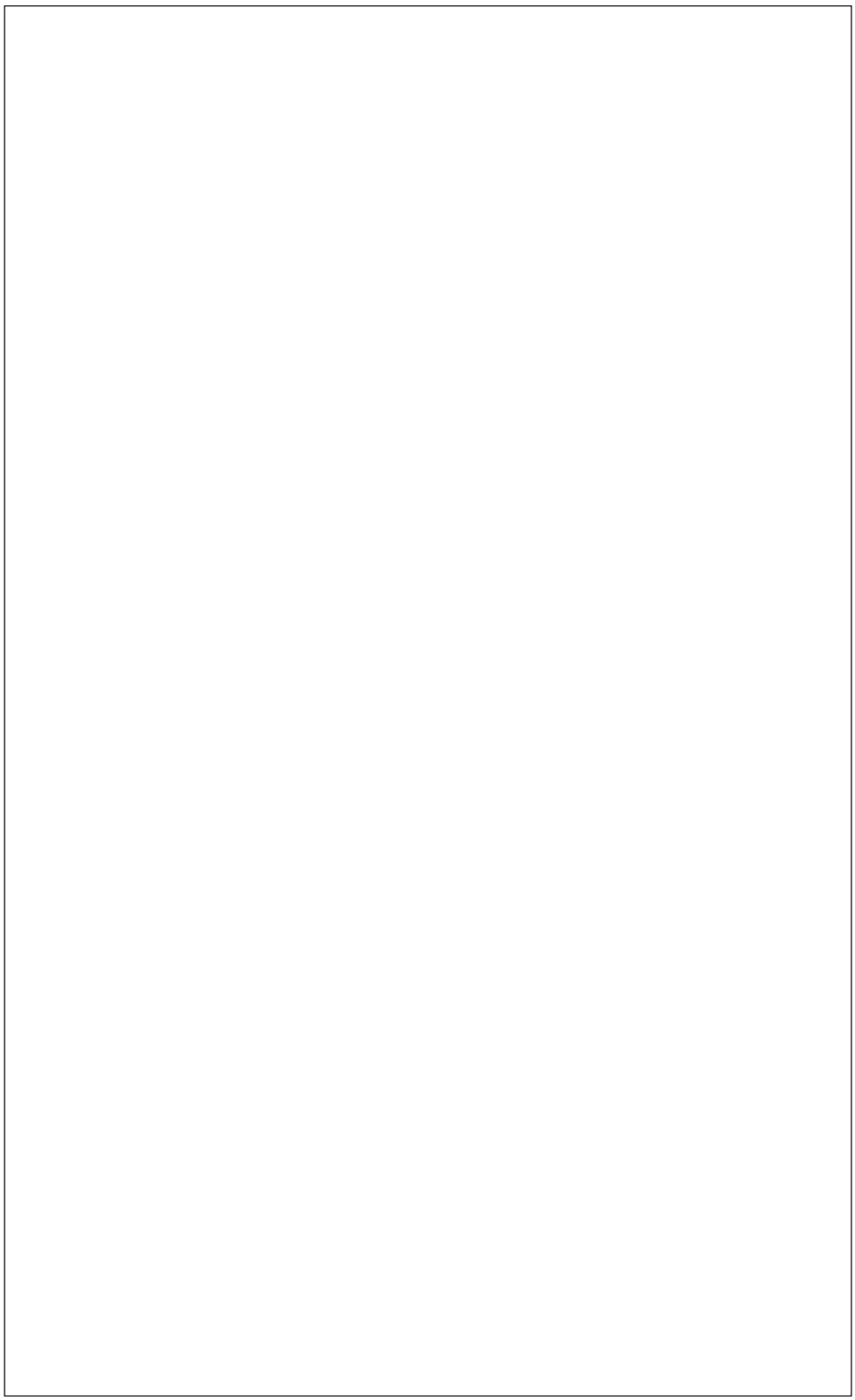
BM: They are universal. For example, if I claim, as Leo does, that by mixing lemon yellow with turquoise, one obtains green, whether with gouache, oil paints, or acrylics, even with felt tips or pastels, I am claiming objective value. However, it is impossible to say: for me green is obtained by mixing red and brown. In this case, we get a dirty red. It sometimes happens that a stubborn ass claims to see green, but they are quite alone in this.

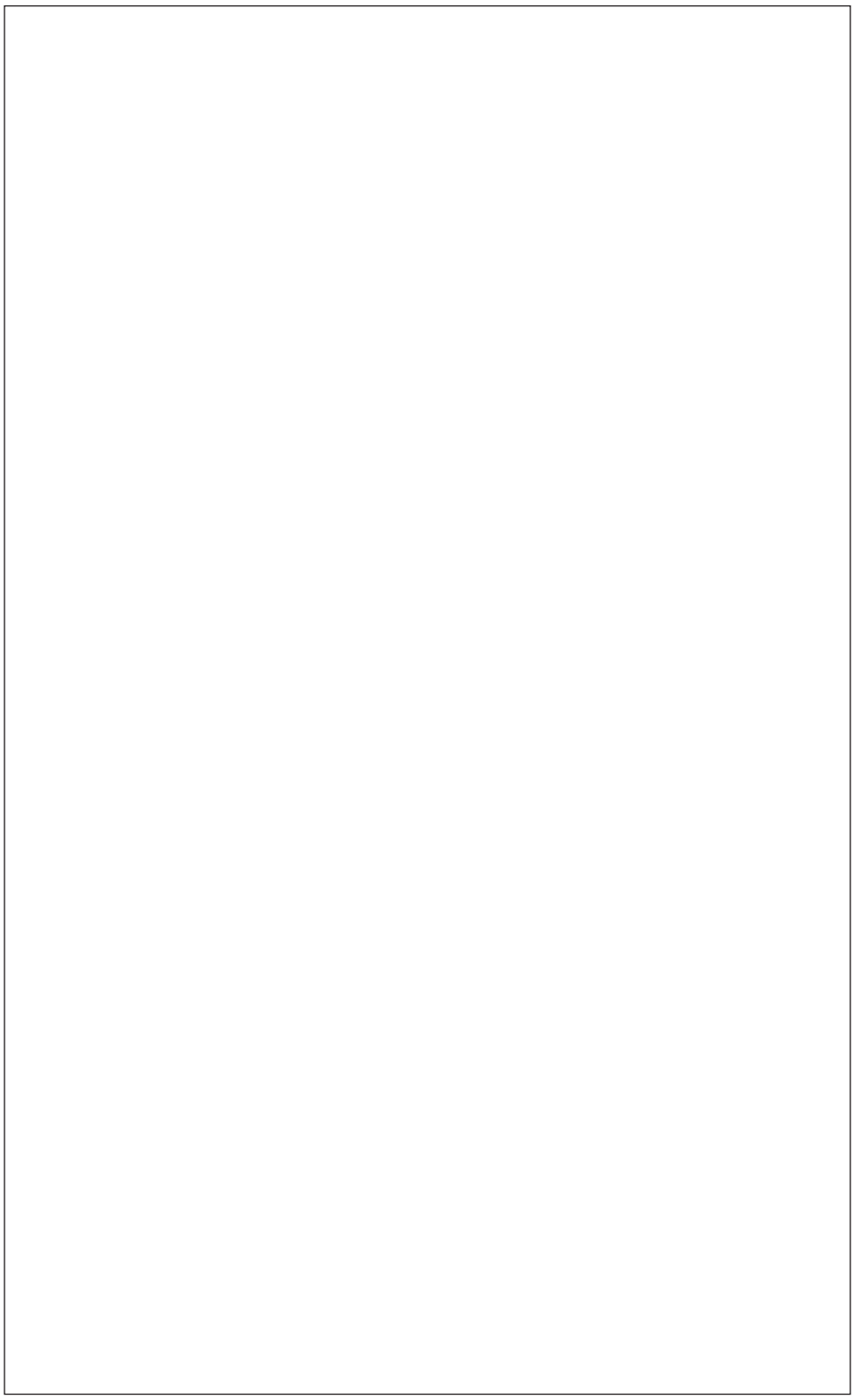
(Elodie Royer & Yoann Gourmel)











This wonderful page from Munari's *Alfabetiere*, headed A, brings to my mind the first page of Walter Abish's *Alphabetical Africa*, likewise headed A. It begins:

Ages ago, Alex, Allen and Alva arrived at Antibes, and Alva allowing all, allowing anyone, against Alex's admonition, against Alex's angry assertion: another African amusement anyhow, as all argued, an awesome African army assembled and arduously advanced against an African anthill, assiduously annihilating ant after ant, and afterward, Alex astonishingly accuses Albert as also accepting Africa's antipodal ant annexation.

Published in 1974, 14 years after Munari's children's book, *Alphabetical Africa* is an adventure novel of a sort, propelled forward by what the poet John Ashbery has called "the terrifying and irrefutable logic of the alphabet." It's divided into 52 short chapters, according to an absurdly rigid scheme: the first chapter consists entirely of words beginning with the letter A; the second, entirely of words beginning with A or B; the third, entirely of words beginning with A, B or C; and so on.

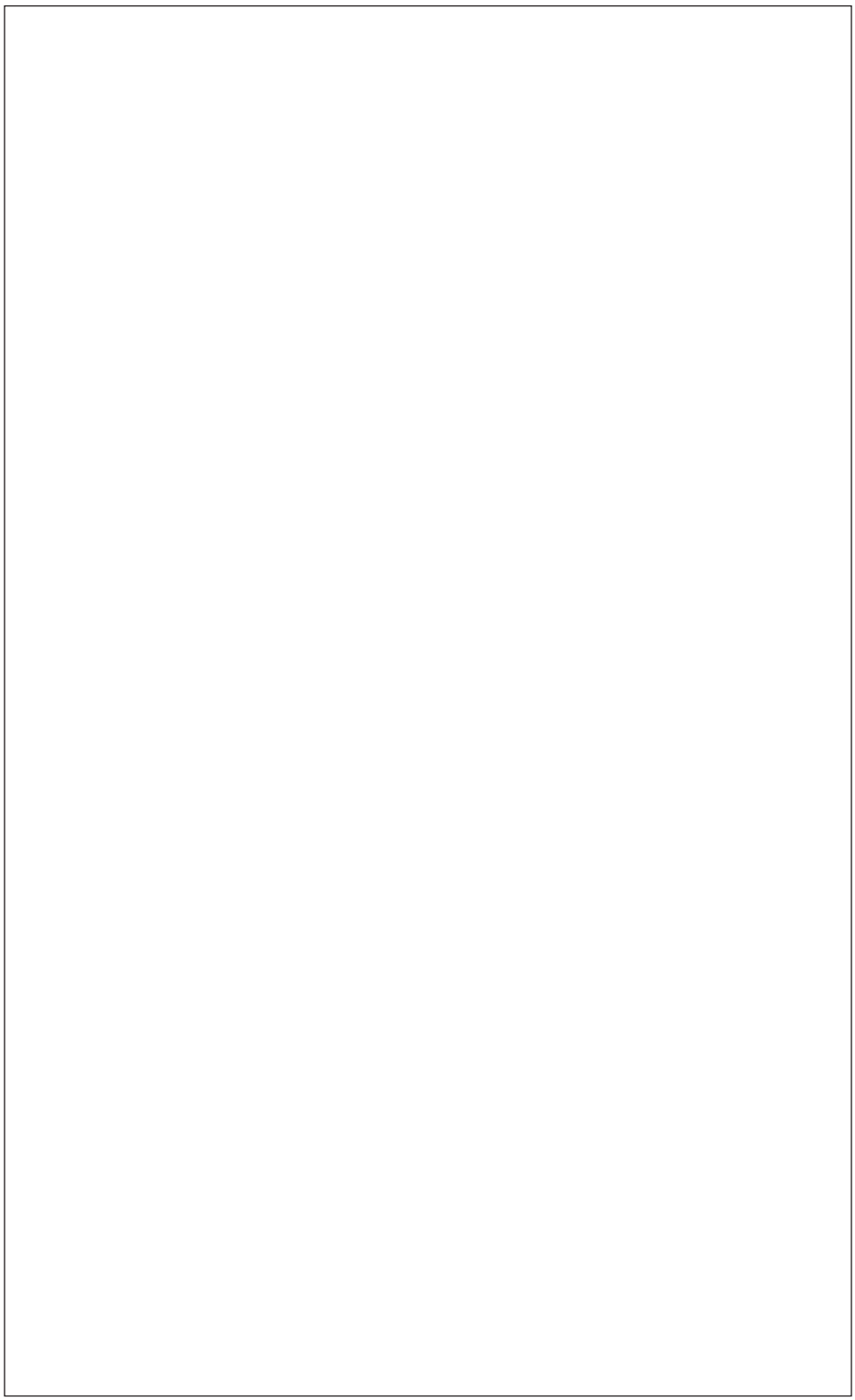
After 26, the process is reversed until the book comes full circle: the last chapter consists entirely of words beginning with the letter A. (Over the years, observant readers have spotted up to 43 errors in this scheme. I only noticed a few "l"s out of place, and an "in" in the first chapter: "Alex and Allen alone arrive IN Abidjan and await African amusements.")

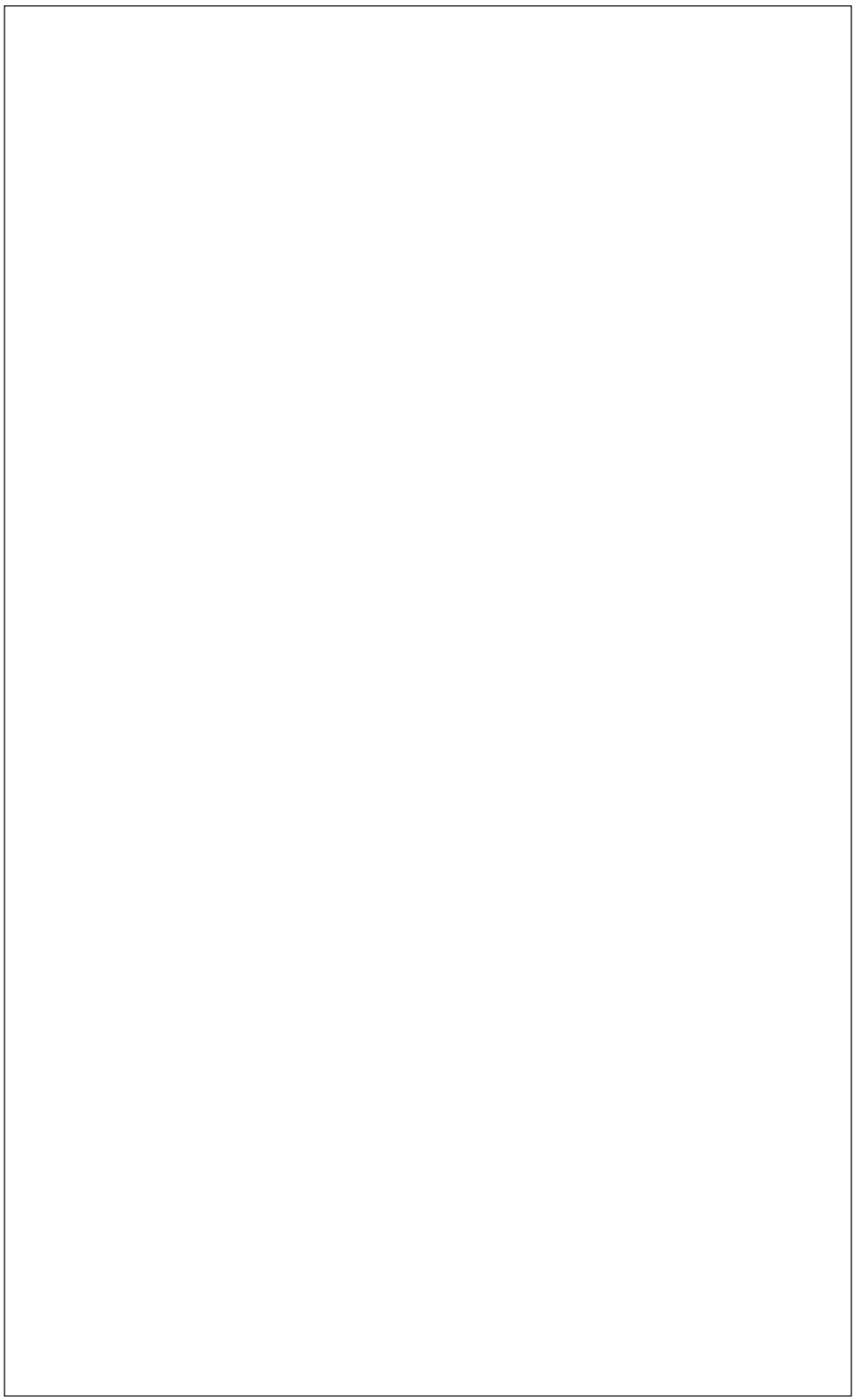
The extreme use of alliteration at the beginning of the novel generates the elements for a rudimentary plot. The main characters will be named Alex, Allen and Alva; the men will be likable crooks, and the woman the love interest. The setting will be Africa — or rather, a caricature of Africa: dancing chieftains, mud huts, click languages, elephants. Bizarrely, the continent will be overrun by giant Ants. (Looking over Munari's poems, I imagine expanding his vague images into a Barthelmesque story about Anna and Reginald.) Because of Abish's alphabetical scheme, other major characters, such as Queen Quat of Tanzania, appear unexpectedly and then vanish on cue, like figures in an elaborate automaton clock.

Echoing Raymond Roussel's *Impressions of Africa*, in which the French author describes a series of surreal tableaux, the trio's adventures are a curious amalgam of colonial history and lexical play. Although the narrator concedes his ignorance of Africa, he freely invents facts and even alters the past. "If I am ever asked how I could erase history, I can answer at once," he deadpans. "It was easy. I bought an eraser. After carefully choosing an East African dictionary, I began erasing a few phrases." This erasure is mirrored by the narrator's own inexorable loss of language after chapter 27 and, by extension, the corrosion of European power. Just as Africa is a shrinking land mass, or so we're repeatedly told, so does Abish's vocabulary get progressively more limited.

Fittingly, the book ends with a list of words in alphabetical order, each preceded by "another": "Another abbreviation another abdomen another abduction . . . ." The narrative collapses into language acquisition. (Or second-language acquisition. An American writer, Abish was born into a German-speaking family in Vienna, Austria, and grew up in Japanese-occupied Shanghai. *Alphabetical Africa* includes an unusual number of German words.) As the Italian linguist Benvenuto Terracini has observed, "For a language to die is for it to change into another." Perhaps imperceptibly, this other language will eventually prevail, and another world will come into being: "another awesome age [...] another Africa another alphabet."

(Louis Lüthi)





Just as there are many different kinds of A, so are there many different kinds of alphabets, and many different ways of interpreting them. I have taken Munari's letter as an invitation to collage together some lines about alphabets: quotations from other authors, memories of certain letterforms, notebook jottings. Like Munari's collages, this poem—a reading primer of a sort—could be added to indefinitely:

Looking for ants, boats and crickets
in the tall grass
From A to C

Glyphs in the mud
From A to Z

What are the letters?
From A to Z

Victor Hugo: "War, harvest, geometry;
the mountain, nomadic life and secluded life,
astronomy, toil and rest"
From I to R

"The horse and the snake, the hammer
and the urn"
From Q to U

Various mythologies
From A to Z

It's raining in the peach-colored book
From A to Z

Looking for spiders, pop-up ads and
mountains in the tall grass
From S to M

Euphoric meaningless form
From A to Z

As the author says, "A rhythm, rather than
a meaning"
From I to SH

The dusk place from which it is said the
entire world is visible simultaneously
From A to Z

To roam like the poet Ian Hamilton Finlay
among the fields and forests, mosses and
springs of an ancient pastoral landscape
From A to Z

Confused tracery of remembrance
From A to Z

Samuel Beckett: "B to C C to D from
hell to home hell to home to hell always
at night"
From Z to A

Recite the names
From A to Z

I recall the polished black stones arranged
on the square in Haarlem
From A to Z

Letterforms bleached into the covers of
secondhand books
From S to S

The discarding of accents
From U

Our common Basic English vocabulary
From A to Z

Having to reconcile oneself to the grammar and glitchy sprawl of empire with a capital E
From A to Z

What is the order?
From A to Z

And Menelik II, Emperor of an unconquered Ethiopia, did reject the order
From A to Z

A history of iniquity
From A to Z

The white rivers and lakes
Between A and Z

A hybrid
Of M and N

Ecstatic monochrome pictures made of words made of letters once made of pictures
From A to Z

To imagine a new writing system
From to

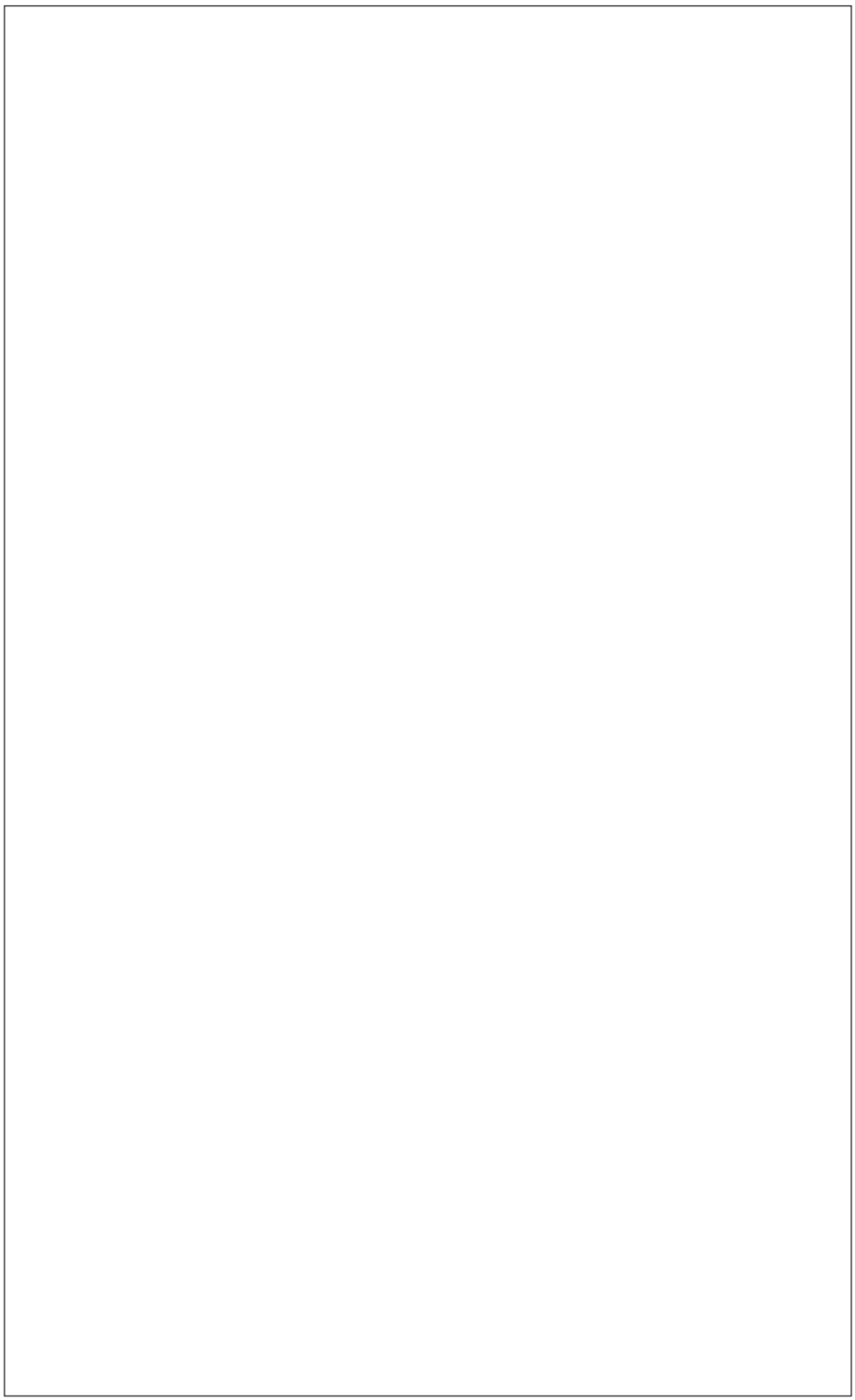
Code without end
From 0 to 1

The silences lengthening between the words in our first language
From A to Z

Swallowing alphabets
From A to Z

In childlike anticipation of encounter
Between X and

(Louis Lüthi)

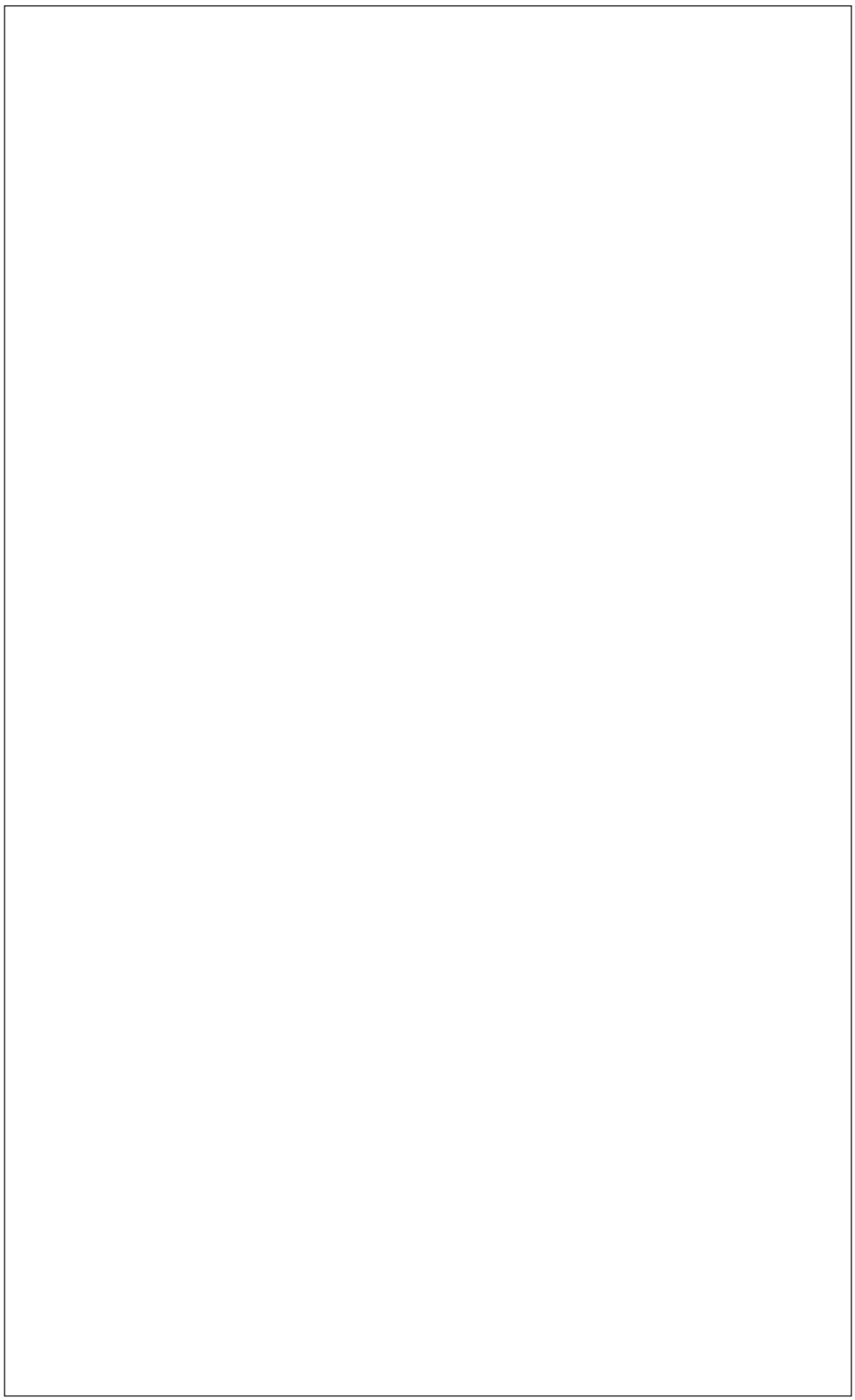


At the beginning I couldn't understand Munari's interest in these specific objects: to me, they looked like children's construction games, like Lego or Meccano, with that add-on of abstraction that characterized modern artistic production after the Second World War. All too simple, all too easy.

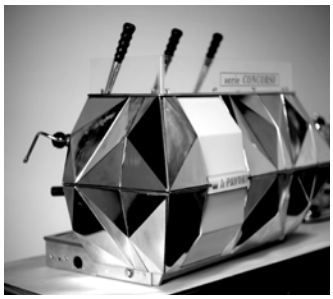
My interest grew slowly, in many years of study and familiarity with his work, until I realized that the continuity and contiguity of these structures were the *fil rouge* threading through Munari's entire project. His thinking was intuitive first, then deductive, but not too much so: one always had to give away something of oneself … otherwise what kind of intellectual cooperation are we talking about?

And so I tried, but eventually I got there from another side, from the drawings for his course at Harvard and his alpaca pots for Danese, and perhaps also from the thin plywood structures that he used for the windows of a large department store in the 1950s. The theorem that I have always maintained about Munari and that I think constitutes my most relevant contribution to his work states that his grand intuition was the one of continuity between dimensions — something that Benoit Mandelbrot's fractal geometry would triumphantly demonstrate a few semesters later. Bidimensional objects, while keeping with their two-dimensionality, effortlessly built three-dimensional structures, and the evidence of the process was so astonishing and so simple to make one marvel that nobody thought about it before. In fact, similar structures existed before, even just in children's toys, but the testing and finding of the limit of the theoretical principle seems to overpower many of Munari's other creations, which usually lean towards the capacity of observation. The proof is in the structures' package: a wooden parallelepiped that guards them with a "T" shape affirms that from something flat one can obtain a potentially infinite volume.

(Marco Meneguzzo)

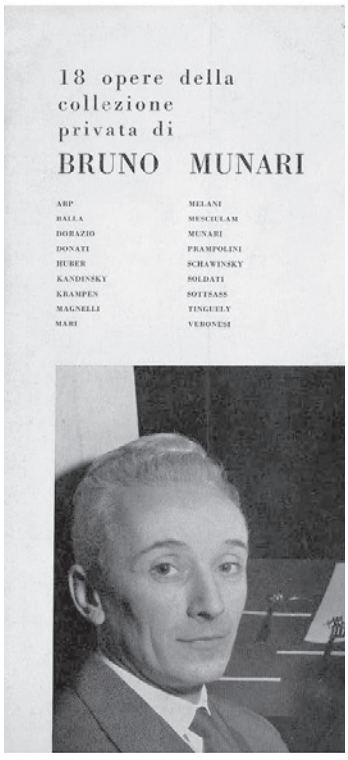


One can read the origins of a dozen brand marks in Munari's sketches for continuous structures, but when made dimensional as in these photographs, I'm instead reminded immediately of the only time I've encountered a Diamante espresso machine (which Munari designed with Enzo Mari for La Pavoni in 1955) in the wild.

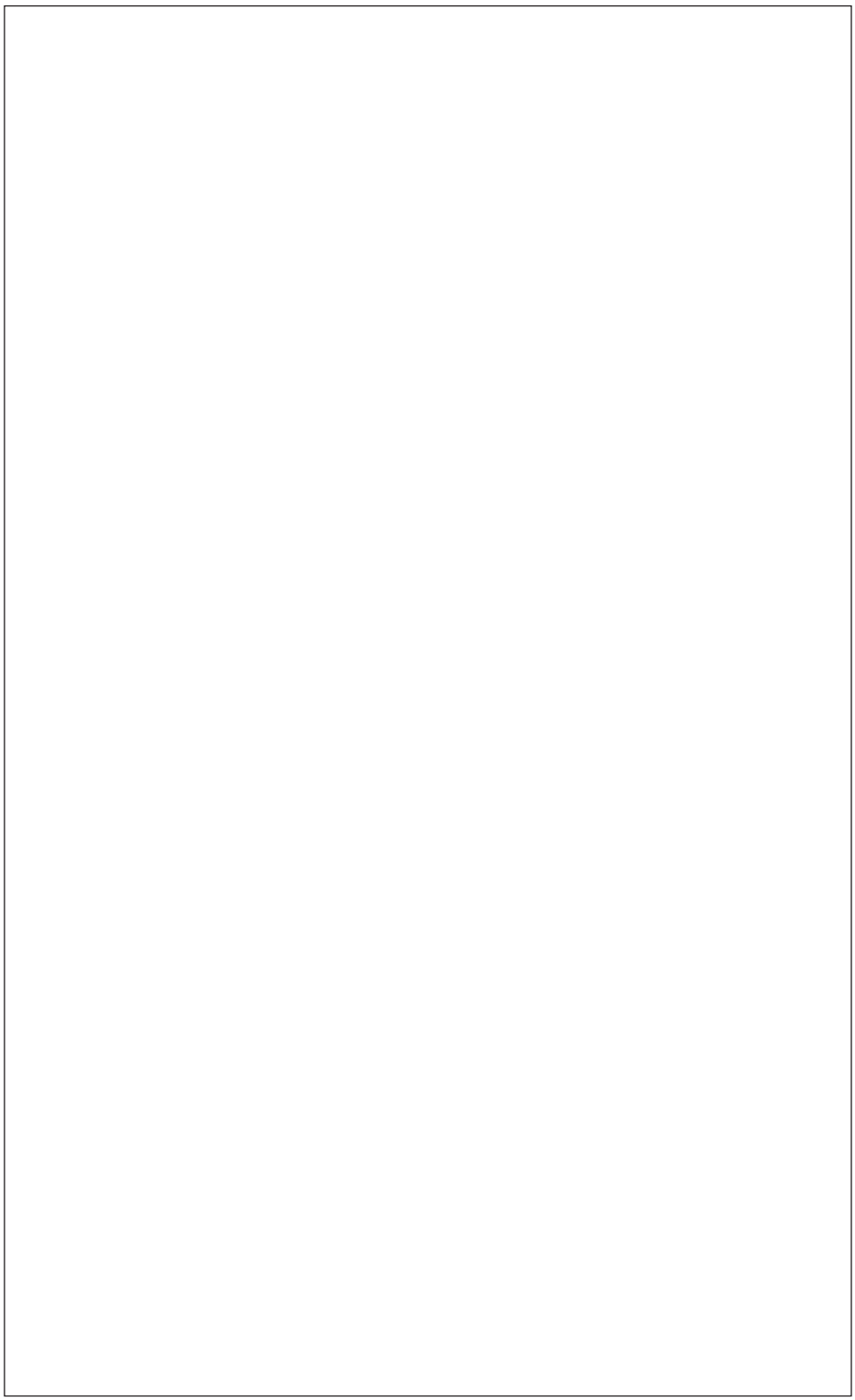


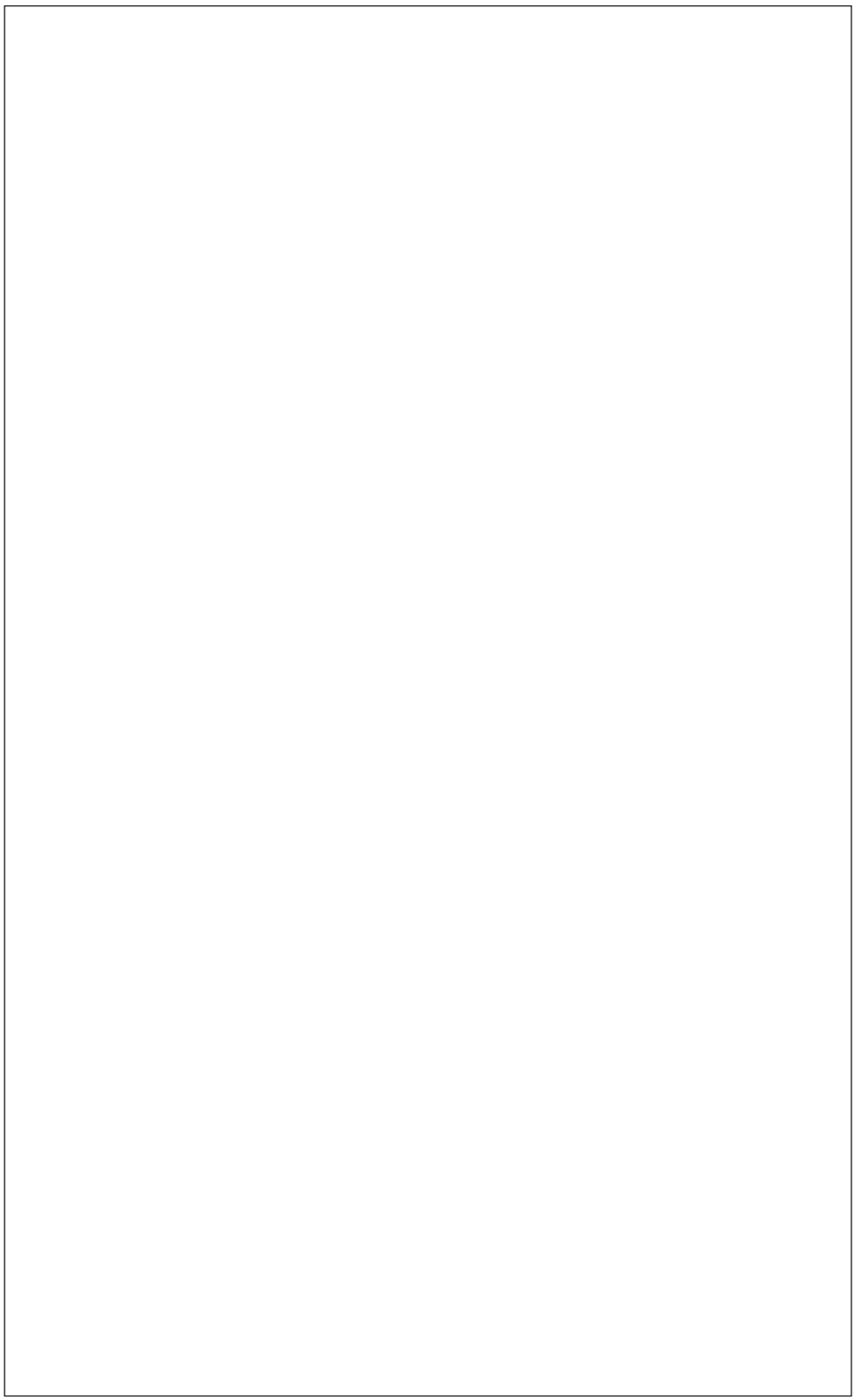
The repetitive geometry of the exterior in almost — but, in the ways of so many things Italian, not quite — gaudy gold and silver was lovingly cared for in a Turin bar that served coffee in the thinnest china cups. Given the drama of the machine, its handles were incongruously bulbous, almost — but not quite — vulgar (a detail lost, alas, in the tone-deaf reinterpretation of 2016).

(Eugenia Bell)

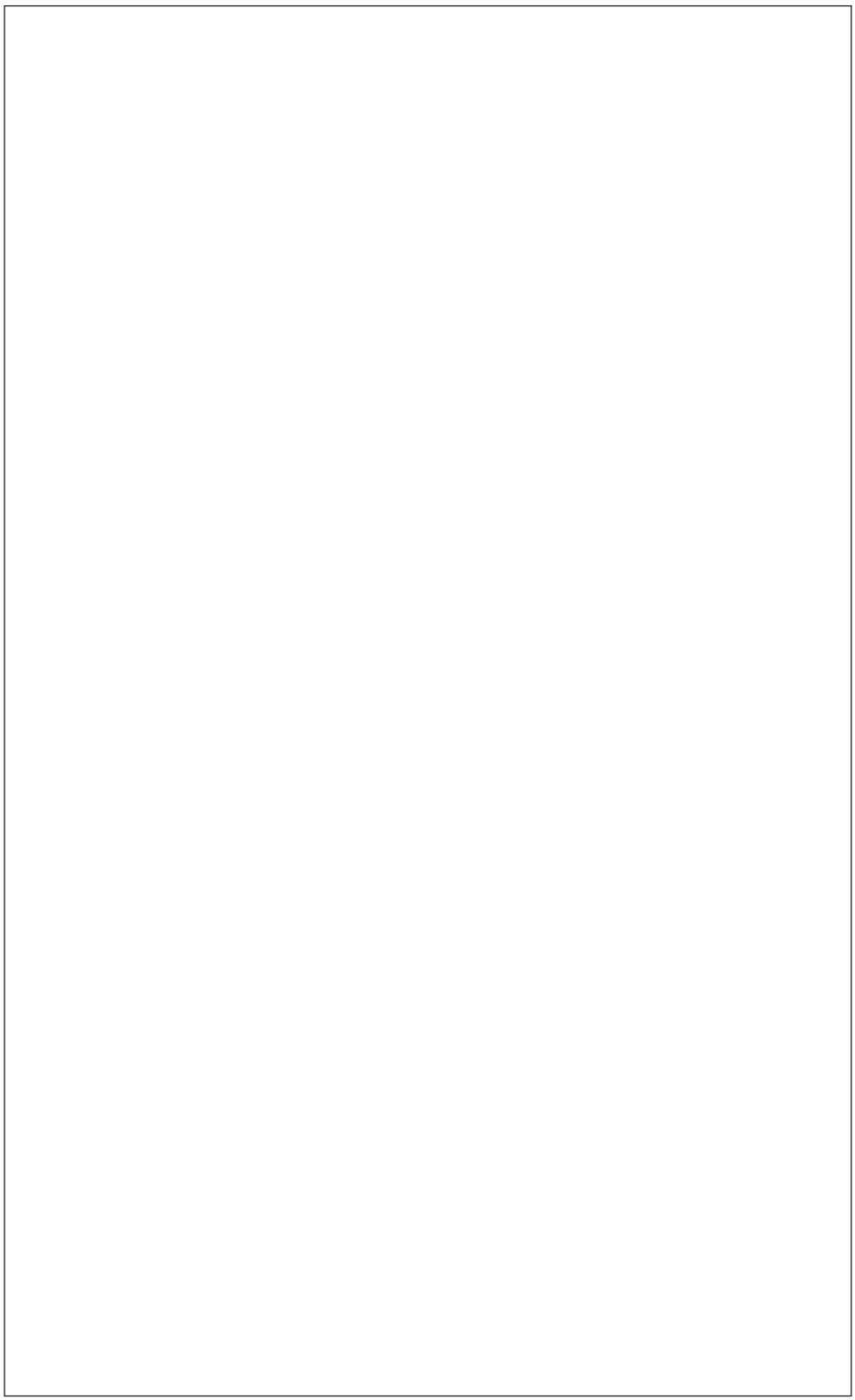


(Valérie Da Costa)





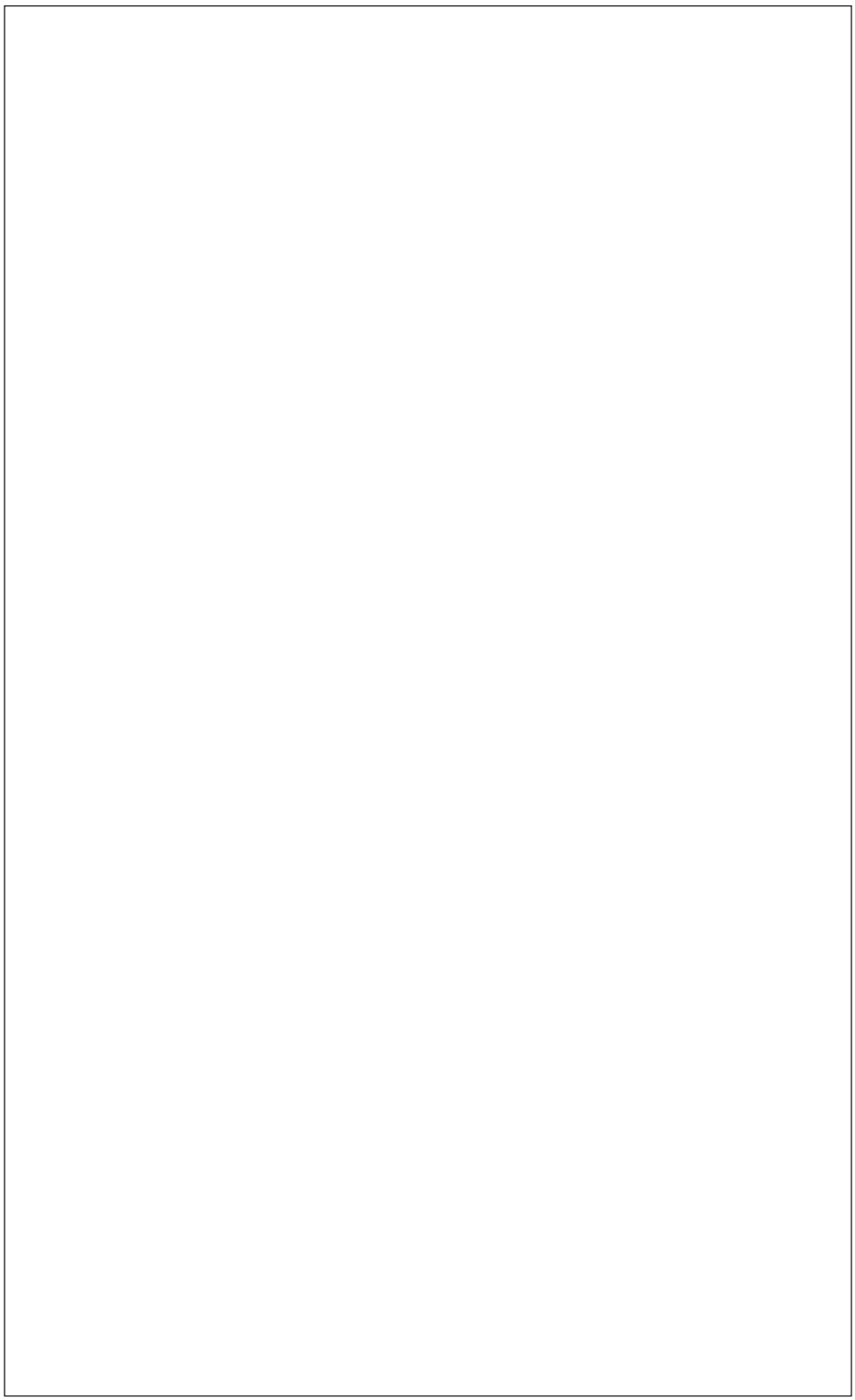
* Translator's note: In Italian, "ora X" refers to the precise moment chosen by a group to coordinate an action, usually as part of a covert operation or a secret plan. Here, of course, it also refers to the shape of an X.

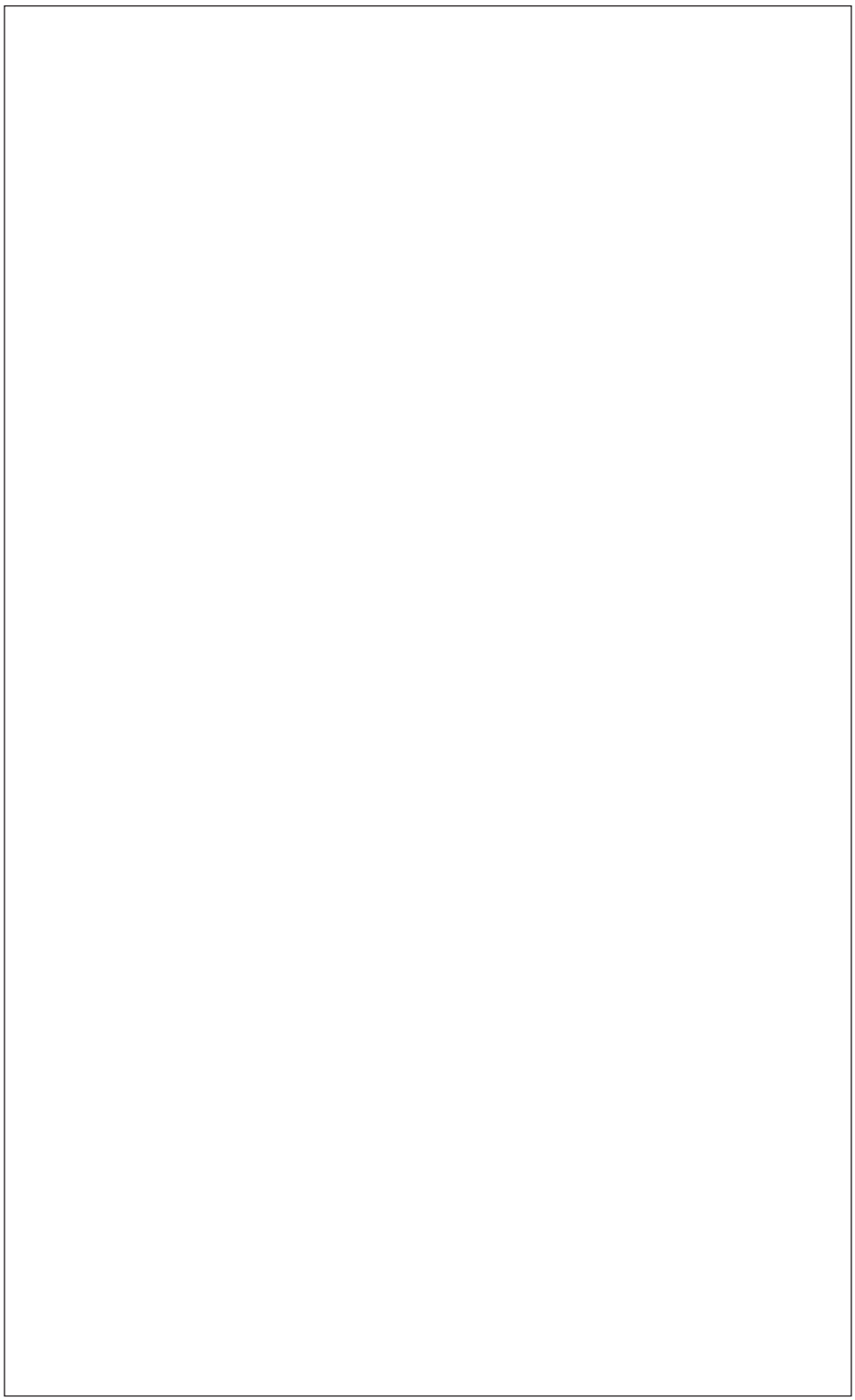


Editors' note: The image on page 83 of the original edition has been replaced.

* Translator's note: As in the Italian, Munari's chosen term here is deliberately weird.

Editors' note: The image on pages 84 and 85 of the original edition have been replaced.





(... Continued from page 33)

The great problem with film is that the first set of things, the physical facts, the material embodiment, is inevitably always and forever severed from the image. Film is always only an image. Yes, I understand that a film has grain in it, and so it can be claimed that somehow this fact can let you treat certain questions about materiality in a film, but nonetheless it is done with something that is always an image, not as a part of the totality of the physical event that a painting is. No one would for an instant claim that Jean-Honoré Fragonard's painting is about paint or an analysis of the materiality of paint, simply because you can see the manipulated pigment at the same time you can see the picture that the pigment makes. Well, perhaps, but not at the same instant, but by turns: paint, image, paint, image. But the point remains: being able to isolate the pigment as the means that make possible a representational image does not in itself mean that the painting is about anti-illusion or deconstruction, materiality, the subversion of bourgeois pleasure, etc.

The image is only part of what film is. It's that simple. The film strip keeps going after the confines of the frame, and because the image is projected, it is always displaced from that fragment of the material base that you do see. So the impossibility is rehearsed twice: you see only a part, and what you do see is not really that part, but a shadow of it.

This is the explanation of why abstract films of the kind in which worms and curlicues wiggle and writhe are so unsuccessful. They model themselves on the vocabulary of abstract painting, but they are severed from the fact that with a painting you see all of it. Not just the full extent of the image, but also a surface that is made and is a document of its own making, a bounded space of a specific size, something with an edge, something finite that stops. Yes, a film image has an edge, but it's an edge produced by masking, not the edge produced by the limits of the material support, confirmed by its being a discrete object in a larger space.

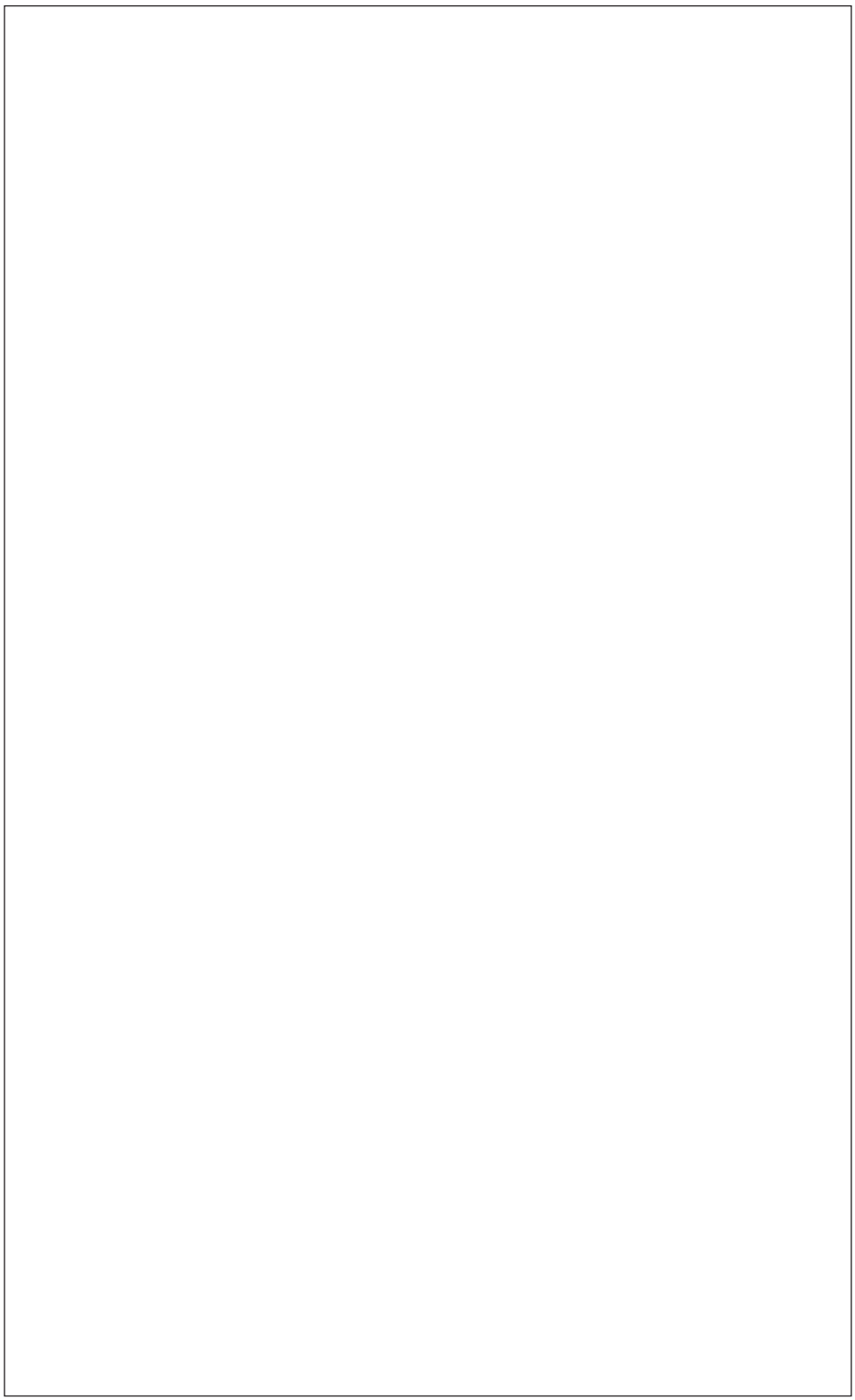
(Morgan Fisher)

Not the product, but man, is the end in view. Proceeding from such a basic readjustment we may work out an individual plan of life, with self-analysis as its background. Not the occupation, not the goods to be manufactured, ought to be put in the foreground, but rather recognition of man's organic function. With this functional preparation, he can pass on to action, to a life evolved within. We then lay down the basis for an organic system of production whose focal point is man, not profit.

(László Moholy-Nagy)

Machines are what make movies…
the institution of film, the cinema — is itself a machine, a process of production whose product is none other than its audience, us.

(Thom Andersen)



Tools and machines are not only signs of imagination and creative capabilities of human beings, they are certainly not only important as instruments for transforming and bending the earth to man's will: they are inherently symbolic. They symbolize the activities they make possible, which means their own use. An oar is a tool for rowing, and it represents the capability of the rower in all its complexity. Someone who has never rowed before cannot see an oar for what it really is. The way in which someone who has never seen a violin views that instrument is different from the perception of a violinist. A tool is always a model for its own reproduction and an instruction for the renewed application of the capabilities which it symbolizes. In this context, it is an educational instrument, a medium, for teaching people in other countries, who live at another level of development, the culturally-acquired methods of thinking and acting. The tool as a symbol in every way transcends its role as a practical means for a definitive end: it is constitutive for the symbolic remaking of the world through human beings.

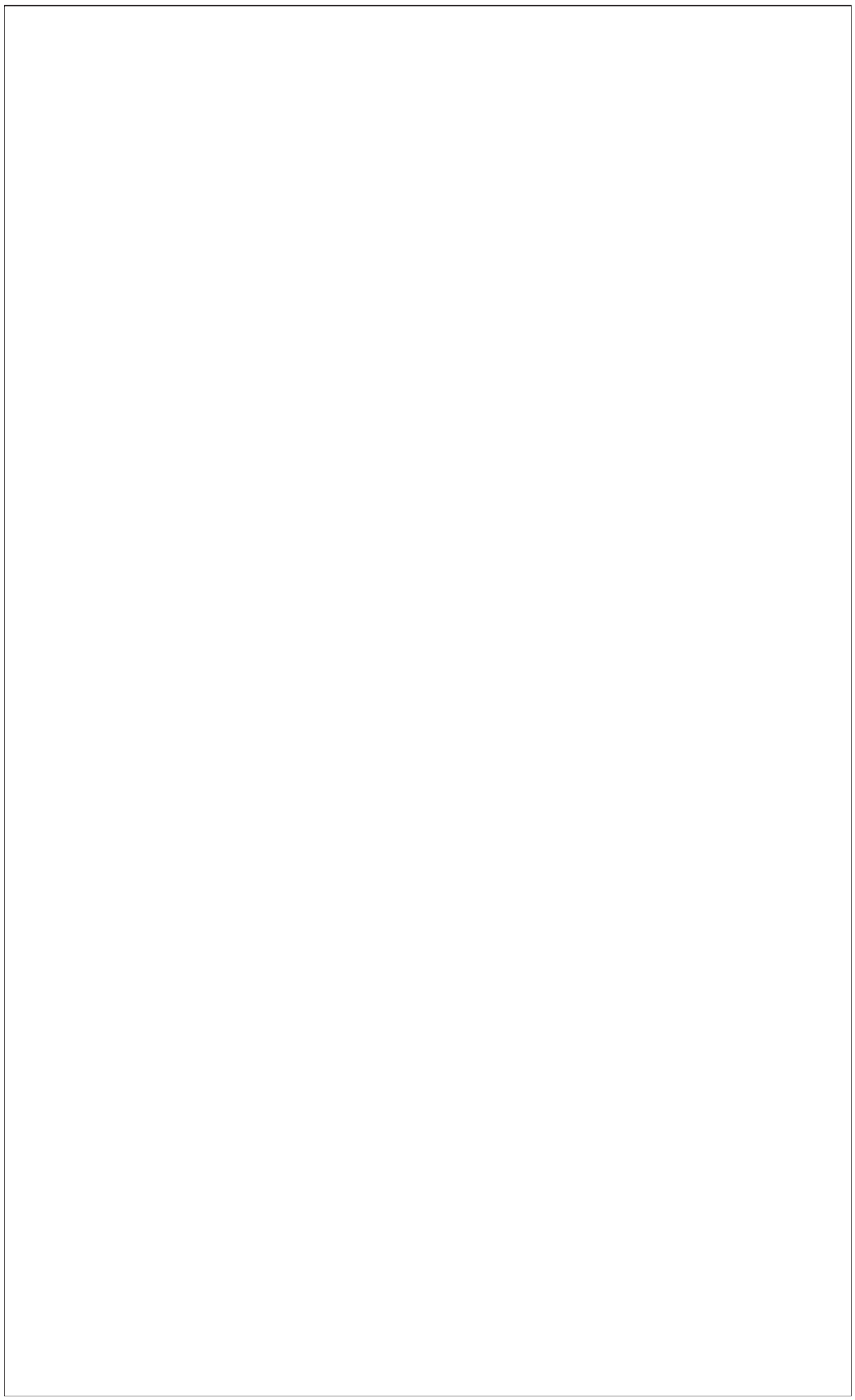
(Joseph Weizenbaum)

Munari would have admired the work of avant-garde filmmaker Ernie Gehr. I wonder if they ever encountered each other. Gehr's own work since the 1960s has largely turned on themes of visual perception and consciousness. His films are plotless, characterless, experimental, yet carefully choreographed and balletic. Both artists created 16mm revelations. Gehr's *Serene Velocity* (1970) echoes Munari's fascination with the visual effect and form of the filmstrip (I see a connection here with his xerographies). Even Munari's observational *Sulle scale mobili* (1964) presages Gehr's *Shift* (1974), playing with people and forms and motion. Gehr's *Morning* (1968) is, in essence, an homage to light, which could also describe much of Munari's research and output.

(Eugenia Bell)

It's not a question of directing someone, but of directing oneself.

(Robert Bresson)



Danese Milano, a design gallery and publisher based in Milan, was established by Jacqueline Vodoz and Bruno Danese in 1952, and for the first few years they sold principally one-off ceramics. These were useful objects, but they were only ever made as unique specimens, never produced in multiple copies. They were premised on the "touch of the artist" in some way.

In 1957, Bruno Danese sought out Munari, who had a significant reputation in Milan at the time. Danese invited Munari to make a project with him and Munari replied by suggesting a simple, industrially produced ashtray made of two pieces of melamine plastic and bent aluminum. He must have said something like, "I have this idea and it's very different than what you've already been doing. I have an idea for an ashtray. It's a cube-shaped ashtray, I've already designed it in my head. I'm not a smoker, and I find seeing butts in an ashtray unaesthetic. I want to solve that problem, and I have a good idea of how to solve it. But here's the thing. I think," as he says to Danese, "it's a time of industrial production and you're making these one-off things and calling them design. I want you to produce this product, to manufacture it in an industrial manner and circulate it through society, of course." Danese agreed, worked out the tooling and production logistics for industrial manufacture, and the *Cubo* ashtray was the result.

The *Cubo* ashtray was, at first, a commercial failure. A lot of money was spent on manufacturing it and it didn't sell very well. But Danese was steadfast, he believed in the product, and remained committed to manufacturing it. It's still in production today, 50 years later; it's become a hit. It even tells this story right on its package:

Bruno Danese, who had been looking for Bruno Munari, put the ashtray into production and for a year or two it was decidedly unsuccessful. But with the insistence of Bruno Danese, and due to its essentiality, this ashtray is still sold today all over the world. Is it perhaps a "classic"?

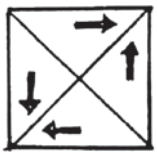
Danese and Munari struck up an active working relationship. Munari got involved in many aspects of the business quickly, even suggesting other artists to collaborate with Danese. One of the first he introduced was Enzo Mari, a designer based in Milan. He was a bit younger than Munari and took an overtly ethical stance in his design work. Munari, Mari, and Bruno Danese soon became involved in designing showroom layouts and producing exhibitions. They'd stage exhibitions for products, like displays, where the design followed a consistent idea about industrial production, about serial production, always in multiple copies, designed to be manufactured. This went for everything from the look of the packages (brown paper cardboard with one-color printing) to the design of the showroom. For example, here is the basement of the Danese Milano store. It is uncompromised. Repetitive. It also does a good job amplifying the serial production of these design objects.

Munari continued to work with Danese, and in 1965 the *Tetracone* was released. Munari released the multiple with an event and exhibition at the Danese Milano showroom, inviting spectators to "… meet the *Tetracone*," as if it was a person. Instead *Tetracone* was a product, an austere black steel cube housing four aluminum cones, each painted half red and half green, designed to spin at four different distinct speeds on an 18-minute cycle.

It was designed explicitly to convey a philosophical attitude, to see the universe as an indivisible unit of pure energy, which is constantly undergoing transformations.

Munari's program lays out a speed distribution across the four cones. The top is fastest, then the other speeds follow counter-clockwise and the rotation speed of each cone is noted in seconds. So, you can see that the first cone turns once every 60 seconds. The second one down to the left turns once every 72 seconds. Then 90

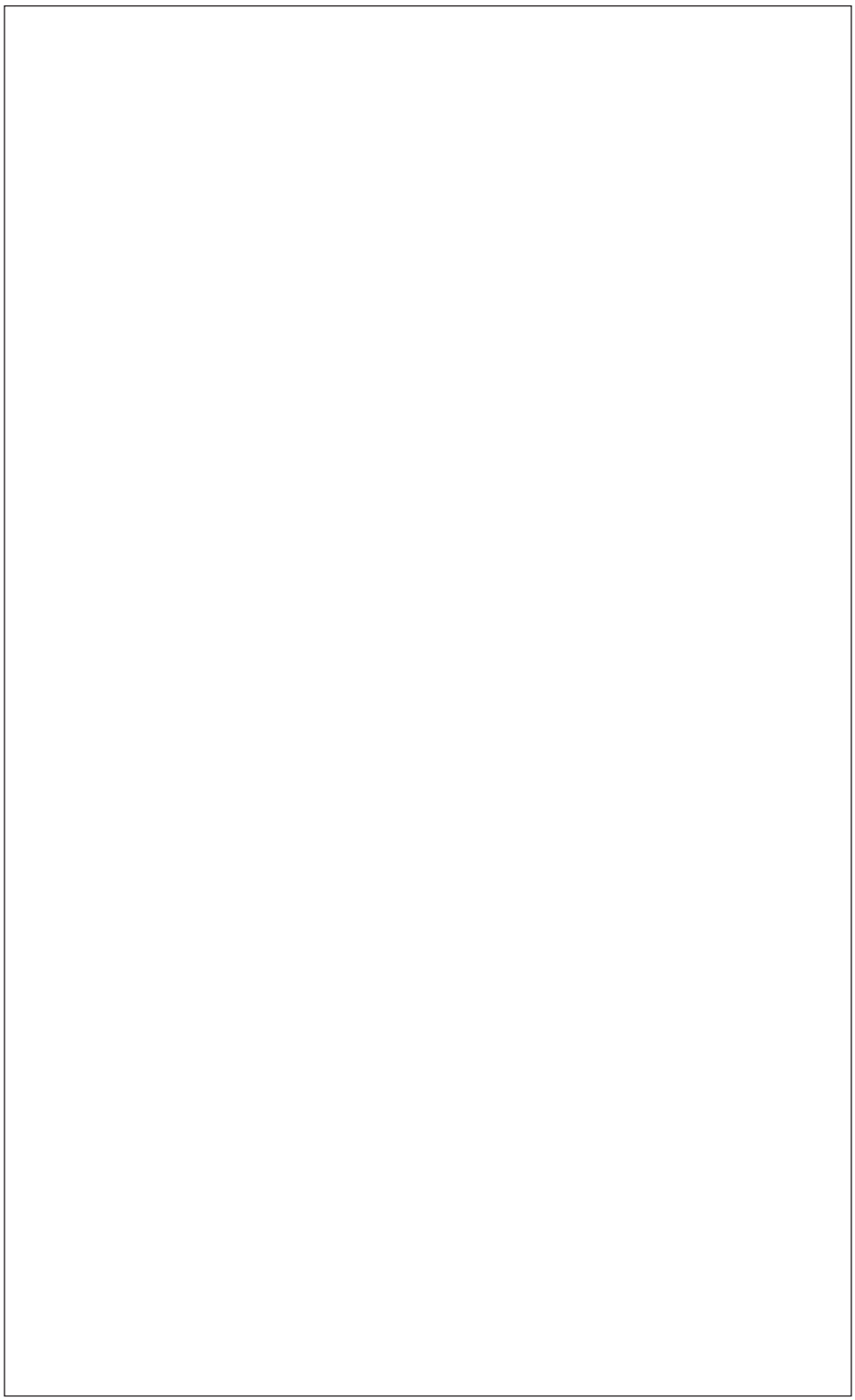
seconds, and then 108. It turns out those numbers have a harmonic relationship to each other. They come into and out of phase in a regular pattern, which then gives the *Tetracone* exceptionally beautiful movement. Finally the last piece of the script details the direction of movement for the four cones. Two rotate up to the top right corner and other two rotate toward the opposite corner.



The first edition was built with motors and was more or less a total flop. Too expensive, too unreliable, and too few were made. The second edition was issued without motors. *Tetracone SM* was a bit more successful. The price was reasonable, and it was intended so that you move the cones yourself. Importantly, at the time, Danese Milano made no distinction in their catalogues between their art editions like this one and their consumer products, like the ashtray. They were shown side-by-side, and so the *Tetracone* was presented as a product, if a fairly strange one.

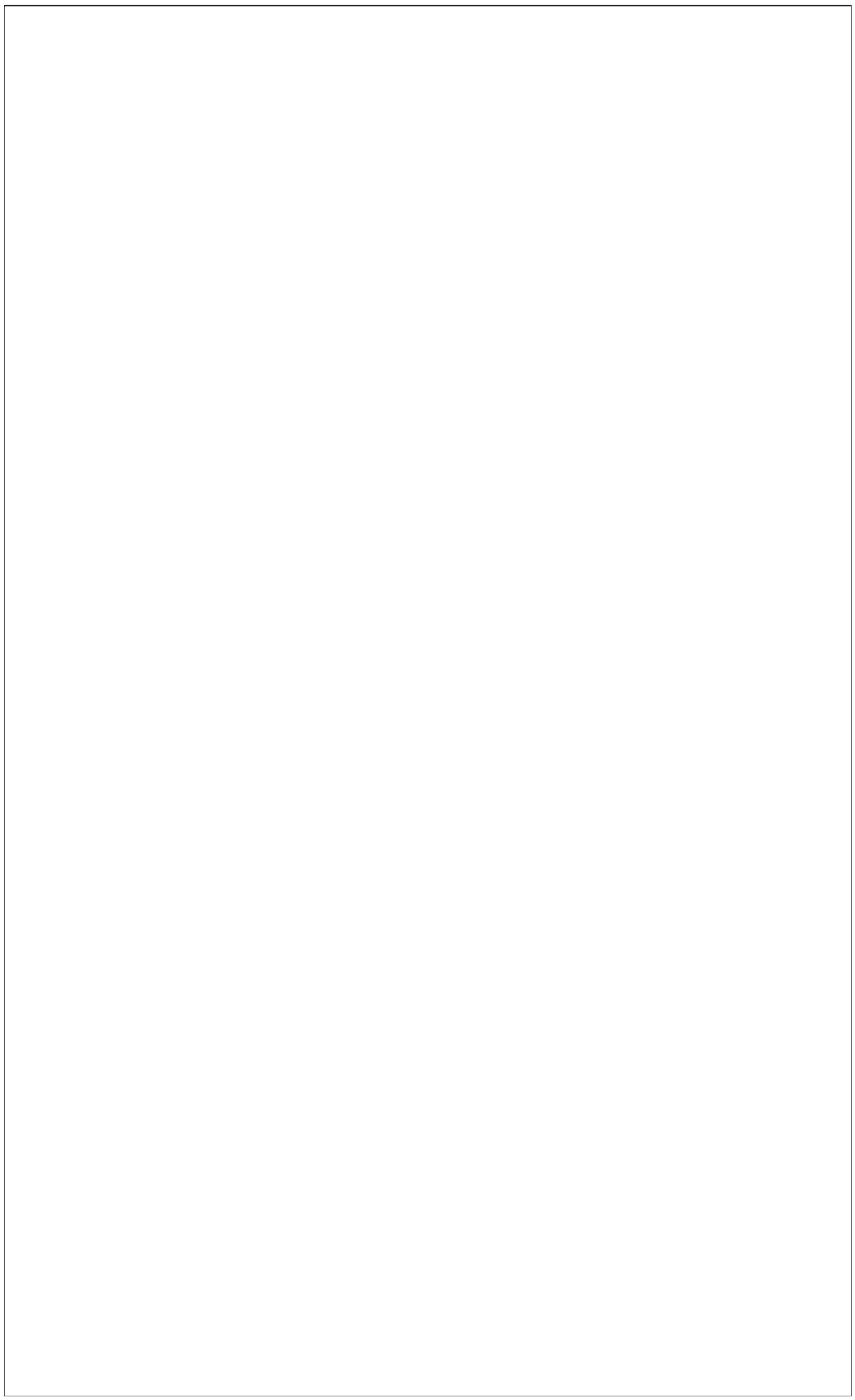
Serial production is different from reproduction, and a reproduction is always inferior to the original. The multiple was central to this logic. But now 50 years later, we've moved on from industrial production of objects to the post-industrial production of information: from cubic ashtrays to bespoke emojis. And it makes me consider that the *Tetracone* was in many ways already a post-industrial product. Or perhaps both industrial and post-industrial at once. It was a manufactured object of steel and aluminum, but its purpose was to produce a constantly changing *image.* Its rhetorical design was in its script: how the cones turn, the sequence, the phasing, its temporal dimension. Munari called it both a product for exploring programming and an object for understanding forms in the process of becoming. Both of these lessons seem equally, or maybe more, important now than they did in 1965.

(David Reinfurt)

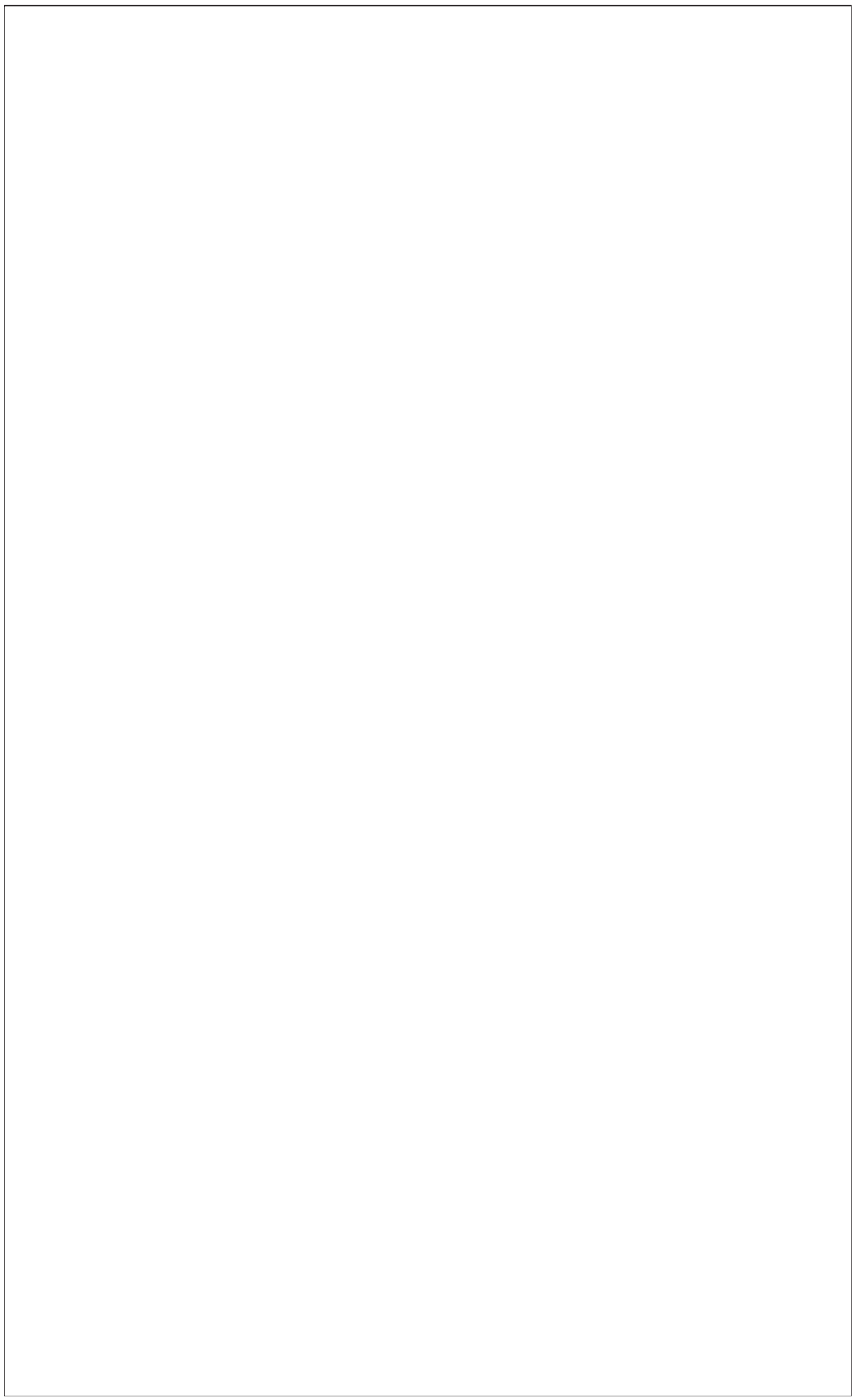


* Translator's note: The checklist for the 1955 MoMA show calls them "books without words," but I put this down to post-war overcaution and here restore Munari's original flavor.

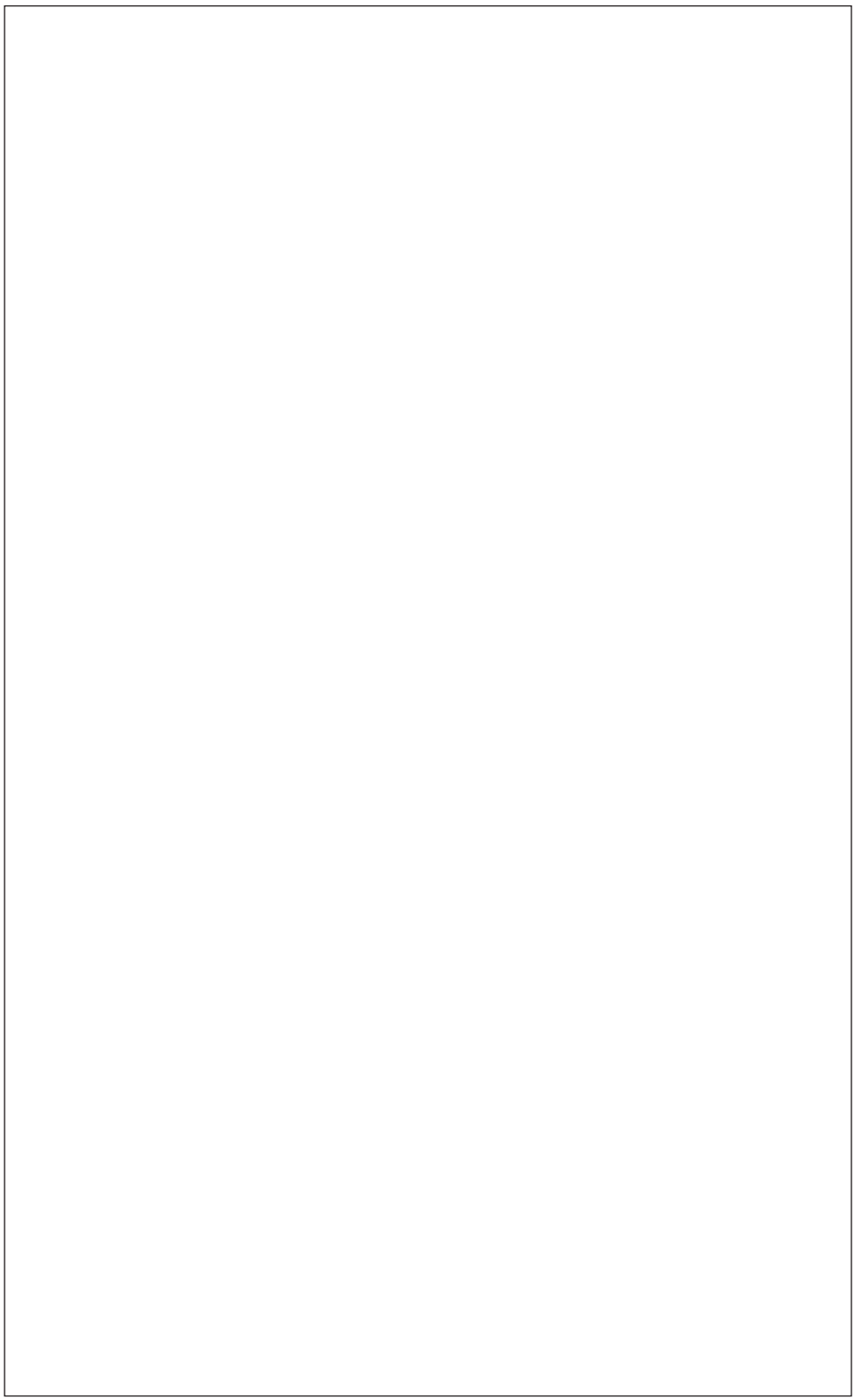
The Museum of Modern Art's "Two Graphic Designers" exhibition of 1955 followed an exhibition a year earlier, also at MoMA, titled "Four American Graphic Designers." Both were curated by Mildred Constantine, who worked in the Museum's architecture and design department from 1943 to 1970.



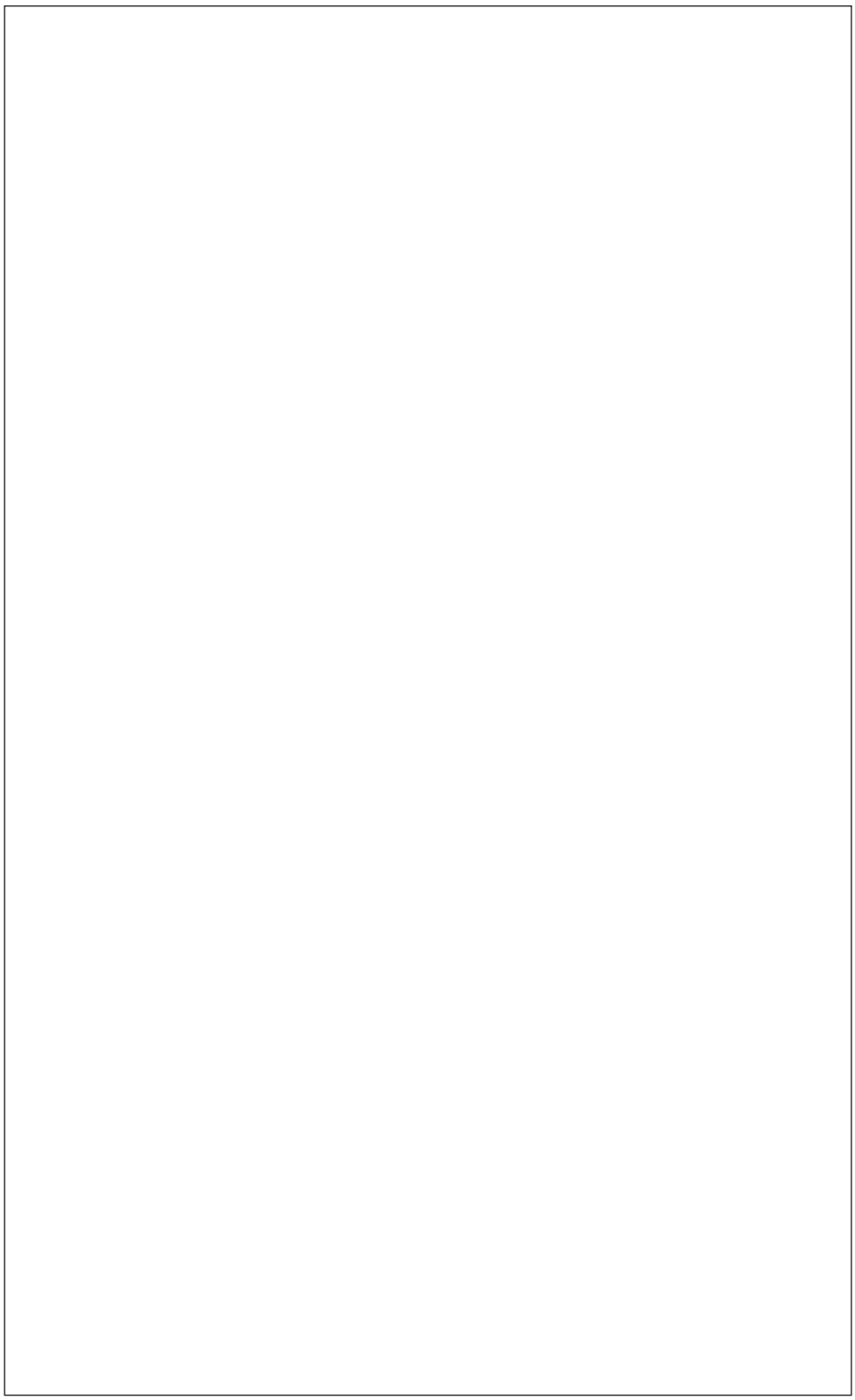
The "Four American Graphic Designers" were Leo Lionni, Noel Martin, Herbert Matter and Ben Shahn (all of them but Martin had been born in Europe) and the graphic designer, apart from Bruno Munari, of the "Two" was Alvin Lustig, who died from longstanding health problems a few weeks after the exhibition closed.



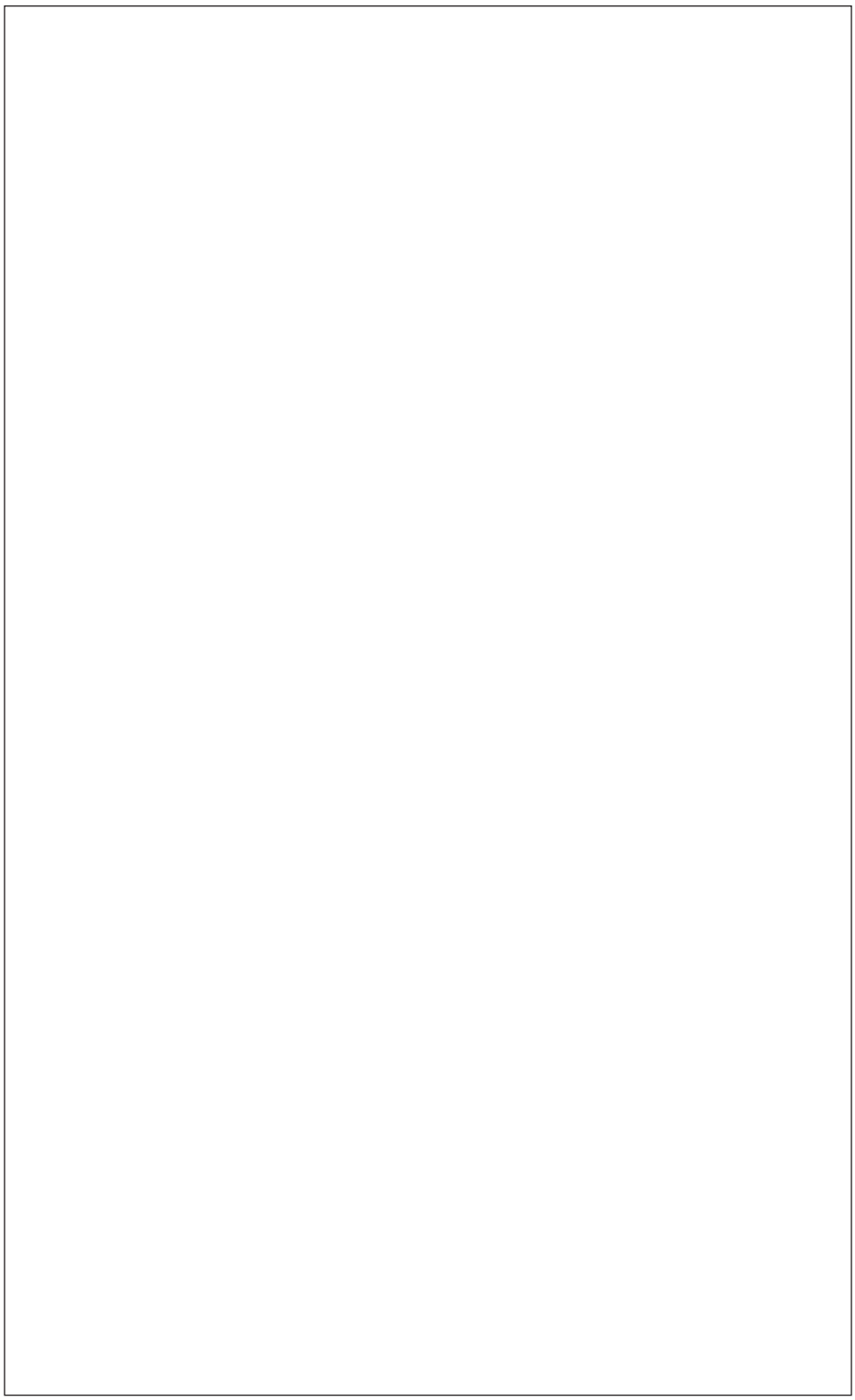
Constantine (who was known by her friends as Connie) put Lustig and Munari side-by-side with the aim of showing "two highly individual approaches to modern graphic design." She argued that, while Lustig "relies primarily on combinations of letter forms and geometric designs," Munari "depends in much of his work on an emphatically physical response to the materials with which he works."



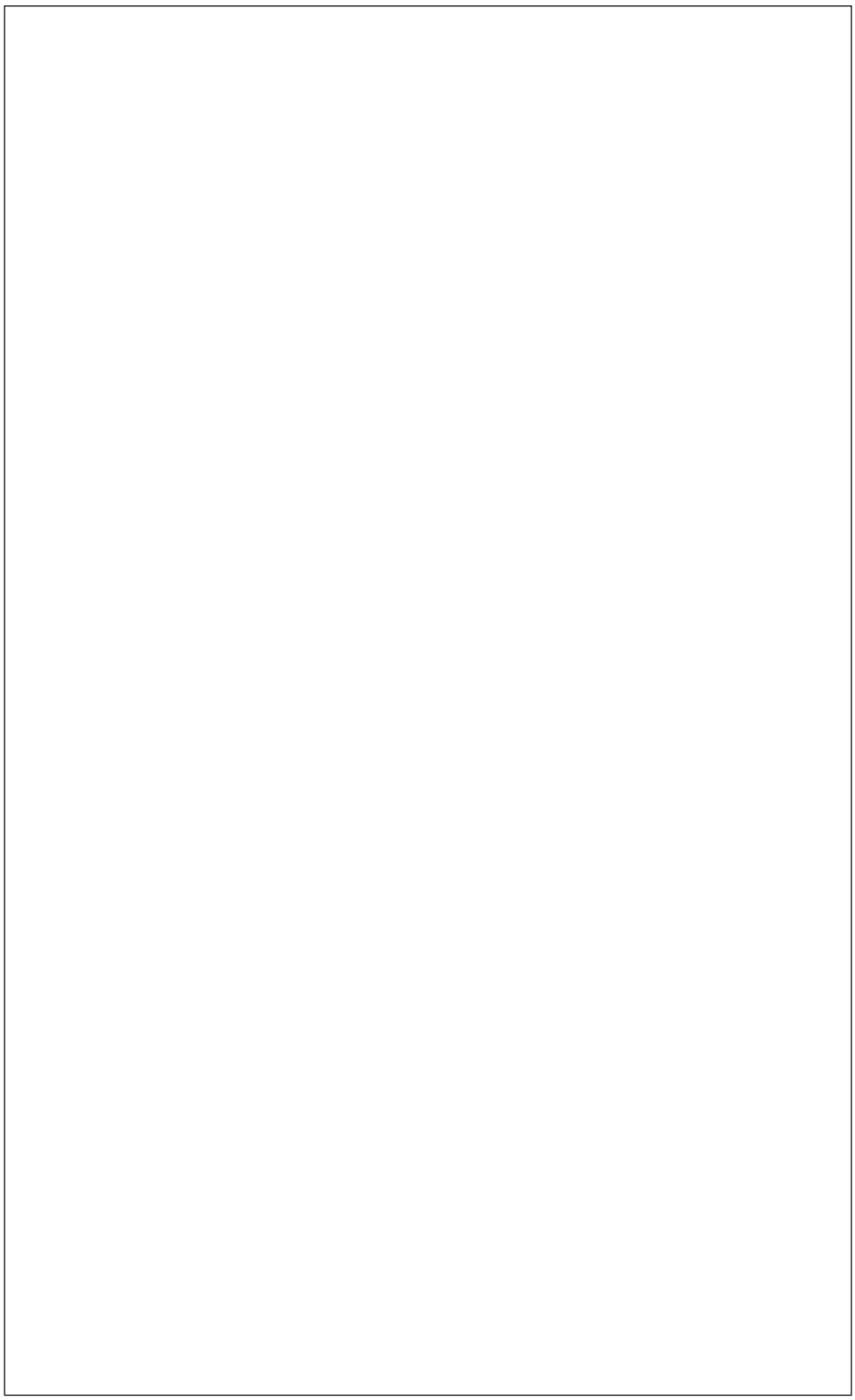
Describing the *libri illeggibili* in the press release, she said, "[Munari] exploits the color, texture and transparency of paper [...] These qualities are considered not merely with regard to the individual page, but to the book as a whole." In particular, she celebrated the designer's use of transparency in producing "gradations of color." "Munari's inventiveness has enlarged the vocabulary of graphic design through the use of the third dimension," she wrote.



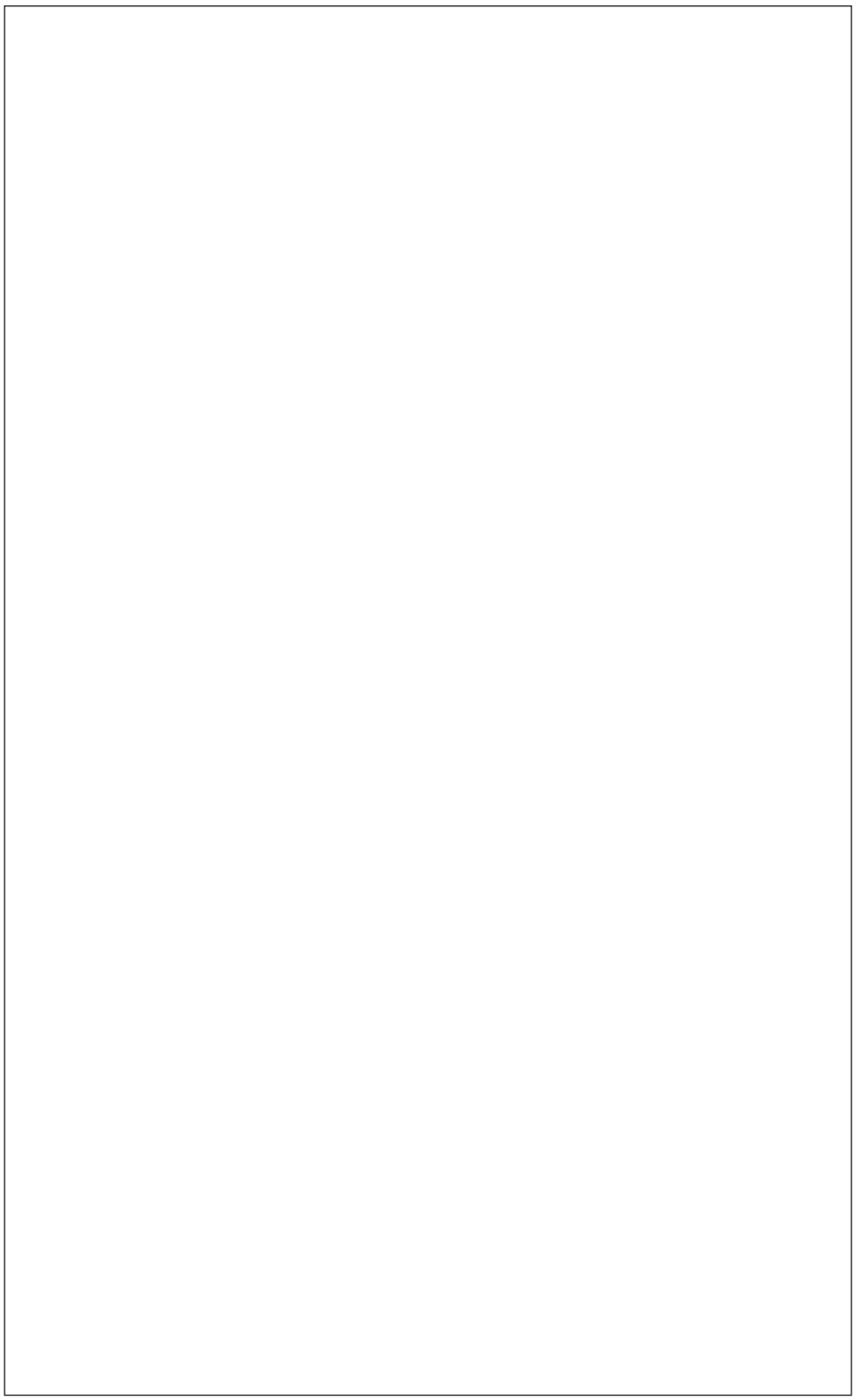
Among the loans to the exhibition was an item coming from the curator's own library: a *libro illeggibile* designed in 1952. Not just a curator, Connie was also a collector.



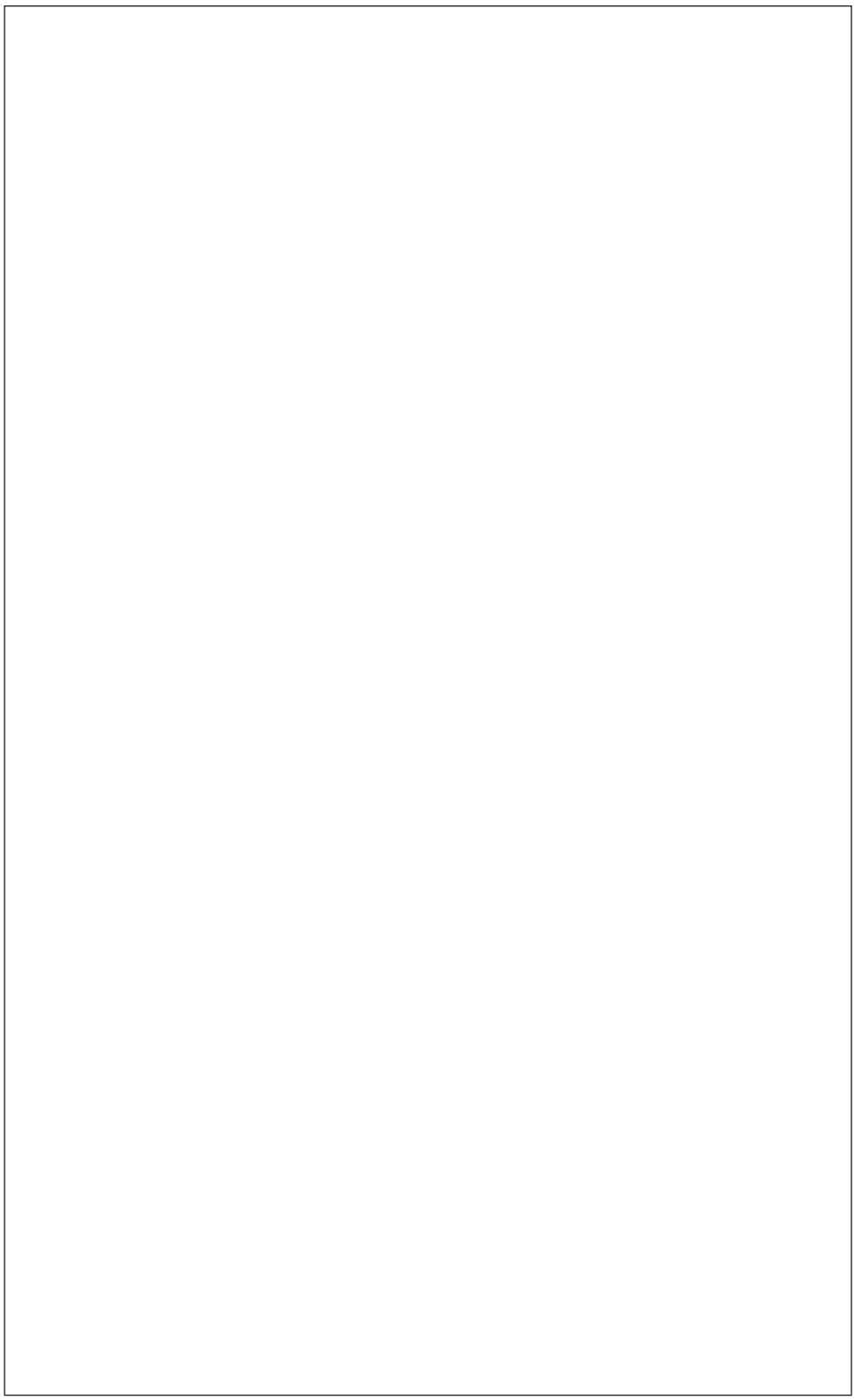
Constantine was a radical. As member of the left-leaning Committee Against War and Fascism, she had visited Mexico in 1936 and, on her return, she created a collection of Latin American posters, many of them of political content, which is now part of the MoMA collection.



"Fugitive material" was the term Constantine used for the objects that caught her attention. On her death in 2008 at the age of 95, she was in the midst of a wide-ranging project on the history of the fibre in art.



(Emily King)



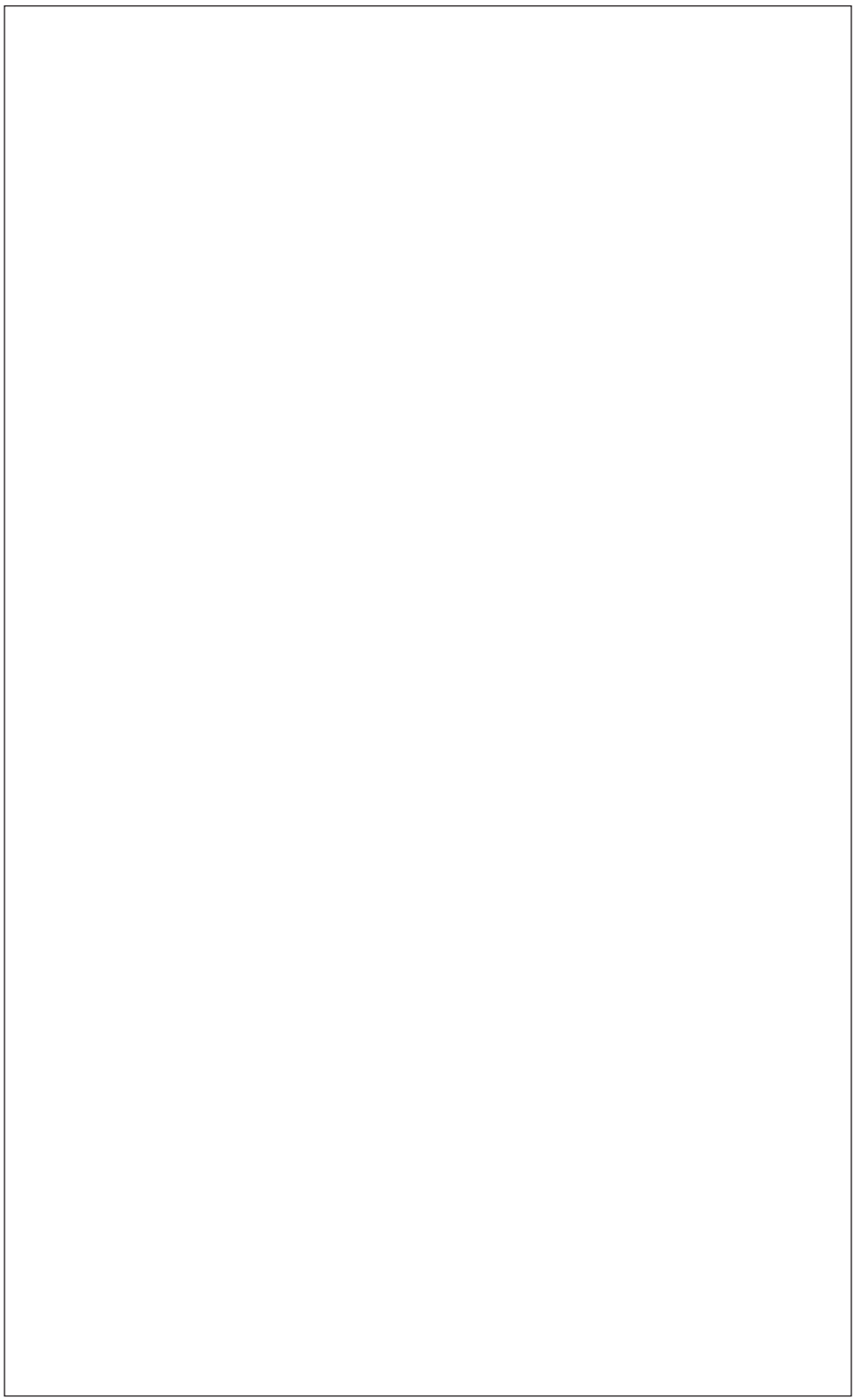
The spark that ignited it all was Gruppo T's invitation to Munari to take part in their exhibition "Miriorama 1." He exhibited the most beautiful of his *macchine inutili*: the modular version made of aluminum strips produced as a multiplied artwork. The first part of the exhibition was a sort of critical introduction through texts, images and artefacts, which paralleled the publication of our manifesto. The T in Gruppo T stands for Time: Time as dimension and as ingredient or motive. And this introductory part of the exhibition was dedicated to the forebears: fathers and traveling companions addressing Time in contemporary figurative arts. These included Paul Klee, Wassily Kandinsky, Umberto Boccioni, Lucio Fontana, Jean Tinguely and of course Munari.

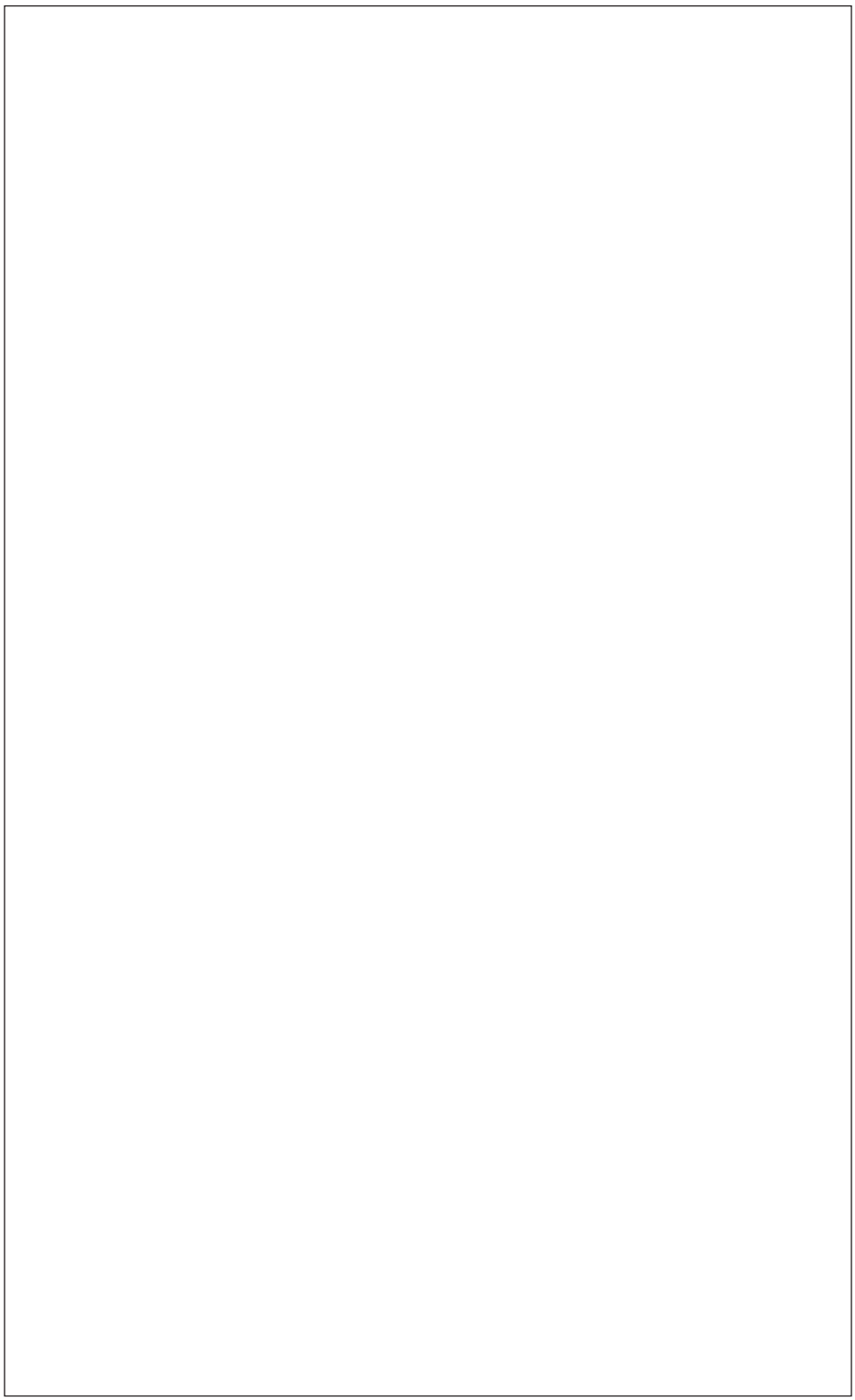
Munari comes to the opening, sees the balloons (i.e. the *Ambiente a volume variabile* (Environment with variable volume) which he renamed *Grande oggetto pneumatico* (Large pneumatic object)), the painting made of smoke, the surface in combustion, the one in oxidation … and he finds out that he is one of the headmasters of the "school!"

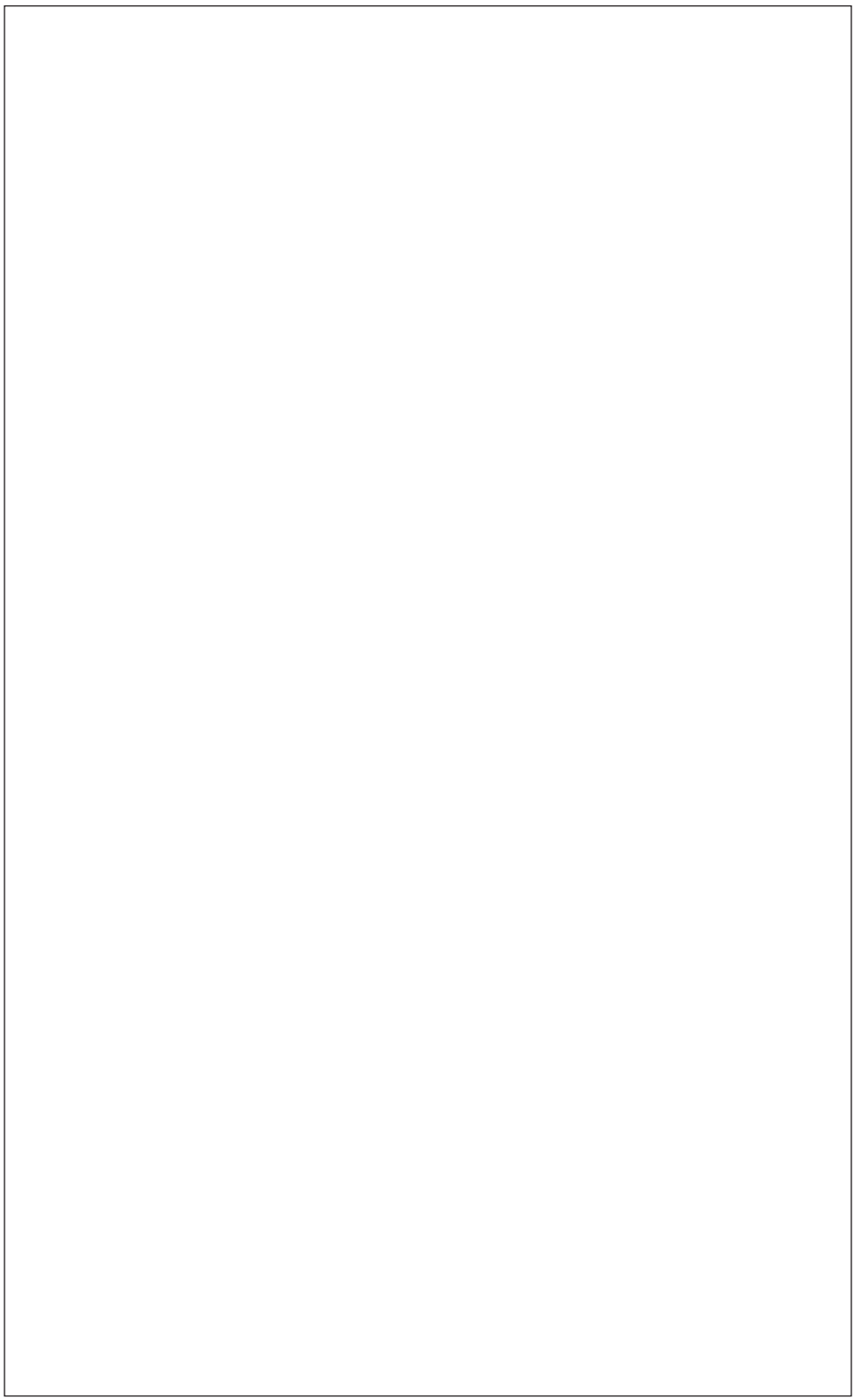
And for Munari the encounter with these young people (Gruppo T and later the others) truly provided an opportunity to take up a definitive position: he found he was not alone, he discovered he could become the messenger and leader of a radically innovative, wide-ranging artistic and cultural policy.

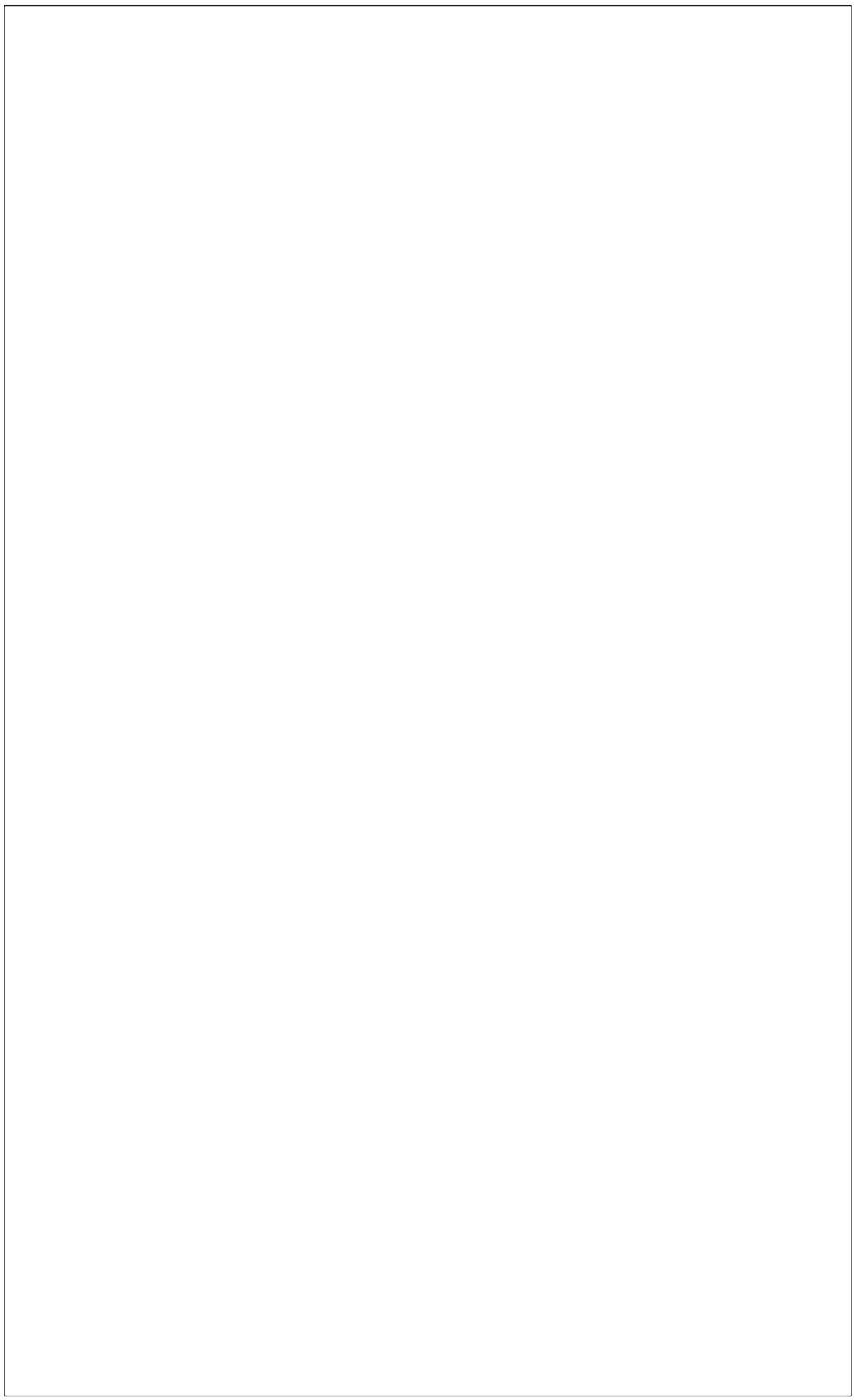
Shortly thereafter, he would organize for his "school," Gruppo T, the exhibition at the Minami Gallery in Tokyo curated by Shuzo Takiguchi and most importantly, "Arte Programmata" in Milan with Giorgio Soavi of Olivetti, including also Enzo Mari and Gruppo N. This would be staged again in the Venice store designed by Carlo Scarpa, expanding the team to include also the French GRAV group (*Groupe de Recherche d'Art Visuel*) and Alviani. A name was thus launched: "Programmed Art," which would have great fortune as a label for an entire movement. And when asked where the name came from, Munari was absolutely right when he claimed fatherhood. Munari was a friend of Max Bill, a great admirer and close friend of Max Bense, who, in 1960, had written a book entitled *Programmierung des Schonen* (Programming beauty).

(Giovanni Anceschi)





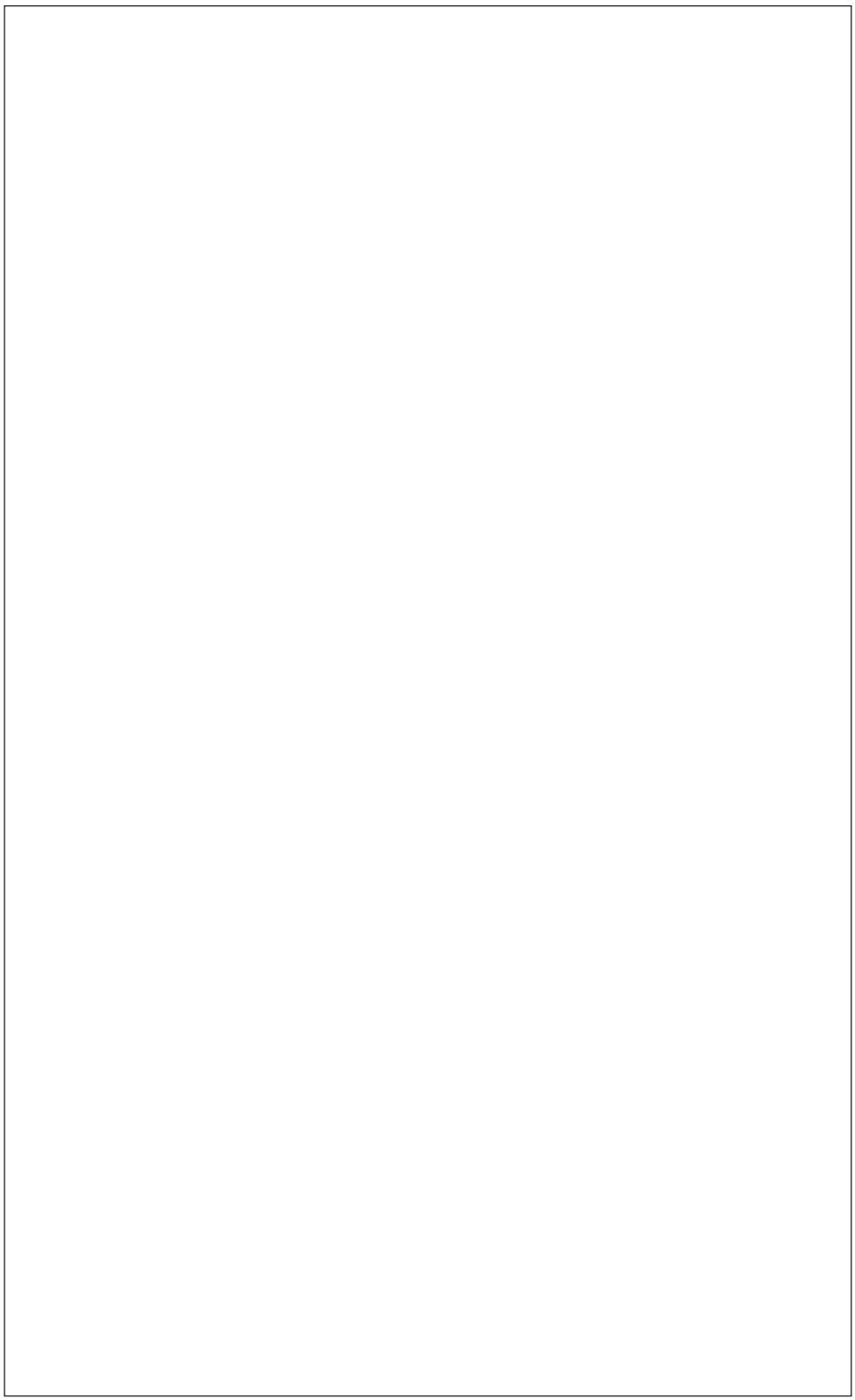




Munari's method is not aimed at breaking with the codes, but rather at exploring their limits, without stopping at the most obvious expectations ("obvious code" indeed). All his activity and creativity were aimed at confuting obviousness, which brought about dazzling openings on our everyday reality. Knowing that a rebellious object hides within every obedient one makes the world an adventurous place full of surprises. And never to be cynical or hardened is surely the least boring way of going through our existence.

So, how far can a photocopy machine go? As far as rejecting itself and the entire technology used to build it. With a gesture resembling the sincerely spontaneous exclamation that the emperor's clothes don't exist, the massifying monotony of the photocopy gets annihilated. Nowadays somebody is trying to do the same by having his girlfriend sit without underwear on the copying surface of the machine, but it is not the same thing: Munari is a revolutionary, the other one is a prankster. Why a revolutionary? Because by consciously pushing the experience until the limits of what is thought of as the "correct" code, one runs the risk of discovering a more interesting function — like Viagra, which originates from a research against hair loss — but always within *the code,* which increases its scope in the process. The code contains its opposite — in the same way that police exist because of crime, and so the accurate knowledge of the code allows to foresee the unexpected and perhaps to turn it at one's own advantage. What does a machine have to do or, for that matter, a person hired to perform a function? The question is predictable. It is not obvious what a machine or a person can do within the same exact conditions of duty: they can unhinge that code, without really disobeying, they can make a soft revolution using the dormant possibilities of the code, and they can feel free, i.e. think.

(Marco Meneguzzo)



"Since it is primarily production (productive creation) that serves human construction, we must strive to turn the apparatuses (instruments) used so far only for reproductive purposes into ones that can be used for productive purposes as well."

– László Moholy-Nagy, *Produktion-Reproduktion*, 1922

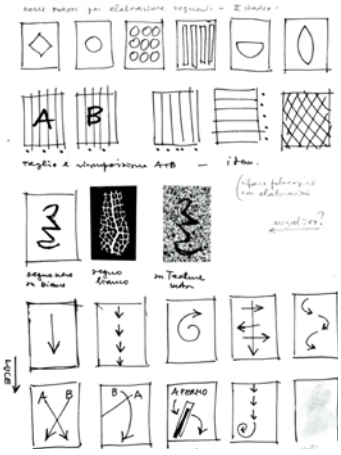
There have been few moments during my life as an artist that I have had the uncomfortable experience of discovering that an object I had made in what I thought was a burst of entirely original thought, had already been made. No work of art can really be made twice, of course, so in this sense, such a feat is impossible, a reproduction is a reproduction, but what I mean is that I set to work with some tools and some materials and some ideas and ended up making something more or less identical to something that someone else had already made and then had the embarrassing experience of discovering that my version was little more than an unwitting appropriation.

The two most conspicuous times this happened, unsurprisingly, were both in college (when my accumulated academic knowledge most vastly exceeded my practical worldly experience). The first instance involved some grass and mirrors and the unintentional reproduction of Robert Morris's *Untitled (Four Mirrored Cubes)* on a campus quadrangle. I did not know who Robert Morris was at the time and I certainly had not seen any images of his ill-fated retrospective in London, but I had nonetheless reproduced *Untitled (Four Mirrored Cubes)* almost exactly as it was installed in the garden of the Tate for four days in the spring of 1971. I was mortified when my professor showed me an image of Morris's installation, though in retrospect, the fact that I had arrived where I did is not particularly remarkable given my academic environment at the time (i.e. if you lock a monkey in a woodshop with nothing to read other than modernist art history and western architectural theory, he will eventually recreate a seminal work of minimalism).

The second instance of accidental plagiarism involved a work-study job at a university art museum that came with unlimited access to a Xerox machine. It was on that machine one night that I made about two hundred individual copies of a black and white herringbone pattern I had drawn meticulously on graph paper earlier that afternoon. Each time the scanner ran under the glass flatbed, I pushed, pulled or twisted the paper in one direction or the other. The result was thrilling — hundreds of original copies of the herringbone pattern twisted and distorted into surprisingly dynamic new compositions. Photoshop was new then and I had contrived something more raw and more analog than all of that software's powerful transform functions (warp, skew, distort, rotate, scale). I took the pages to the 24-hour copy shop that used to be a fixture of any university main street and had it spiral bound. It was the first book I ever made. Later that year a friend, a graduate student in the sculpture department, gave me a copy of Munari's *Design as Art*.

Munari's experiments with Xerox technology began in 1963 on a Xerox 914, the first widely successful plain paper commercial copier. Munari immediately recognized the potential of the machine designed to obviate the most rote clerical tasks as a widely accessible art making tool. The fact that I had made my ersatz Munari entirely inadvertently was perfectly consistent with the ethics of his kinesthetic pedagogy in which the democratization of tools was far more important than the adulation of authorship.

The inherent paradox of the original Xerox fits seamlessly into a practice that often generated visual energy from semantic misdirection and the charge of contradiction (useless machines, unreadable books). Munari's copies were not copies at all —they were originals, one-time records of a particular arrangement at a particular time. The result of a tool engineered for mechanical reproduction, repurposed as a means of production.



In *Xerografie originali: Un esempio di sperimentazione sistematica strumentale* (Original xerography: an example of systemic instrumental experimentation), published by Zanichelli in 1977, Munari diagrams some of the more basic ways in which a body can manipulate paper on plate —a simple notation for the choreography of machine and body. Throughout his experiments with Xerox, Munari copied patterns, textiles, leaves, text, and photographs, but unlike many of the artists working with first generation copiers (Andy Warhol, for example, copied his face on a Photostat machine in an art supply store in New York in 1969), Munari's own body is largely absent from his xerographies, a typically self-effacing omission that belies the essential role of human interference in this process of original reproduction.

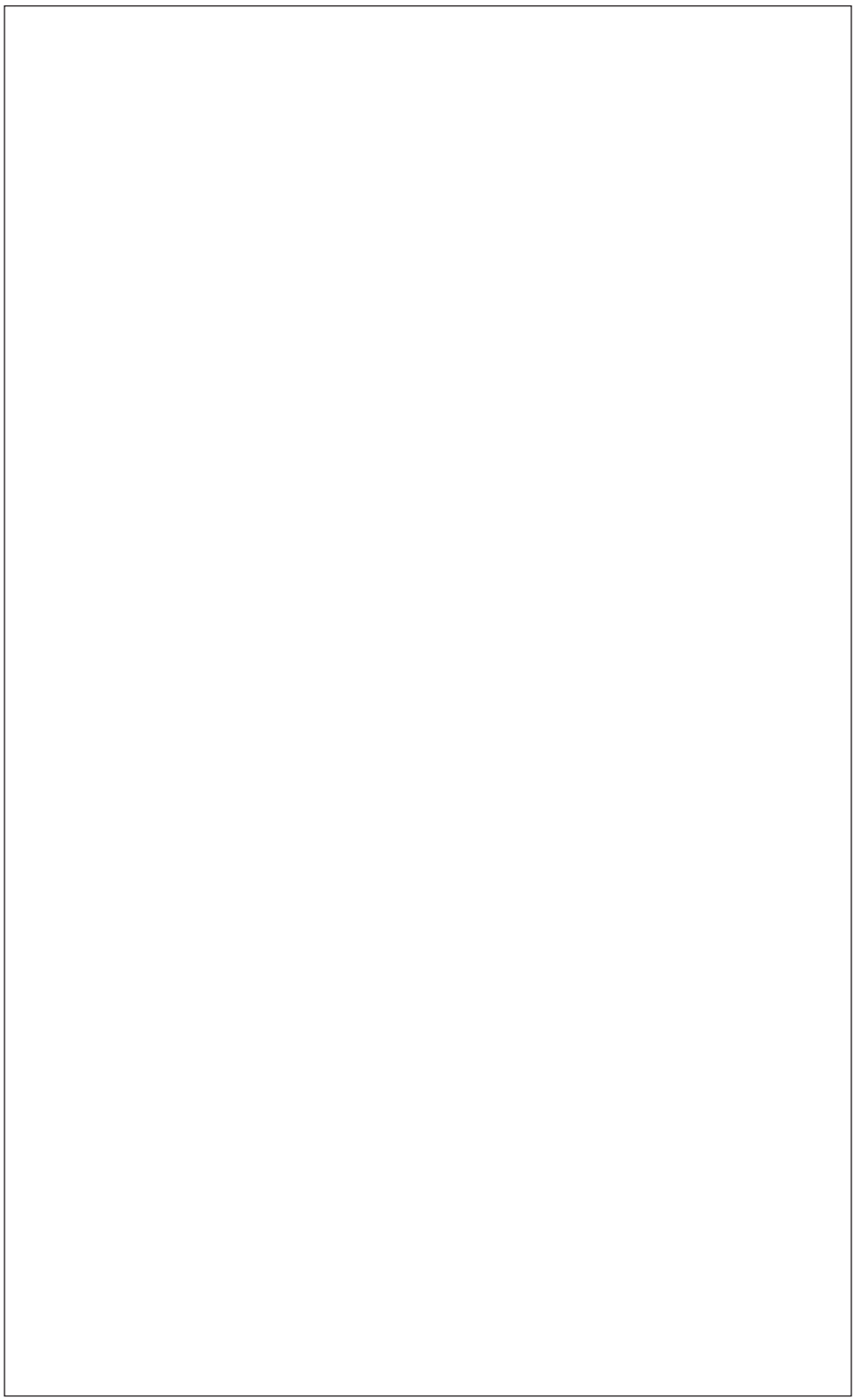
Most of the xerographies, however, explored pattern rather than form. Munari used the process to create moirés, capture texture, flatten contour and create depth in a two-dimensional medium. They suggest playful rebellions against the prescribed use of a machine, moments of clerical insurgence and strategies for wasting the time saved by a time-saving machine. Munari was right to foresee that Xerox machines would be ubiquitous, easy to use and cheap, and he was less interested in creating discrete works of art than in giving people a playbook for how to be visual operators themselves. In this sense, Munari's simple instructions are conceptually aligned with the democratic spirit of his friend and colleague Enzo Mari's *Autoprogettazione* furniture manual.

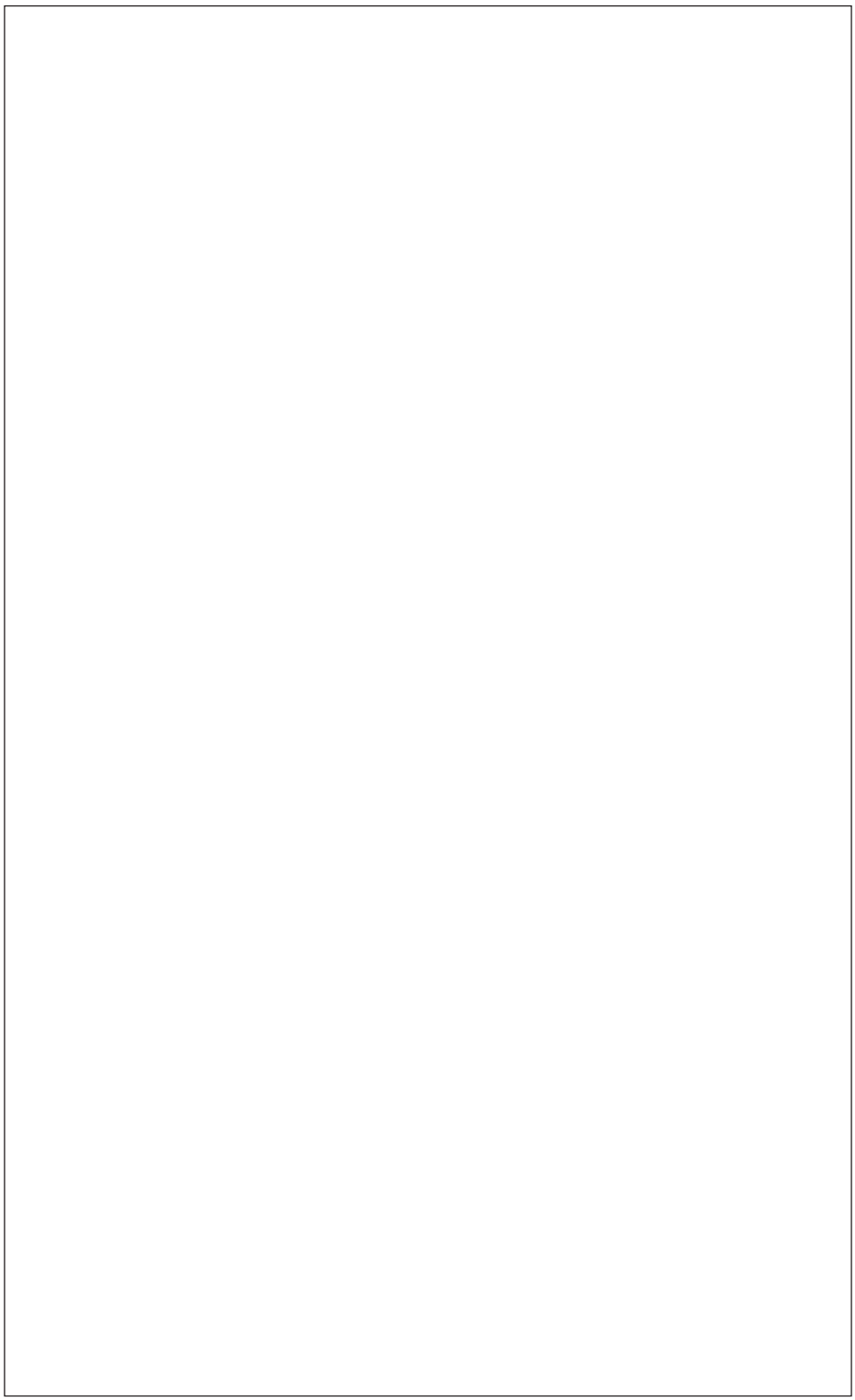
For his installation for the Venice Biennale in 1970, Munari collaborated with the Rank Xerox Corporation and a new RX 720 duplicator was made available to artists and the public to use as they wished for the duration of the exhibition. This was a radical idea at the time. The following year Robert Morris filled his exhibition at the Tate with large, unwieldy interactive sculptures and it was closed after four days because visitors were getting injured, sculptures were being damaged and museum staff found themselves unprepared and overwhelmed. *Untitled (Four Mirrored Cubes)* was removed from the lawn.

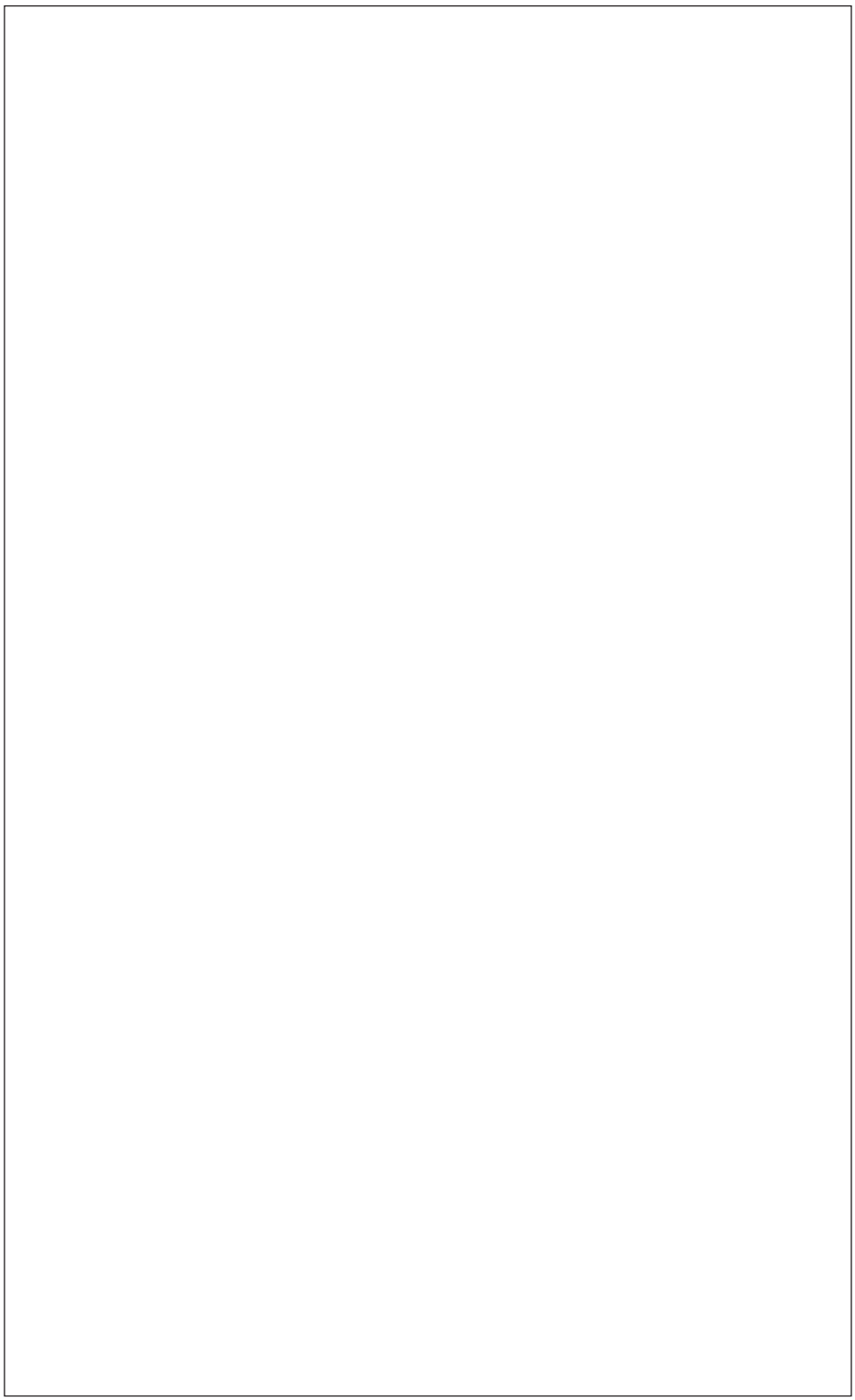
In conjunction with Munari's project in Venice, Rank Xerox produced a catalogue entitled, *Xerografia: Documentazione sull'uso creativo delle macchine Rank Xerox* (Xerography: documentation of the creative use of the machine Rank Xerox). The catalogue opened with an epigraph from Marshall McLuhan:

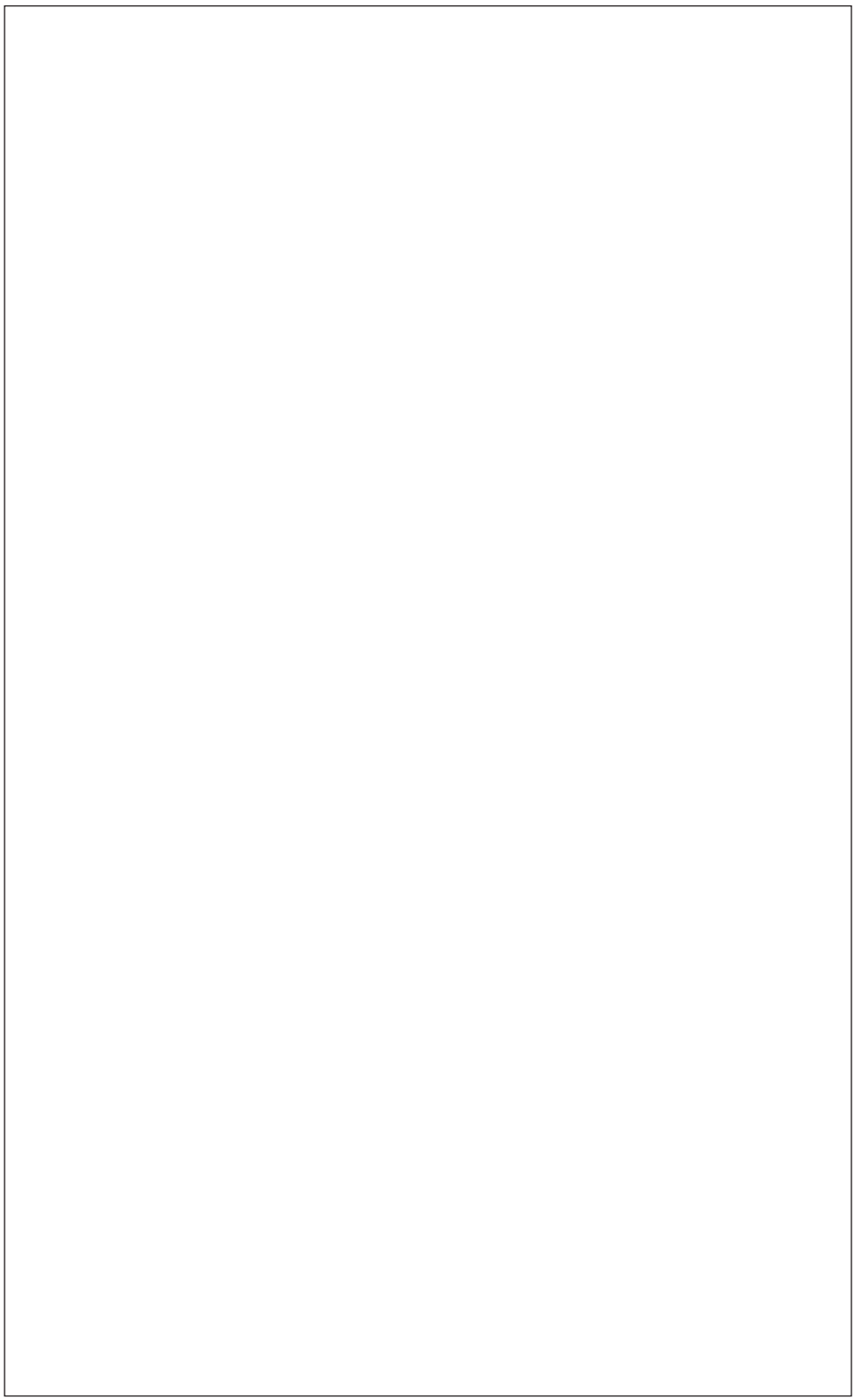
Xerography welcomes the advent of instant publishing. Now anyone can become an author and a publisher.

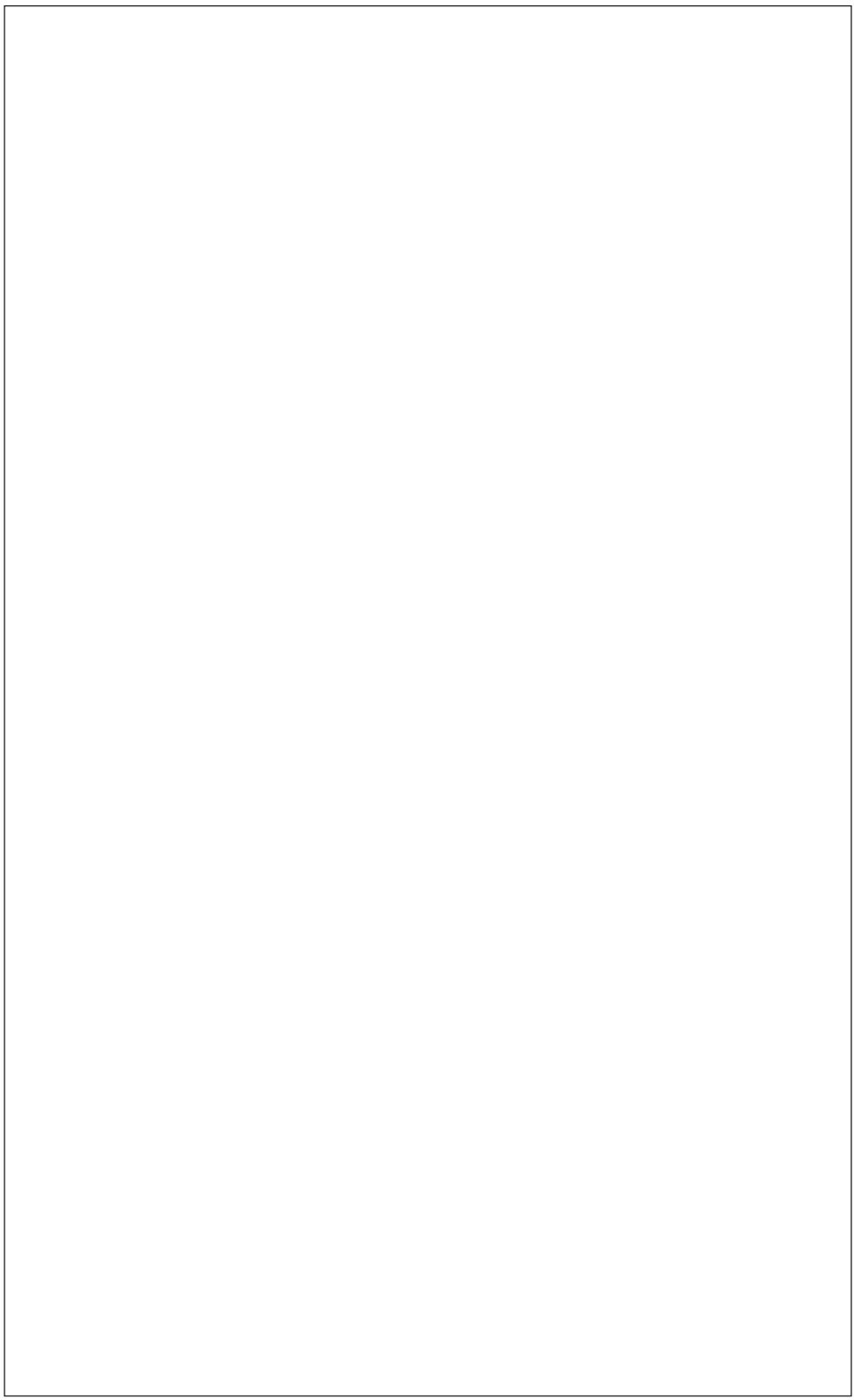
(Justin Beal)

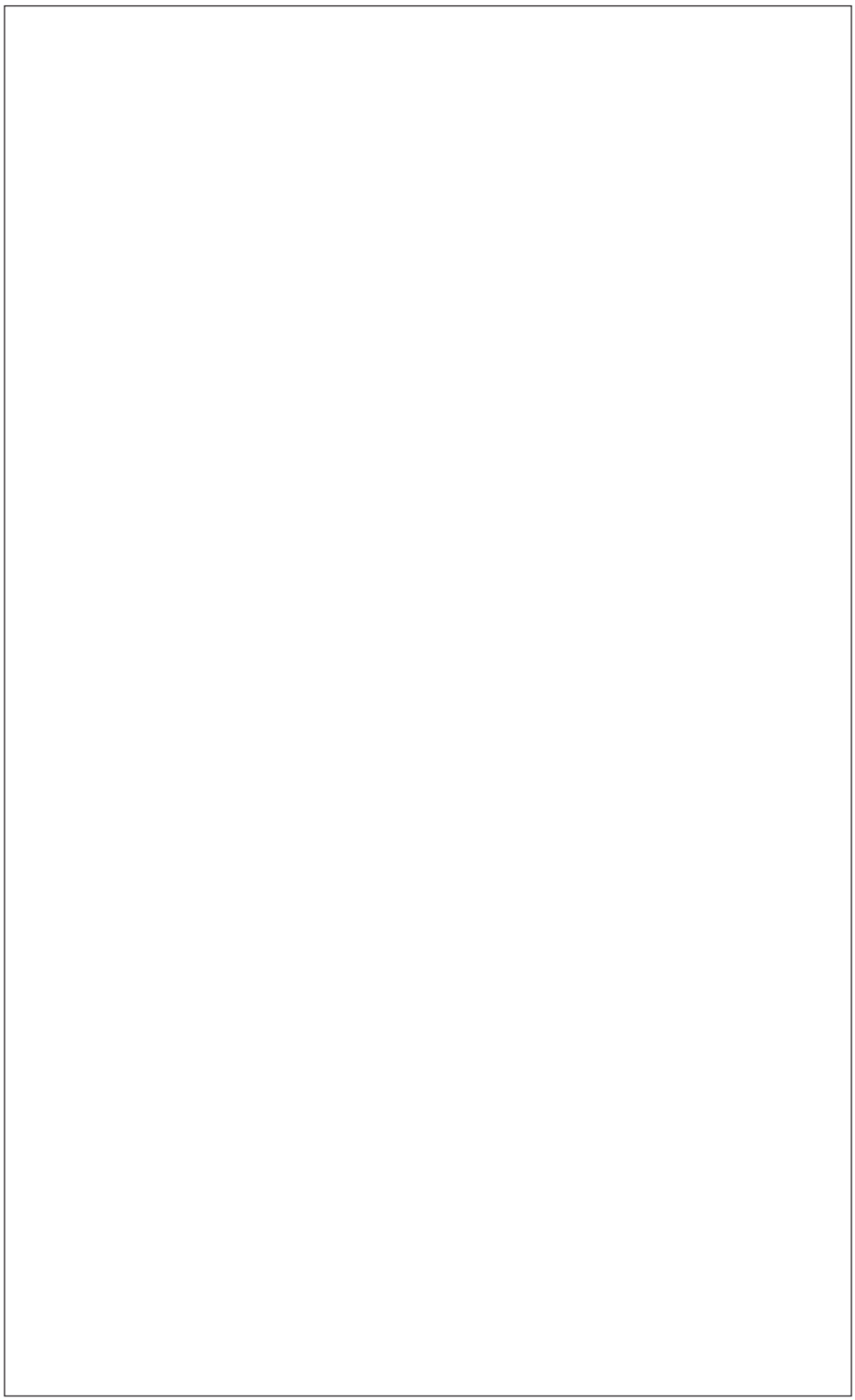












* Translator's note:

This work consists of a series of short narrative statements pivoting on homonyms — words with several meanings. Each sentence is constructed so as to encourage the reader to favor one meaning over the other until the very end. Of course, translating a text built around this premise is seldom straightforward, as homonyms generally do not maintain across languages.

The first, for instance, literally translates as:

A sparrow hopped among the castle's merlons.

In Italian, though, the word for "merlon" also means "blackbird."

"Crane," from the text's second line, is an interesting counter-example, insomuch as its metaphorical use holds in both languages:

In a nearby construction site, a crane turned slowly,
then flew away.

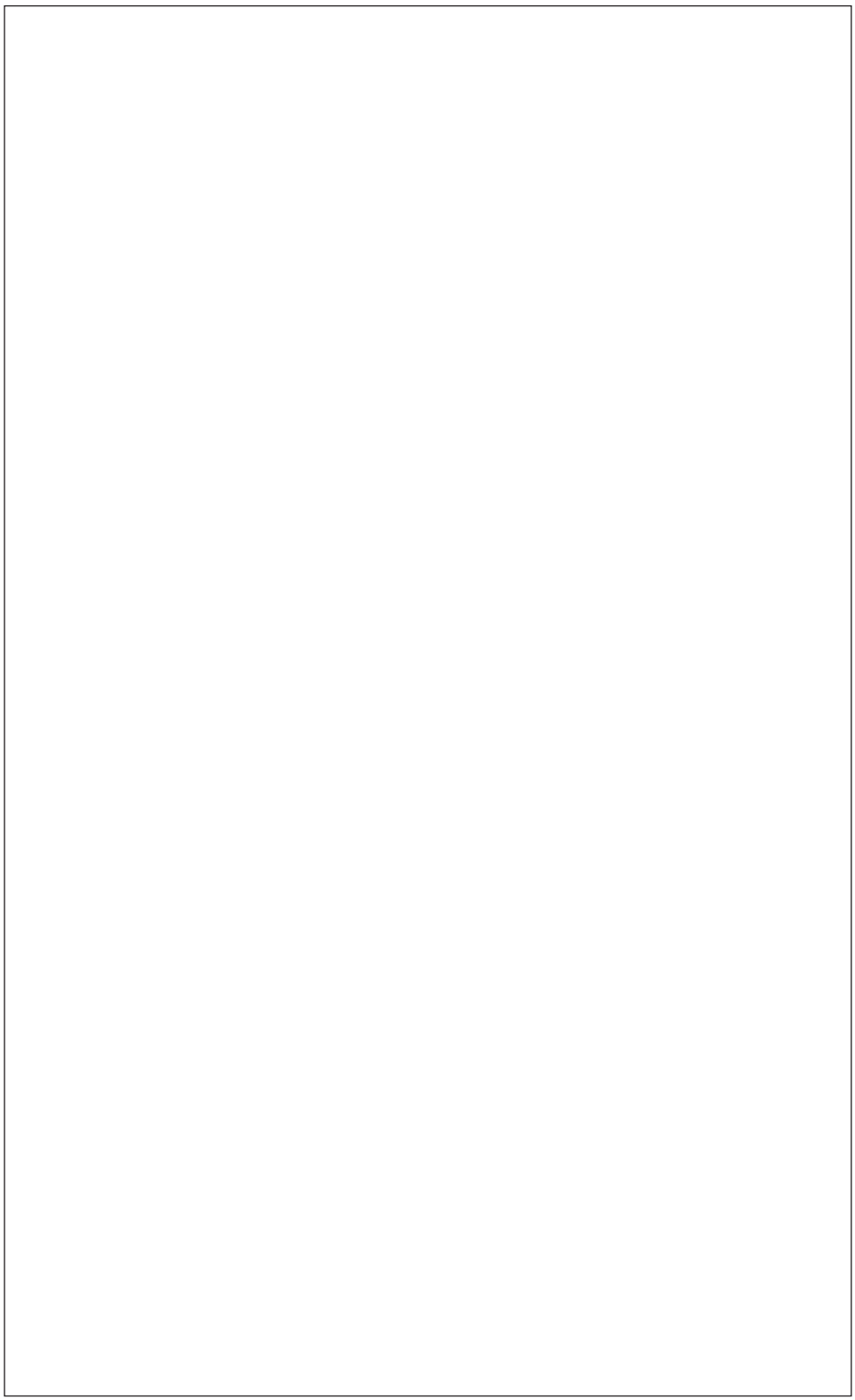
But this is *extremely* rare. A better way to translate the first one could employ a similar ambiguity in English, still related to birds:

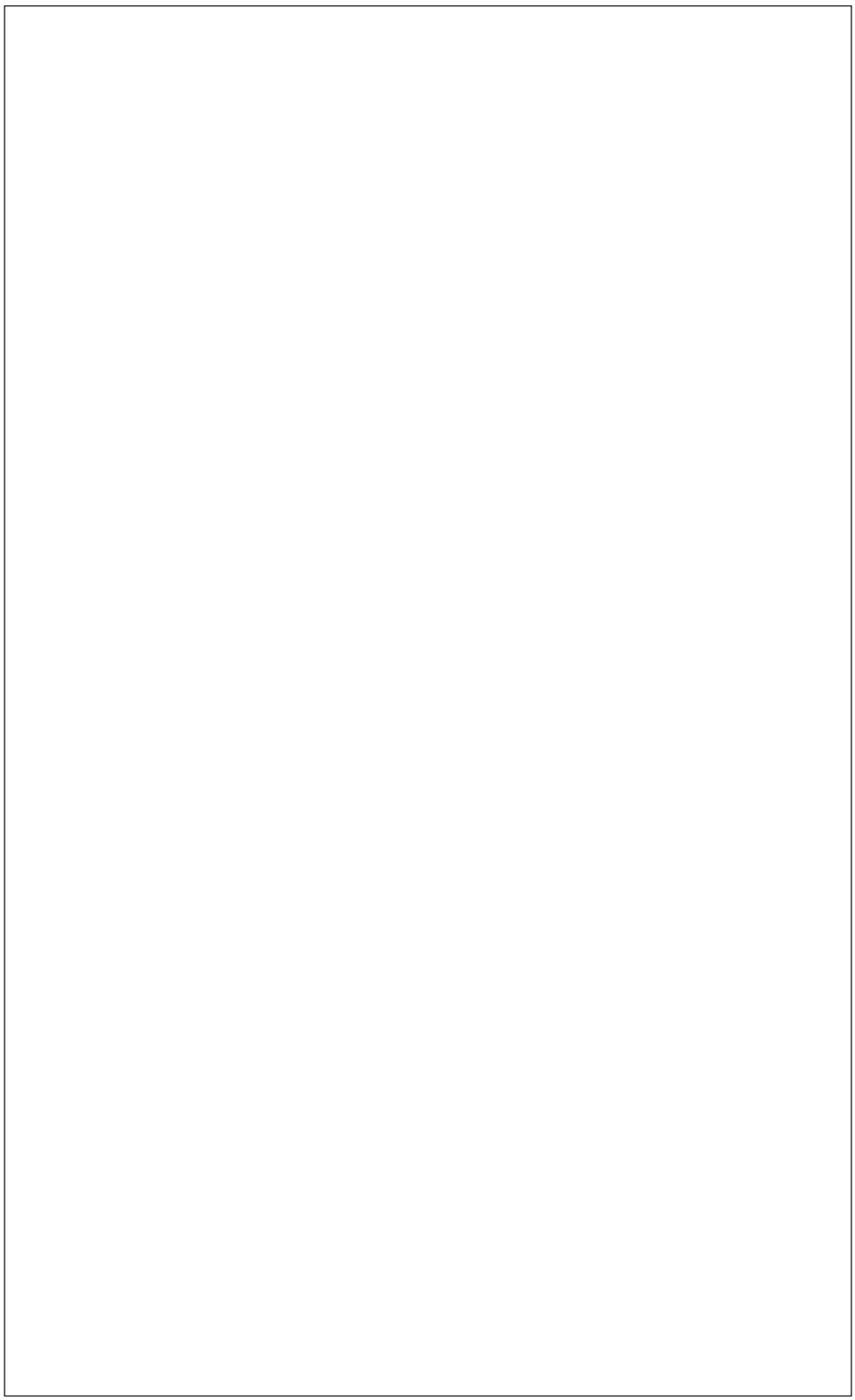
A murder of crows left three dead on the pavement.

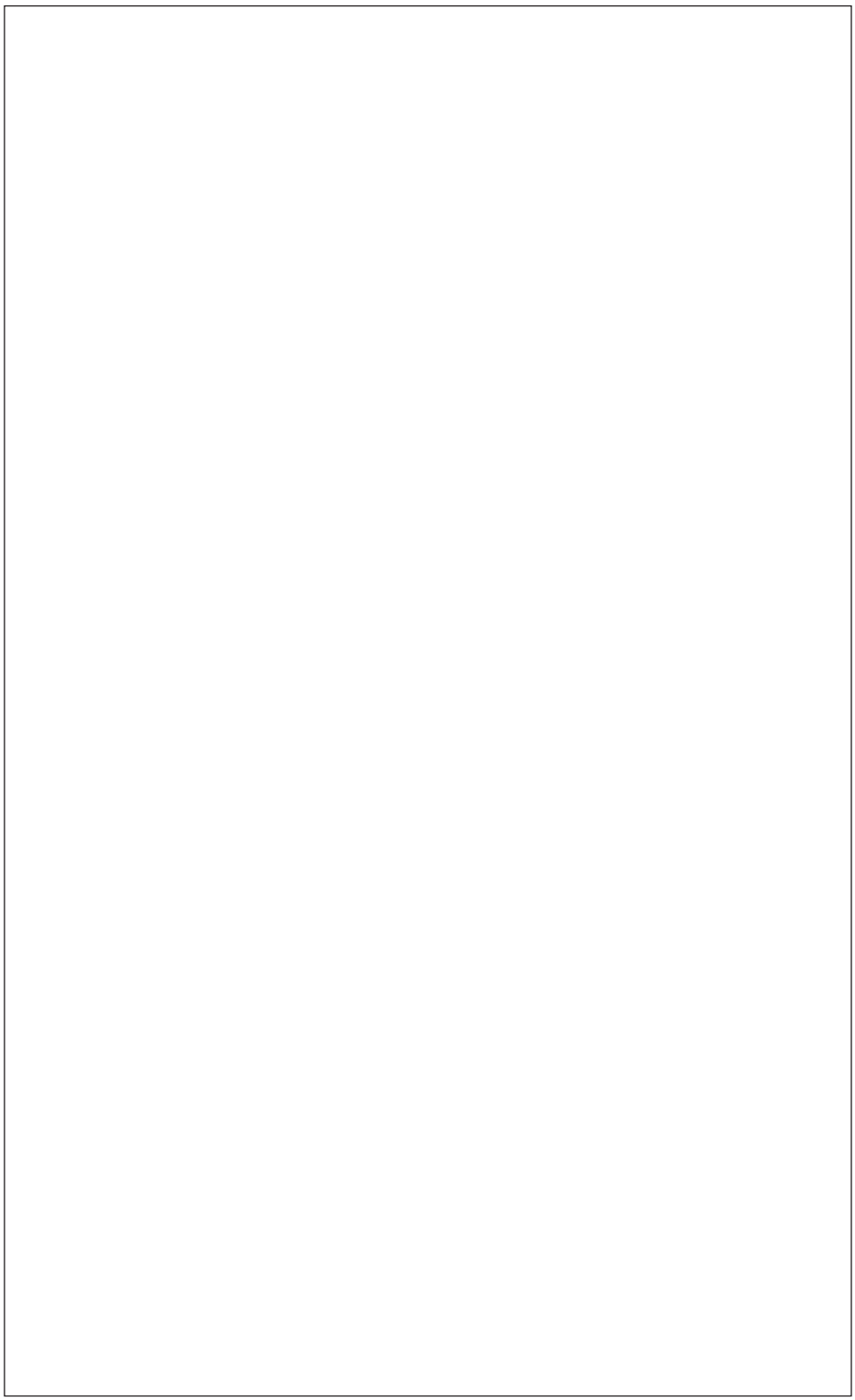
The rest of the translation would be a work of invention along these lines: identify a homonym and build an ambiguous sentence around it, such as:

The missing minister was ultimately found locked away in the cabinet.

Once this premise is made explicit, however, readers can easily do the inventing themselves, thereby having much more fun than they would have reading this particular translator's take on the matter. I suspect Munari would have approved, too.







For Munari, play is a way to move beyond the rigid compartmentalization of art and design, art and life, towards a balance that is reached "when the objects we use every day and the environment in which we live become themselves works of art." Play is a kind of fun exercise, which trains the mind without abusing it: a non-intimidating presentation of art. This is a kind of art that calls for a use; that humbly shows itself to be in "need" of human intervention; that promises and affords simple revelations and surprises; that can be accepted as useful fun. At the same time, by promising a surprise, a useful object opens a new horizon to its possible uses.

[...]

All of Munari's objects minimize their resistance to users' personal needs and fantasy. One can imagine countless ways to intervene on *Abitacolo*; similarly, the *Falkland* lamp can be felt and pulled like a spring; the *Cubo* ashtray can be disassembled and combined with others of its kind; the dime-store *Paraluce* glasses have to be assembled like a travel sculpture, and can be used to hide from sunlight or to make funny grimaces; *Più e Meno* is a pedagogic experiment in visual organization based on curiosity. Surprise — the fundamental element of play — is the secret link between art and design. "An artist works with fantasy, a designer works with creativity": creativity takes into account the reality of industrial constraints, production techniques and distribution; creativity directs the artistic experimentation on forms and materials towards a concrete, useful goal.

In the first Danese catalogue (1957–1961) no distinction is made between actual products and art multiples: the production technique (both conceptually and physically) is essentially the same. The cardboard travel sculpture produced in 1959 in an edition of 1000 is a design object: essential, light, serial. Its place is in a suitcase, together with the toothbrush, so that travelers can keep in touch with their cultural world. It is a game, because it sparks curiosity and offers aesthetic pleasure without intimidating, because it's fun; this fun can inspire thought or simply leave its mark on experience and habit. It is kinetic: its shift from folded paper to three-dimensional object is a movement that explores the fourth and fifth dimensions. It is industrious: industriousness was required both to design it and to produce it, and it is required of its users. It is an example of industrial design culture applied to art in order to make it useful and concrete.

(Paola Antonelli)

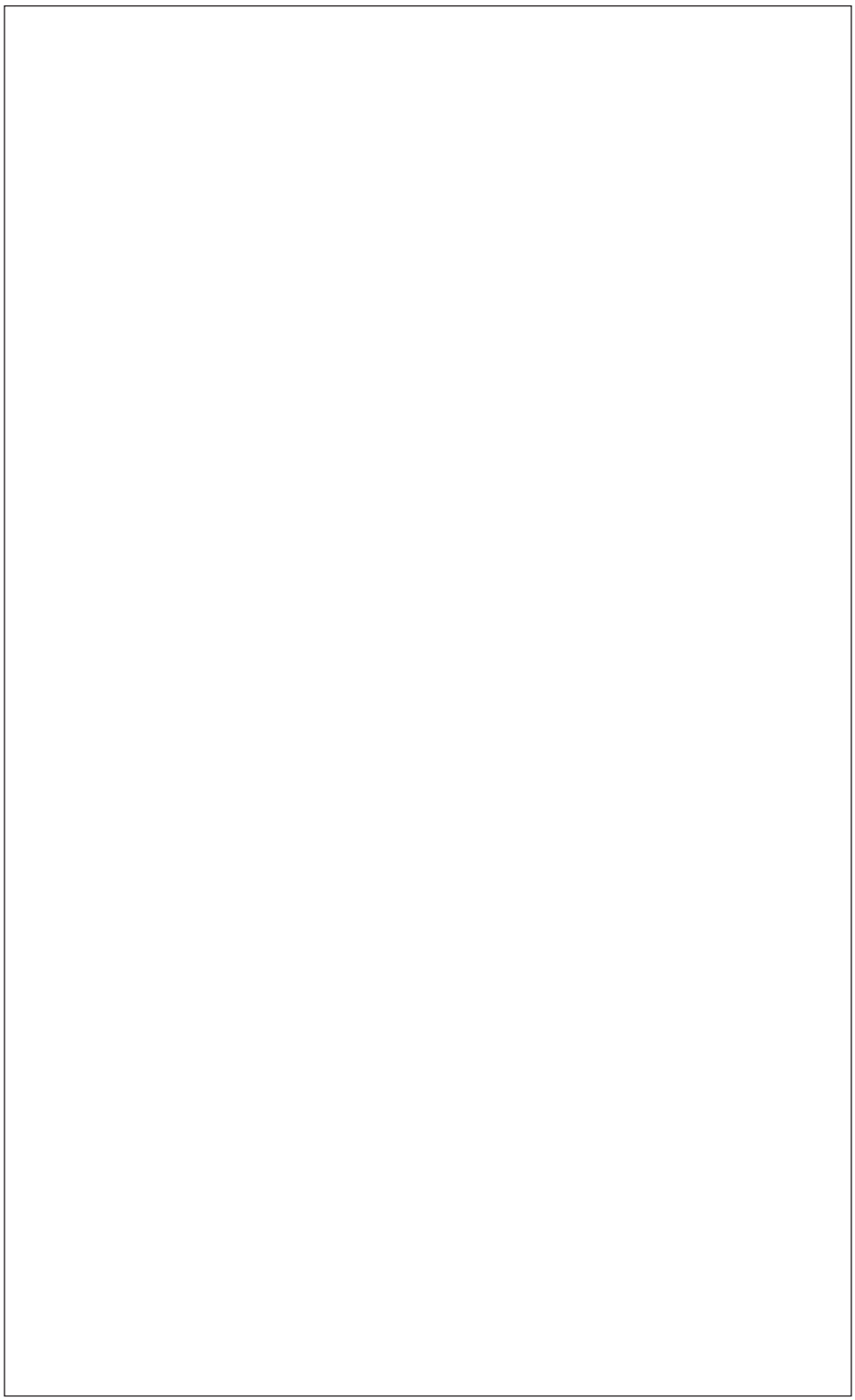
This picture was taken in a square across the street where my family has always lived, and where I lived until I left Mantua to go to university. In its simplicity, it seems to replicate the performance *Making Air Visible* given by Munari in 1969 during "Campo Urbano," (Urban field), a series of interventions in the urban space of Como, aimed at triggering aesthetic awareness.

I participated in one of Munari's workshops for children in 1987. I was eight years old and attending a public school with very progressive teachers — the mathematics teacher was Giuseppina Marastoni, an innovator in geometry whose books are still in use in Italian elementary schools. Munari's presence in public schools was also supported by the gallerist Maurizio Corraini, who eventually became his publisher.

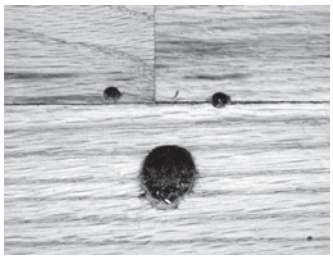
The workshop was dedicated to book making — if the brief was given today in a design school, it would sound like: design a limited edition, self-initiated editorial project on a subject that matters to you. I have no memory of my personal output, but a very clear feeling of the final exhibition at Galleria Corraini, for which Munari designed a poster including the name of every single child.

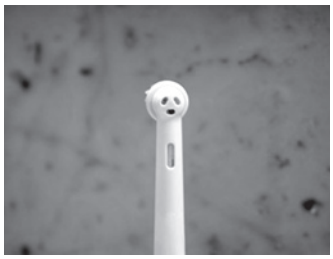
Books were tied to the ceiling at child's height with wool threads, in a very dense grid, which made the gallery space look like a very colorful forest. But it was not only a children's exhibition: we were co-starring alongside Bruno Munari at the launch of the new edition of his book *The Blackbird Has Lost its Beak*, printed on transparent plastic foils by Corraini. The experience was typical of Munari: making serious things in a fun way, fostering applied arts in the activity of children, transforming a gallery into a play space.

(Davide Fornari)

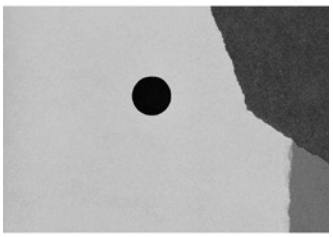


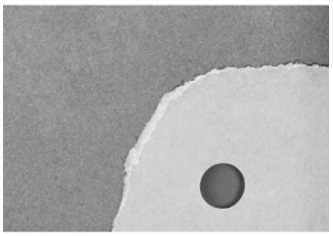
* Translator's note: In Italian, this is called "intonaco a vista," an expression that includes the word for "sight" on which this list of free association pivots.

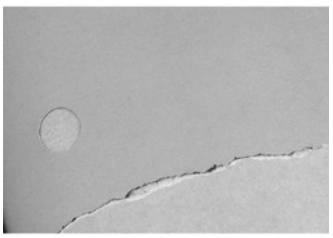


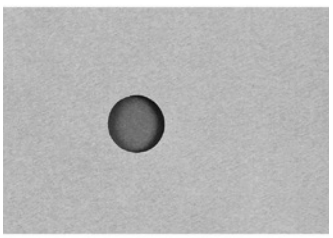


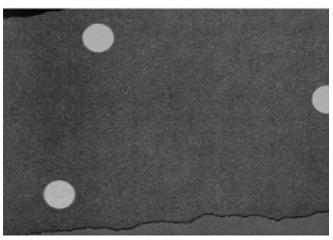
(Rosalind Nashashibi)











(Shannon Harvey & Adam Michaels)

Editiors' note: The *Abitacolo* images on pages 114, 117, 118, and 119 in the original edition have been replaced by a series of photographs found online by Julie Peeters. These were intended as her contribution to the margins but are now upgraded to the main field of play. She wrote:

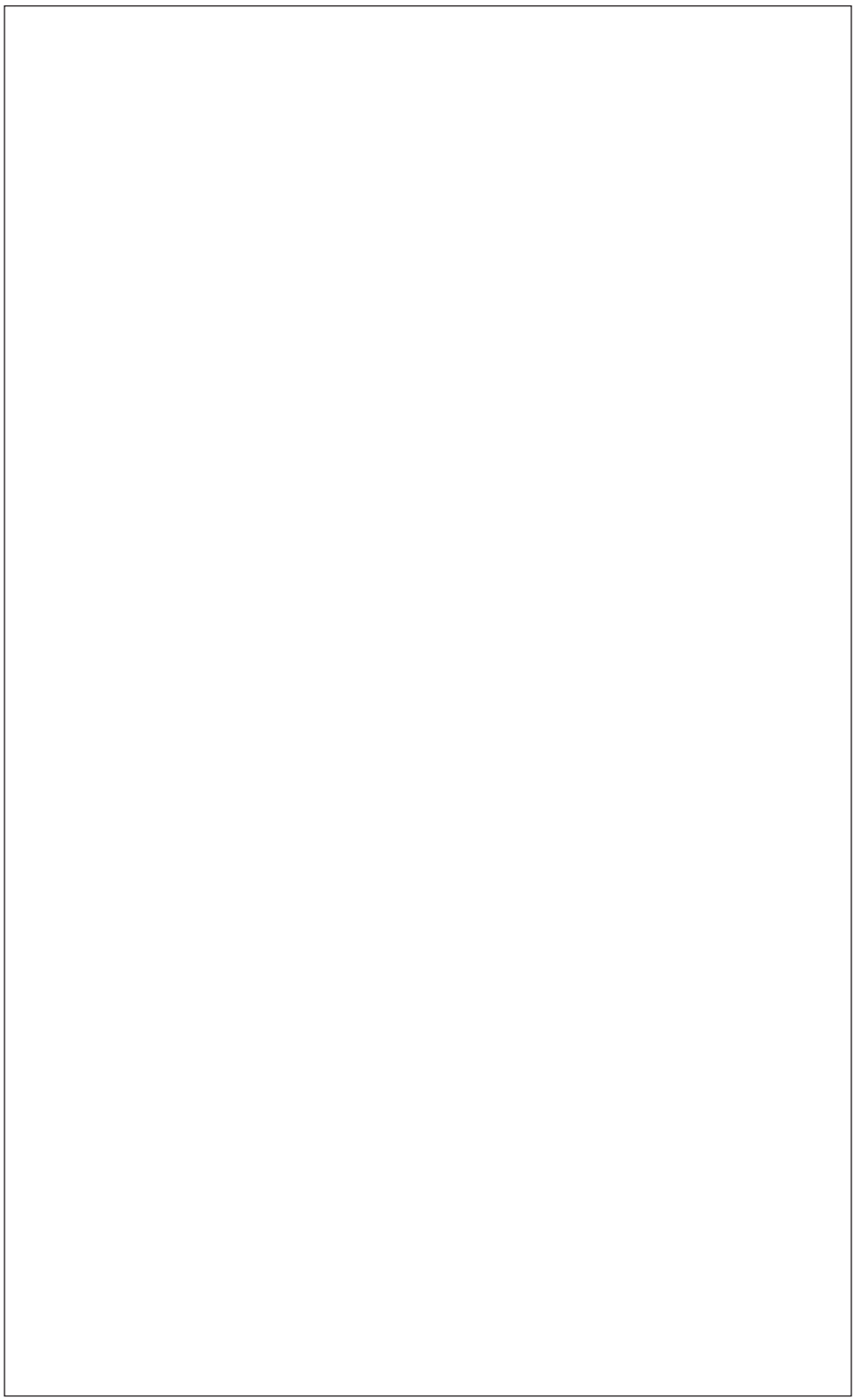
Attached you will find a folder with images. It's a collection of photos found on Italian Ebay (currently) featuring the *Abitacolo*.

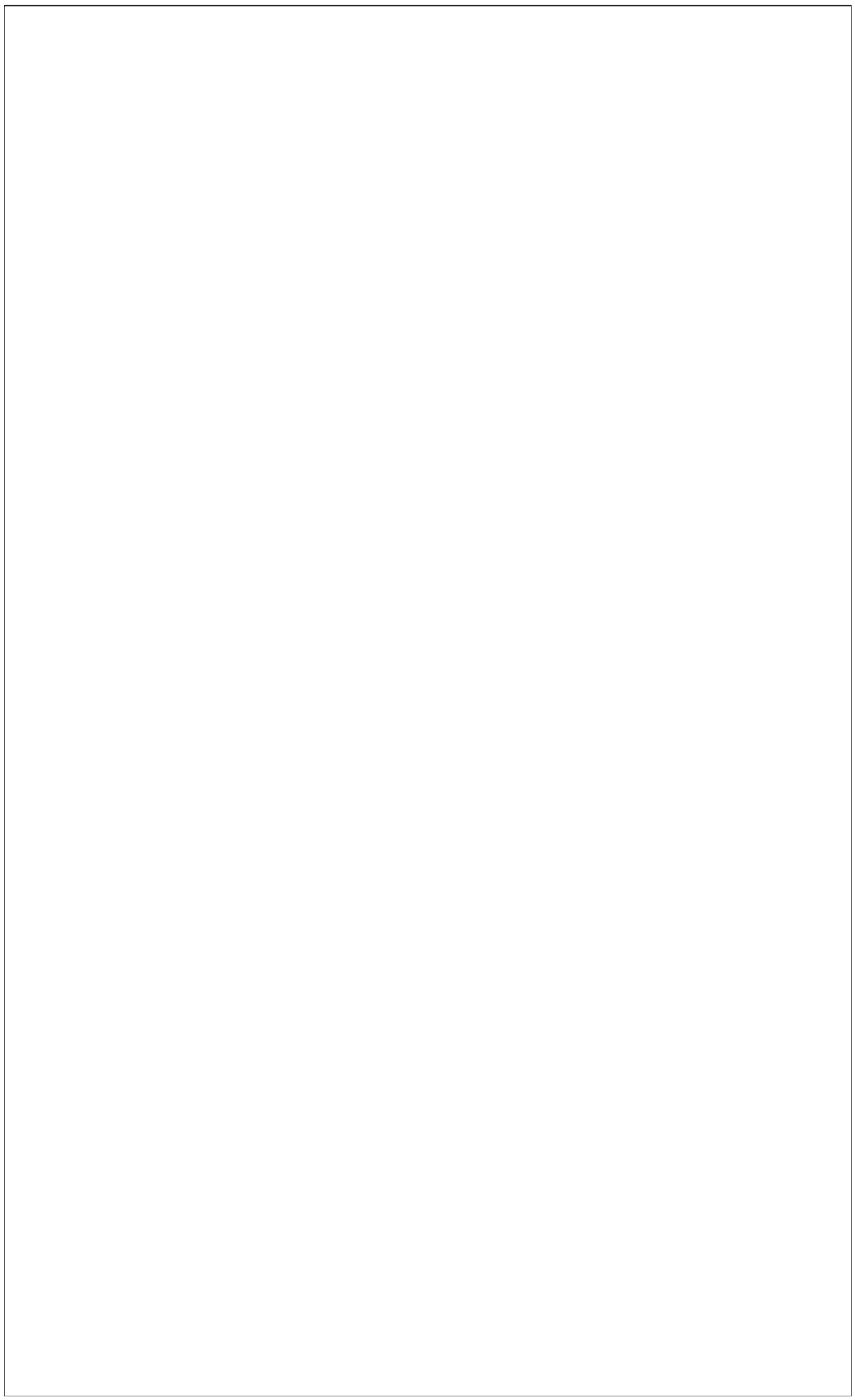
One of my preferred ways to learn about Munari's work is to do an eBay search on his name and go through endless pages of Munari-related material. I enjoy to see the way that people use or document his works, which makes them more approachable and easier to understand. Since a lot of the books on his work have very specific ways of documenting his objects, it's always fascinating for me to see them in a more casual setting.

I'm sure this will clash a bit with the visual aesthetic of the issue but I think that will make an interesting connection to the now.

(Julie Peeters)

* Translator's note: The name of Munari's iconic design "abitacolo" is itself a pun: the term in Italian means "cockpit"—a tiny space that however has access to all the controls. But the word's root is "abitare," which means to inhabit, granting the name an immediately homely feel.





Abitacolo is a project that I particularly love, because it's a platform object, a living object that children understand immediately, that speaks of possibility and not of status, and that reminds me of a toolbox, open to life.

A bed, a desk, an attic, an assemblage, a scaffolding, a kit, a sculpture, a riser. It's all these things at least once.

A minimum object for a maximum use.

Munari is an open eye onto the world, a freedom in name of experience.

(Matali Crasset)

It reminds me of when I was a child, and I built forts from couch cushions, with blankets overtop, hiding beneath, playing all afternoon. Soft-sided, that fort could barely hold me, let alone 20 others. But I felt safe. It was a structure of support.

Like a disassembly of the couch, the *Abitacolo* "makes furniture useless." It's a complete environment that makes barely present its bounds. It's a paradox. It's technology. It's a high-performance object, with resin affixed at 200 °C, turned on and off with an "inhabitant's intrusion." And like so much technology, it wants, almost insists, on being invisible. It does change behavior — and perhaps, in that way, it's a bit cybernetic. My brother and I had bunk beds, but our parents chose wood, not wire. Ours were more reminiscent of a ship's cabin than a telephone's antenna. They were sturdier, gentler, and, without doubt, more generic.

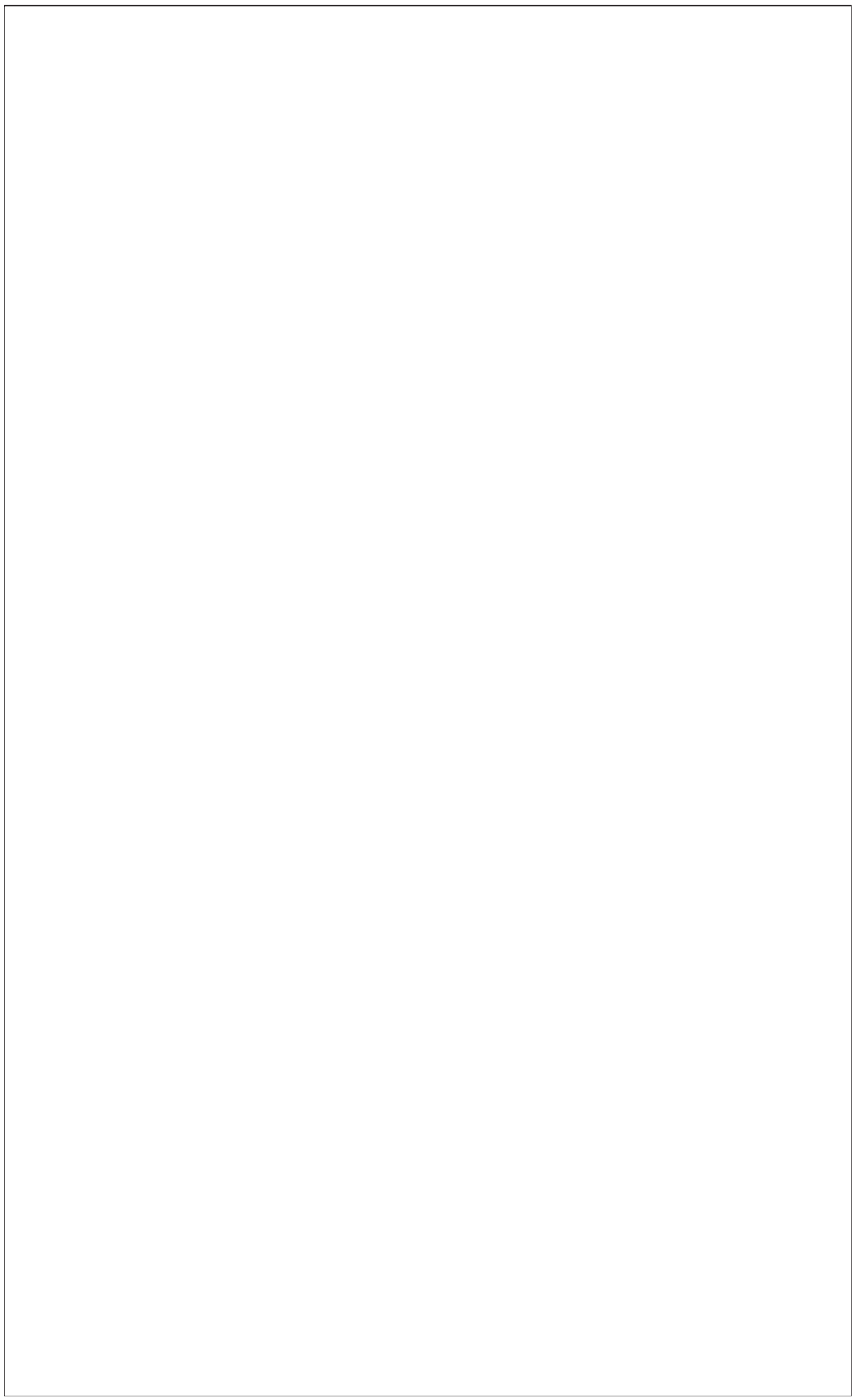
But we grow up and out of our bunks and into something else. Munari writes that the *Abitacolo* is a technology that can help to lift the psychic weight of growing up — a place to "be alone, study, meditate, write, listen to music, read, sleep, talk to friends." Bits can be added, removed, folded away. Siegfried Gideon, in *Mechanization Takes Command*, writes of an early example of foldable furniture, "a table that will fold to the wall like an ironing board" in Vittore Carpaccio's 1502 painting of *St. Augustine in His Study*. Once the table was folded away, the room was free for Augustine to kneel in prayer.

Years later, I saw the *Abitacolo* at MoMA as an adult and wondered if the model on view was ever used by a child. There was something haunted about it.

Placed in the middle of a room, the *Abitacolo* has a sense of flight, which is no accident I'm sure. *Abitacolo* means "cockpit." A pilot faces the controls. The controls face the pilot. The space between them is the interface, the territory connecting one to the other. To make that space an efficient one is the role of ergonomics. Perched in a small space, everything at hand, the body supported just so. Only glancing pressure on the spine, legs, shoulders, back. "Ergonomics." The word gained popularity after a 1949 meeting of the British Admiralty, who oversaw the strategic bombing in WWII, a case in which the "man-machine interface" had to function impeccably. At the same time, researchers including Bengt Åkerblom of Sweden found ways to calculate stresses on the body by using, among other things, the spines of cadavers. This skeletal research led to ever more skeletal chairs that traded padding for positioning and upholstery for cantilevering. These chairs had a profile that routinely took the shape of a single, wispy line expressed in materials like bent bicycle tubing or resin-coated wire through the air. Munari delighted in this quality, the "air made visible," here manifested in a steel structure so slight that not even dust can find a comfortable spot to rest on its frame. As Munari delights in its quality of shadowlessness, I know he must be thinking of Peter Pan.

A skeleton, a scaffold, a shelf. Woven as delicately as a tapestry, a net work that can hold as many books and friends as could ever be practical. A fort, a den, a study. Did Munari ever ponder its resemblance to the cell of a prisoner instead of a monk? He coated the wire, but the bars are still there. A fence, a pen, a cage. As we imagine ourselves as a child, alone in our *abitacoli*, we may be seen from any angle, and the fable turns panoptic. Was it Michel Foucault who compared the school and the prison?

(Rob Giampietro)



Munari writes:

An *Abitacolo* is an essential quantity of living space. Figuratively it is also an individual's innermost recess, the place inside us where we keep what informs our world.

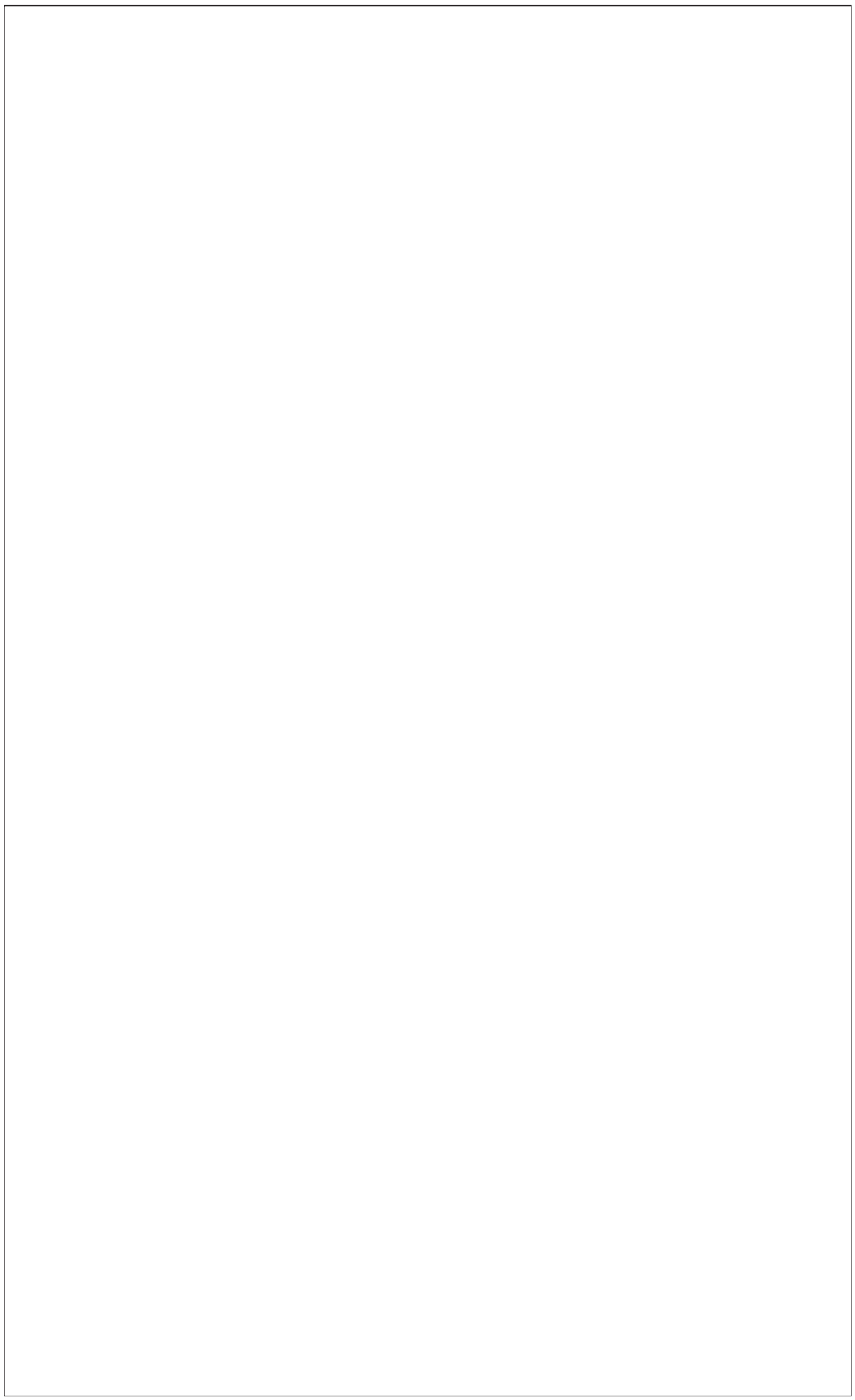
This is a key to Munari in his entirety. With the fervor of an activist, in a sense he built *Abitacolo* into all the work he made with and for children, dedicated to preserving what he knew was precious, unique, and necessary.

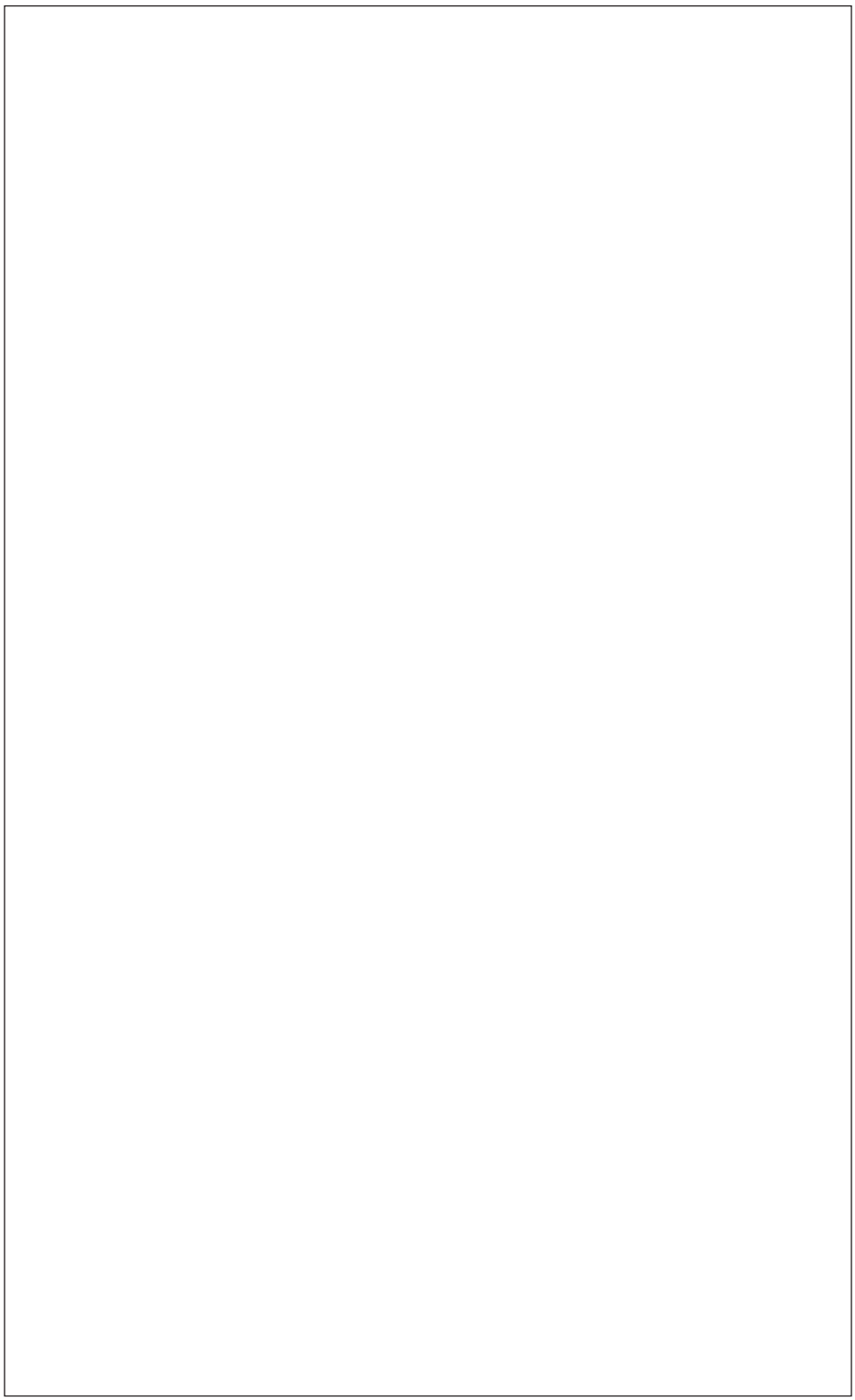
The *Abitacolo* activates an area in a room often left unused, at least physically (it may complicate the view while in one's thoughts). It creates useful spaces out of volumes, somewhere on the outskirts. It is a frame of sorts that says "I'm busy right now"—even if the tasks are not visible or apparent to you, the onlooker.

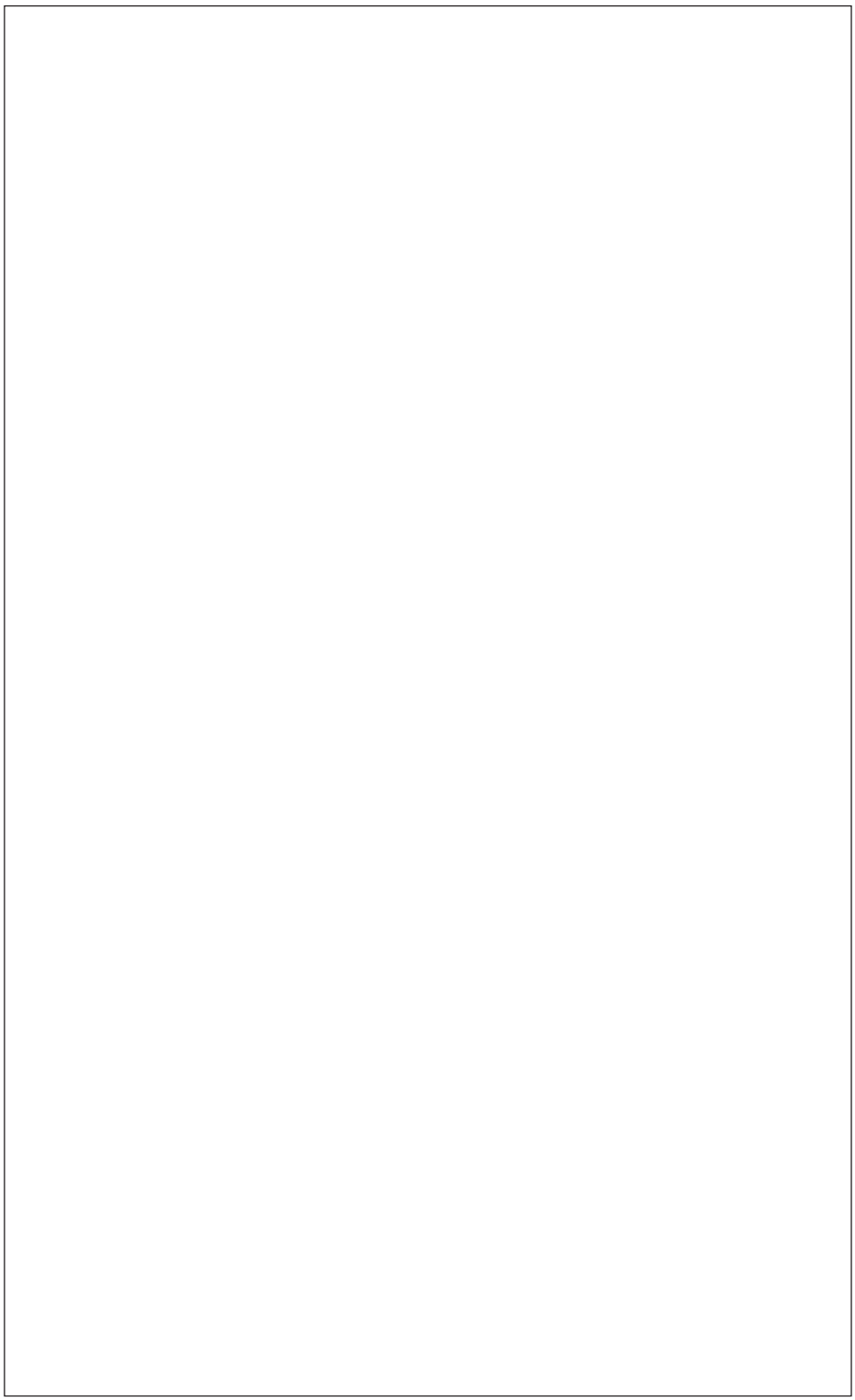
How many desks I've kept myself from leaping across (and how many I haven't) to stop the child painter from running the brush through the most beautiful, intelligent, levitating painting, or the child builder from toppling a stunning impossibly balanced tower of things—the moment in paint just before the glorious mud and in blocks just before the thrill of gravity asserts itself. All of these states are equally interesting, as beautiful, no less discoveries, but harder to pin up on the school bulletin board or the kitchen fridge, as assertions that something has been accomplished. I wish these exercises weren't called Art Class, as this seems to put the cart (or donkey) before the horse. Sensory and Materials Intelligence Class would be more appropriate, if admittedly more of a mouthful.

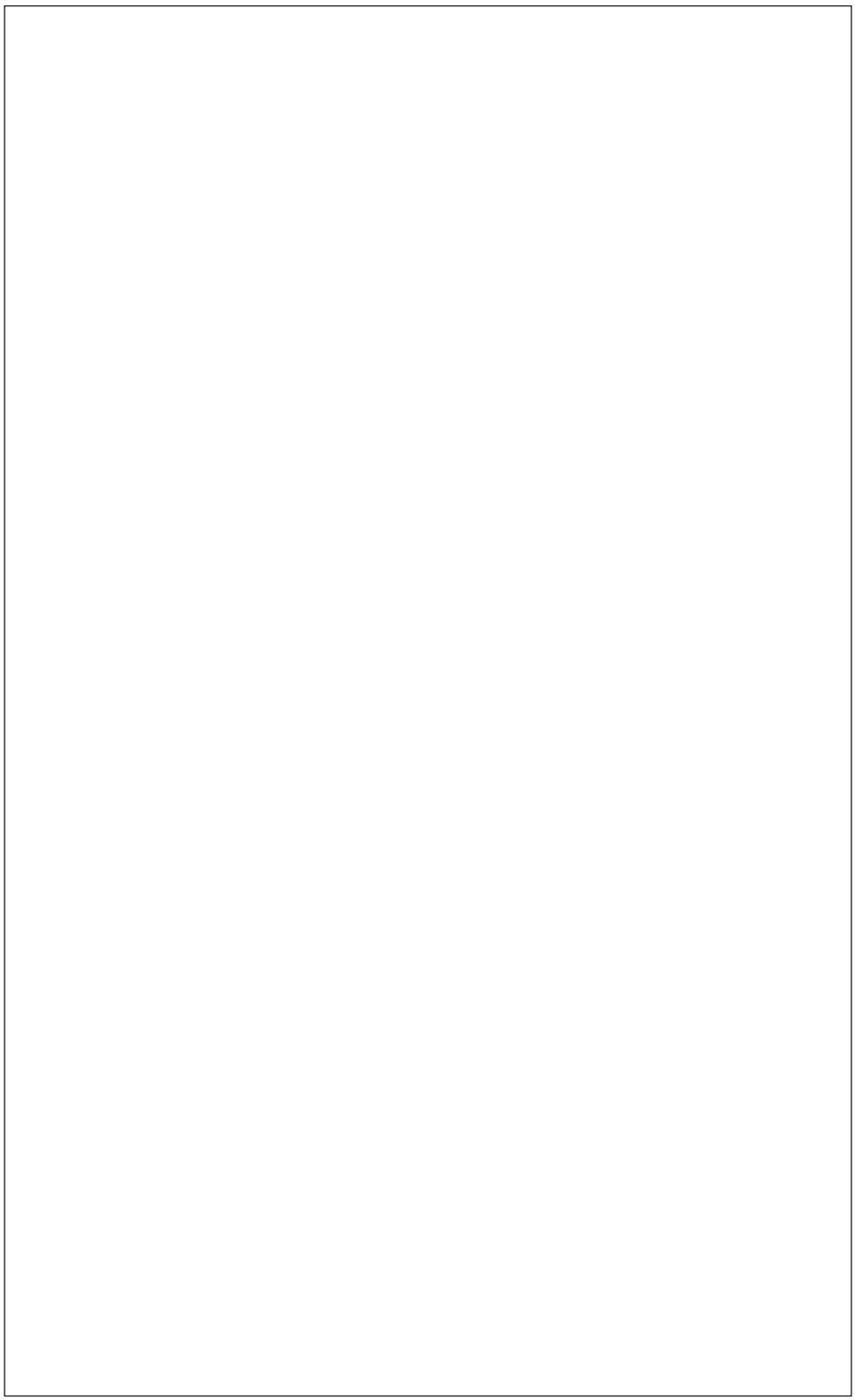
Munari stands in a long, illustrious line of adults who think about children, their value, and their needs as vitally human and relevant. He reminds us of the easily forgotten fact that "tomorrow's society is made up of adults who are children today." Ultimately, the *Abitacolo* is a structure intended for a child to inhabit away from these perhaps well-meaning adults—including Munari himself. The constant danger of interruption to the otherwise not visibly busy person cannot be overstated.

(Jenny Monick)









By the time this column will be published, many will have already written about the passing of Bruno Munari. This is not an obituary, it's a memory, a memory from the time we worked together through the late 50s and most of the 60s, at Bompiani; I was an editor there, he was a part-time creative director, that is, he didn't oversee the publisher's overall image but worked on certain publications, for instance the Almanacchi series.

[...]

Most of our work together involved illustrated books. At the time we were publishing a history of inventions in pictures, later translated into nine languages; a history of civilization for young adults; things like that. Books had texts, pictures and captions, of course, but everything had to work in parallel, each page had to be a specific communication machine, independent of all others, whose layout had to reflect or anticipate what one could call the text's conceptual rhythm. For instance, I remember the history of the atomic bomb was represented by two cinematic sequences of events; on one side, the scission of the atom; on the other, the series of events that, starting with Mussolini and Hitler's rise to power, led to the flight of physicists to the United States and later to the bombing of Hiroshima.

Munari didn't read the text, he had someone summarize its main concept for him, then plunged his hands in a cardboard box where we had prepared a couple dozen possible photographs. He worked quickly, ruled some pictures out, brought others under the ray of his tiny, thick glasses. He would say, "cut here, let's keep this detail, we'll put it there." Then he would trace an almost imperceptible pencil mark on the page.

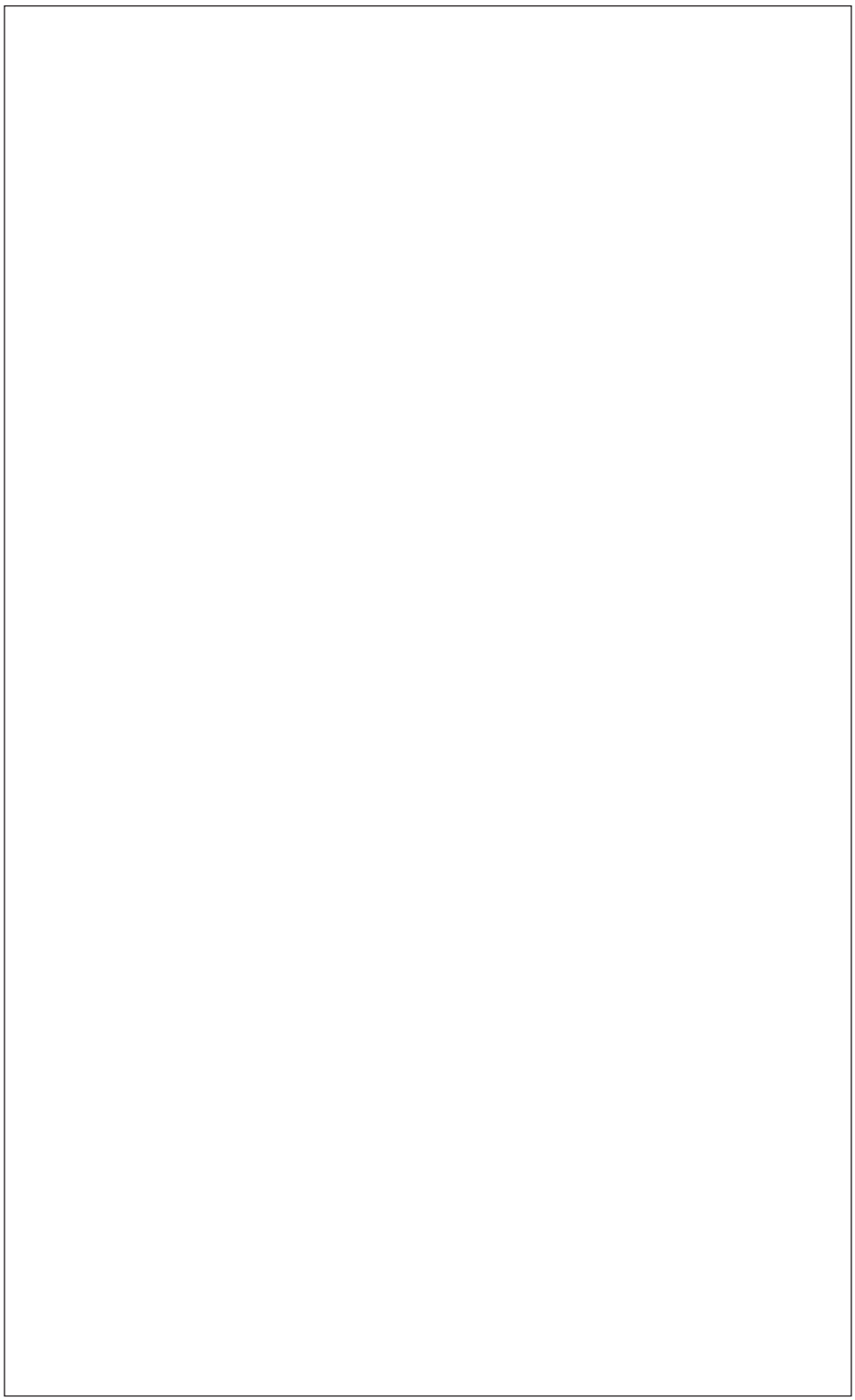
At the time, to specify the printing size of an image, typesetters first circumscribed the portion that would be reproduced, traced its diagonal, then ideally or physically extended it across the page, according to the desired size. Munari did all this in a split second, "virtually," one would say today, with no other tool than his pencil. He touched the page and it was already perfect.

If one of us raised any objections (such as, "doesn't this leave too much blank space on the right margin?") Munari — who was adamantly not afraid of emptiness, but was also extremely good-natured — would look up at them (anyone would be taller than him), smile patiently, and say, "ok, then let's make it a little bit wider on the right"; then he would look at the picture with a backlight, move the margin (rubber eraser, then another tiny stroke of pencil to correct the first mark), and the page's appearance would change drastically. Then he would glance at us sideways, smile and say, "See? It's worse." He was right. He worked a page as if tuning a violin. I watched him, enraptured, and knew I would never learn.

His pencil moved with such speed, such lightness, as if tracing on paper the dance of a bee. And I say "lightness" thinking of Italo Calvino's first memo for the next millennium (I don't know why, but I've always seen Munari as a character out of Calvino's books). This is how I like to remember him, dancing, light; working with him I understood many things about rhythm and void, I learned how one can *see,* to the last millimeter, how the finished version of a sketch will look like — the rarest of gifts.

Often, after Munari had interpreted (without reading it) the text of an illustrated book by laying out its typographic elements and images, we were forced to rewrite it to make it more consistent, in a way, with the layout His pencil marks were ideas.

(Umberto Eco)



Arturo Carlo Quintavalle: As a designer with your own individual discourse, do you think you can transform the "language" or, in other words, the entire system of communication, and if not, what do you think your job is?

Bruno Munari: Yes, of course, but all in due time.

(Arturo Carlo Quintavalle)

We could continue speaking of his work as a writer, an advertiser, an experimental filmmaker, a participant in a practice of art as political action and tool of social intervention (such as the unforgettable "Campo Urbano" in 1969), but we shall close instead with an ironic, parodic and yet poignant comment, which perfectly sums up who Bruno Munari was:

The egg has a perfect form even though it comes out of a butt.

(Alberto Salvadori)

p. 3:
Alberto Salvadori, "Change is the Only Constant in the Universe," in *Bruno Munari*, exhibition catalogue, kaufmann repetto, Milan & New York, Andrew Kreps Gallery, New York, and Repetto Gallery, London, 2018.

p. 4:
Barbara Casavecchia, 2019.

pp. 7–8:
Umberto Eco, *The Open Work* (Cambridge, MA: Harvard University Press, 1989).

p. 9:
David Reinfurt, 2019.

p. 10:
Saul Steinberg & Aldo Buzzi, *Reflections and Shadows* (London: Penguin, 2002). Proposed for inclusion by Robert Snowden, 2019.

p. 14:
Franciszka & Stefan Themerson, *Labędź, Ryba i Rak*, 1944, © Themerson Estate. The fable was first published in Stefan Themerson, "Z encyklopedii wieczorów rodzinnych czyli ze zlotego skarbczyka wiedzy wszelakiej z porzdąku alfabetycznym ułożonego," *Nowa Polska*, London, 1944. English translation in *The Themersons and the Avant-Garde*, exhibition catalogue, Muzeum Sztuki w Łódzi, 2013.

p. 17:
Jason Fulford, 2019.

p. 19:
Jason Fulford, 2019.

p. 21:
Jason Fulford, 2019.

p. 24:
Jenny Jaskey, 2019.

p. 25:
From Orson Welles, *F for Fake*, 1974. Proposed for inclusion by Michael Crowe, 2019.

p. 27:
Lauren Mackler, 2019.

p. 33:
Morgan Fisher, "Abstraction," in *Writings* (Cologne: Walther König, 2013). Proposed for inclusion by Lucas Quigley, 2019.

pp. 35–36:
Anthony Huberman, 2019.

p. 37:
Olimpia Zagnoli, 2019.

p. 38:
Justin Beal, 2019.

p. 40:
Luca Zaffarano, "Bruno Munari. Creatore di forme in continua transformazione," in *Bruno Munari*, exhibition catalogue, Setagaya Art Museum, 2018.

p. 43:
Leonor Antunes, *grid dancing*, 2012/19, photograms (after Bruno Munari's *Concave-Convex*, 1947).

pp. 44–47:
James Langdon, 2019.

p. 49:
Marco Meneguzzo, 2019.

p. 55:
Giovanni Rubino, "The Obvious Code. An editorial project as a little-known conceptual artwork," 2019.

p. 56:
Stuart Bertolotti-Bailey, 2019.

p. 57:
João Ribas, 2019.

p. 58:
Tamara Shopsin, 2019.

p. 59:
Arturo Carlo Quintavalle, interview with Bruno Munari, in *Bruno Munari*, exhibition catalogue, Università di Parma, Centro Studi e Archivio della Comunicazione, *Quaderni*, no. 45, 1979.
Michael Crowe, 2019.

p. 61:
Céline Condorelli, 2019.

pp. 63–64:
Elodie Royer & Yoann Gourmel, 2019. With extracts freely adapted from: Bruno Munari, *Arte come mestiere* (Bari: Laterza, 1966) and *Da cosa nasce cosa* (Bari: Laterza, 1981); and Leo Lionni, *Between Worlds, The Autobiography of Leo Lionni* (New York: Alfred A. Knopf, 1997). A longer version of this fictive talk was published in Yonatan Vinitsky, *The Middle of the World* (Paris: Empire, 2017).

p. 69:
Louis Lüthi, 2019.

pp. 71–72:
Louis Lüthi, 2019.

p. 73:
Marco Meneguzzo, 2019.

p. 75:
Eugenia Bell, 2019.

p. 76:
Valérie Da Costa, 2019. Pages from a leaflet accompanying an exhibition of Lucio Fontana's and Bruno Munari's private collections at Galleria Blu, Milan, 1957.

p. 82:
Morgan Fisher, "Abstraction," in *Writings* (Cologne: Walther König, 2013). Proposed for inclusion by Lucas Quigley, 2019.
Lázló Moholy-Nagy, *The New Vision and Abstract of an Artist* (New York: Wittenborn, Schultz, Inc., 1947). Proposed for inclusion by Lucas Quigley, 2019.
Thom Andersen, quoted in Scott MacDonald & Morgan Fisher, "An Interview," in *Film Quarterly*, vol. 40, no. 3, University of California Press, 1987. Proposed for inclusion by Lucas Quigley, 2019.

p. 83:
Eugenia Bell, 2019.
Joseph Weizenbaum as quoted in Harun Farocki, "Bresson: a Stylist," in *Nachdruck / Imprint. Texte / Writing* (New York: Lukas & Sternberg, 2001). Proposed for inclusion by Lucas Quigley, 2019.
Robert Bresson, *Notes on the Cinematographer*, Copenhagen: Green Integer, 1997. Proposed for inclusion by Lucas Quigley, 2019.

p. 85–86:
David Reinfurt, 2019. Photograph by Davide Clari. Courtesy Fondazione Jacqueline Vodoz e Bruno Danese, Milan.

p. 89–103:
Emily King, 2019.

p. 106:
Giovanni Anceschi, "How Programmed Art Was Born" in *Re-Programmed Art, an Open Manifesto*, eds. Serena Cangiano, Davide Fornari, Azalea Seratoni (Monza: Johan & Levi Editore, 2015).

p. 110:
Marco Meneguzzo, 2019.

pp. 111–112:
Justin Beal, 2019.

p. 121:
Paola Antonelli, *Collezione per un modello del disegno industriale italiano*, (Sonzogno: Gruppo Editoriale Fabbri, Bompiani, Etas S.p.A., 1990).
The quotation in the first paragraph is from Bruno Munari, *Design as Art* (London: Penguin, 2008).

p. 122:
Davide Fornari, 2019.

p. 124:
Rosalind Nashashibi, stills from *Eyeballing*, 2005, 16mm film, color, sound, 10 min.

p. 125:
Shannon Harvey & Adam Michaels, 2019.

pp. 126–131:
Julie Peeters, 2019.

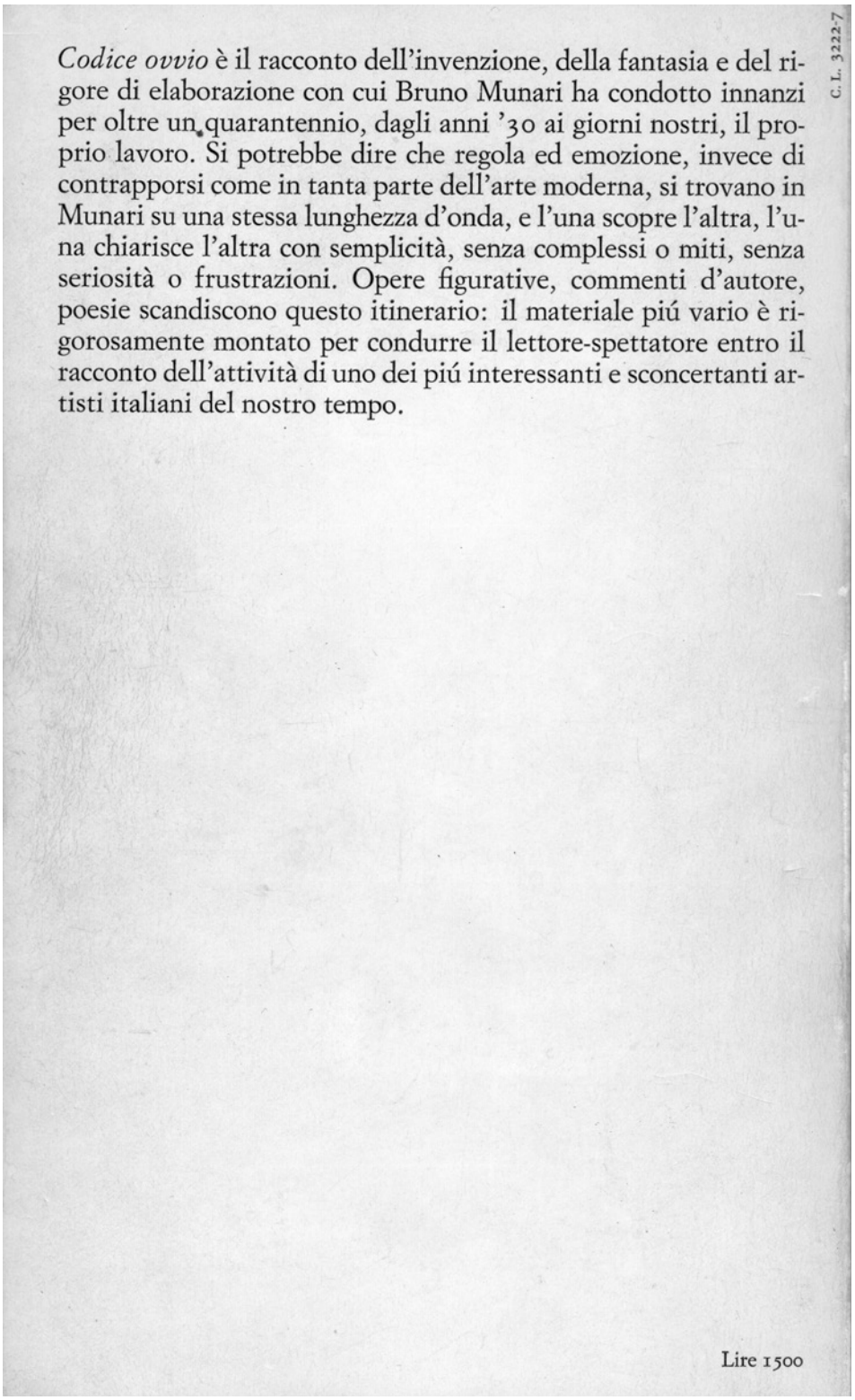
p. 128:
Matali Crasset, 2019.

p. 129:
Rob Giampietro, 2019.

p. 130:
Jenny Monick, 2019.

p. 134:
Umberto Eco, "The Unbearable Lightness of a Pencil Mark. Typesetting with Bruno Munari," in *L'Espresso*, October 15, 1998. Translated by Vincenzo Latronico, 2019.

p. 136:
Arturo Carlo Quintavalle, interview with Bruno Munari, in *Bruno Munari*, exhibition catalogue, Università di Parma, Centro Studi e Archivio della Comunicazione, *Quaderni*, no. 45, 1979.
Alberto Salvadori, "Change is the Only Constant in the Universe," in *Bruno Munari*, exhibition catalogue, kaufmann repetto, Milan & New York, Andrew Kreps Gallery, New York, and Repetto Gallery, London, 2018.



Codice ovvio è il racconto dell'invenzione, della fantasia e del rigore di elaborazione con cui Bruno Munari ha condotto innanzi per oltre un quarantennio, dagli anni '30 ai giorni nostri, il proprio lavoro. Si potrebbe dire che regola ed emozione, invece di contrapporsi come in tanta parte dell'arte moderna, si trovano in Munari su una stessa lunghezza d'onda, e l'una scopre l'altra, l'una chiarisce l'altra con semplicità, senza complessi o miti, senza seriosità o frustrazioni. Opere figurative, commenti d'autore, poesie scandiscono questo itinerario: il materiale piú vario è rigorosamente montato per condurre il lettore-spettatore entro il racconto dell'attività di uno dei piú interessanti e sconcertanti artisti italiani del nostro tempo.

Lire 1500

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