



Calder NOW

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ROTTERDAM



Contemporary Reflections on Calder's Vague Universe

— DIETER BUCHHART

Calder suggests nothing. He captures true, living movements and crafts them into something. His mobiles signify nothing, refer to nothing other than themselves. They simply are: they are absolutes.

— JEAN-PAUL SARTRE, 1946¹

Nothing at all of this is fixed.

— ALEXANDER CALDER, 1932²

Quantum computing will radically change our lives, just as Niels Bohr's "complementarity principle"³ and Werner Heisenberg's "uncertainty principle"⁴ not only revolutionized⁵ ways of thinking at the beginning of the 20th century, but also laid the foundations of quantum mechanics. If one follows the uncertainty principle of the physicist Heisenberg, which states that the position and momentum of a particle cannot be precisely measured at the same time, then every system would fundamentally contain uncertainties and introduce vagueness into science, which aims for objectivity. In contemporary art, the idea of vagueness and uncertainty has almost become a symbol of postmodernism. Today, in the age of transhumanism and posthumanism,⁶ in the time of social media and virtual and augmented reality, the dichotomy between the urge to be objective and uncertainty is clearly evident in science and art.

In the first half of the 20th century, the relationship between art and science was characterized, on one hand, by the adoption of new materials, such as steel, glass, and plastic, or synthetic colors and approaches such as projection, construction, and abstraction, and, on the other hand, by a relatively widespread interest in new scientific methods. It is known that Piet Mondrian, Theo van Doesburg, and Kasimir Malevitch were familiar with Max Planck's discoveries in the field of elementary physics as well as with Einstein's theory of relativity, and philosophized and speculated about space, time, and non-Euclidean geometry.⁷ Such institutions as the Bauhaus forged intersections between art, technology, and science.⁸ References to science and technology are particularly notable in the works of Marcel Duchamp,⁹ who in 1915 demanded new scientific rather than sentimental values in art. *The Large Glass*, which Duchamp worked on between 1915 and 1923, shows a strong engagement with modern science and art, which is reflected in the connections between individual pictorial elements and the latest illustrations of scientific

◀ Alexander Calder with *White Panel* (1936) and *Devil Fish* (1937, before completion) in his New York City storefront studio, 1936.



[ill.8] Olafur Eliasson, *Room for one colour* (1997). Monofrequency lights. Installation view: Moderna Museet, Stockholm, 2015.

the different constellations and connections of the billiard balls. The flapping of the magnetic tapes in Kempinas's work generates a crinkling sound paired with that of the fan. These postmodern works show that sound, tone, and noise are given elements of the era's art practice. Signer's bent organ pipe [► pp. 152–153], on the other hand, visualizes a large, damaged sounding body that has been robbed of its fundamental function of being played in an ensemble of other organ pipes. Sound is presented here without noise, in the form of a monument to failure.

Reflections of Light

In addition to the theme of sound, through the reflections of light on its polished metal, Signer's organ pipe also refers to the reflective surfaces and reflections of light in Calder's works such as *Untitled* (c. 1942) [► pp. 74–75], in which the movement of elements of the work and their reflections are constantly changing according to the time of day and the effects of external sources of light. In contrast, the burning candles in *Birthday Cake* (1956) [► p. 93] and *Untitled* (c. 1947) [► p. 79] generate the heat of the flame as well as reflections of light that are transformed by the flickering of the flame and the ongoing burning of the candles. Likewise, Eliasson also deals with reflective surfaces in his perceptual experiments, such as those of the mirrored crystal in *Hydro mobile* and numerous lamps and projections. The *Black and yellow double polyhedron lamp* (2011) [► pp. 116–117] generates a space of changing color and light dependent upon movement with an internal light source, comparable to the candles. The spectacular, kaleidoscope-like murals of the huge polyhedron lamp lead Calder's play with reflections of light into the 21st century, with LED lights and precise coordination of certain wavelengths of light. For example, the yellow tone of *Room for one colour* (1997) [► ill. 8] robs viewers of their colors and makes them appear gray. With great radicalism, Calder also introduced vagueness via reflections of light, through the uncertainty of the movement of elements, changing angles of incidence, and refraction of the reflections of light beams, which are not predetermined.

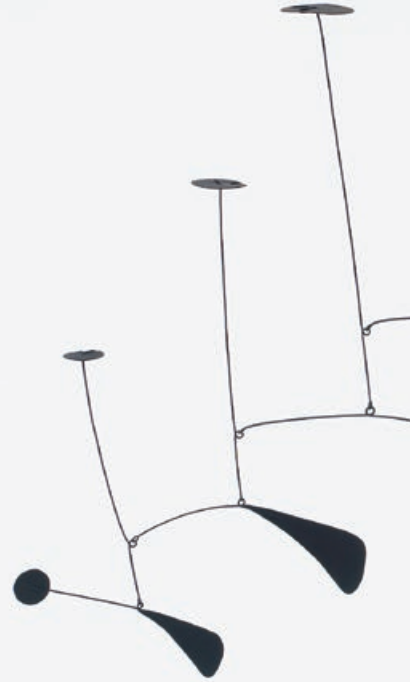
A further sign of Calder's modernity is how the negative space around and within his mobiles and stables, as Hans Arp called the stationary abstract sculptures such as *Sphere Pierced by Cylinders* (1939) [► p. 67],⁴⁰ becomes part of the sculptures. With his return to the United States in 1933, Calder "began to develop a feeling for increased scale,"⁴¹ and in 1934 created *Steel Fish*, one of his first large-scale outdoor sculptures [► ill. 9].⁴² Consequently, he planned even more monumental outdoor works, many of which he was able to realize in the 1960s. Since Calder's stables are literally so expansive, James Jones even describes the nonspace as threatening: "I had the nervous feeling that if I walked in under one of the larger ones, I might not be there; that if I pushed my hand between elements or through a hole of the smaller ones, the hand would disappear. I wouldn't drive a car under the Spoleto stabile for anything, because I could never be sure I would always come out on the other side!"⁴³ In this sense, the stables create a negative space belonging to the sculpture, which, despite its immateriality, creates a further dimension akin to a force field. "The thing that makes Calder unique as a sculptor is his sense of a cosmic mathematic. He is willing to believe equally in a nonspace as well as in space. Because of this, his stables (and his mobiles as well) are able to fill a given space without occupying it."⁴⁴ It is the interplay with space and nonspace that Kempinas also takes up in *Double O* and that likewise can be described as a force field formed by the fans and their air currents. In his expansive installations such as *It Happens When the Body is Anatomy of Time* (2000) [► pp. 128–133], Ernesto Neto also creates negative space within his sculptures, which becomes the actual space of experience for viewers, who are removed from their usual perceptions and immersed within an olfactory art space. Both Neto's and Calder's works activate our different senses. While Calder's



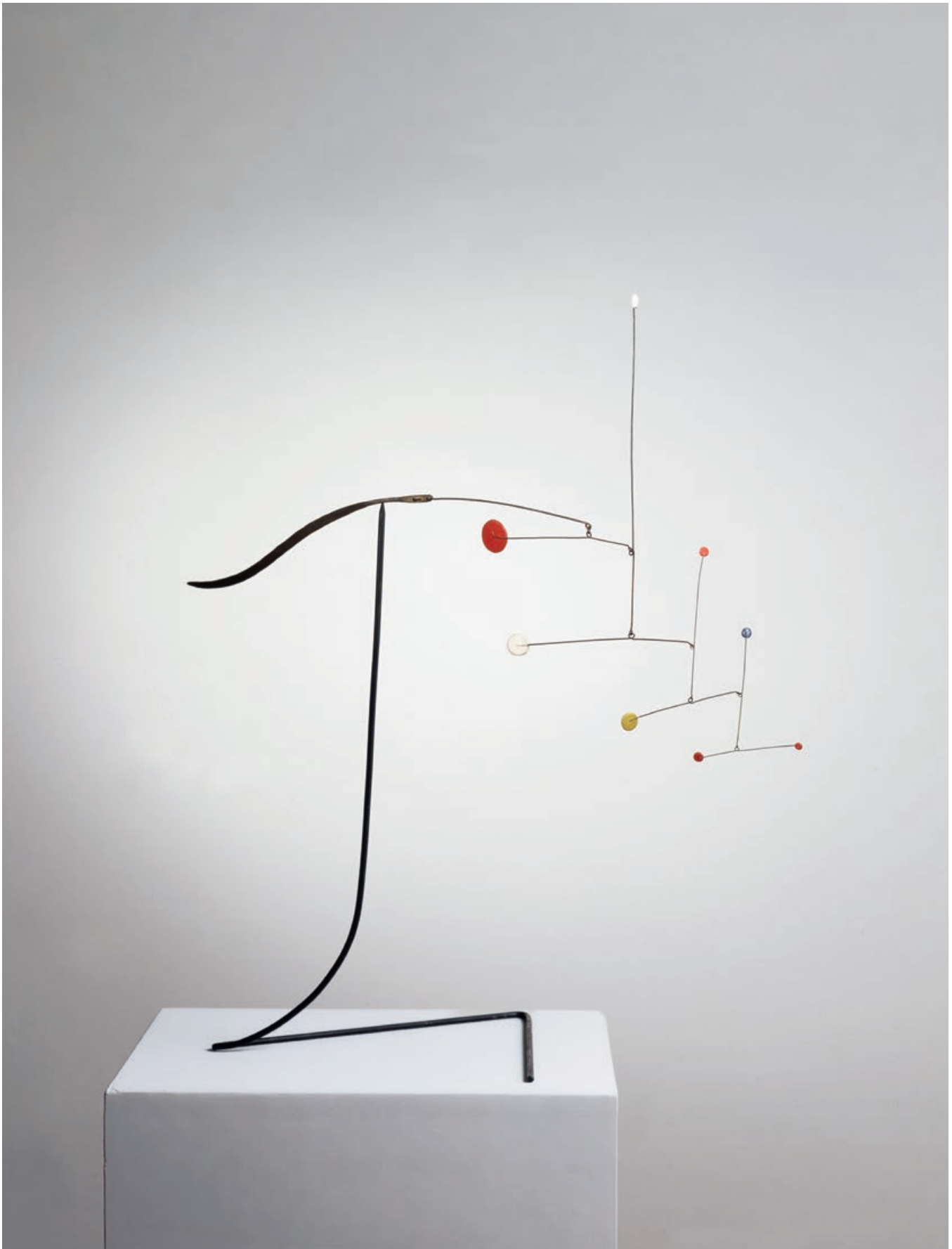
[ill. 9] Alexander Calder, *Steel Fish* (1934). Sheet metal, rod, wire, and paint, 292.1 × 347.9 × 304.8 cm, Calder Foundation, New York.

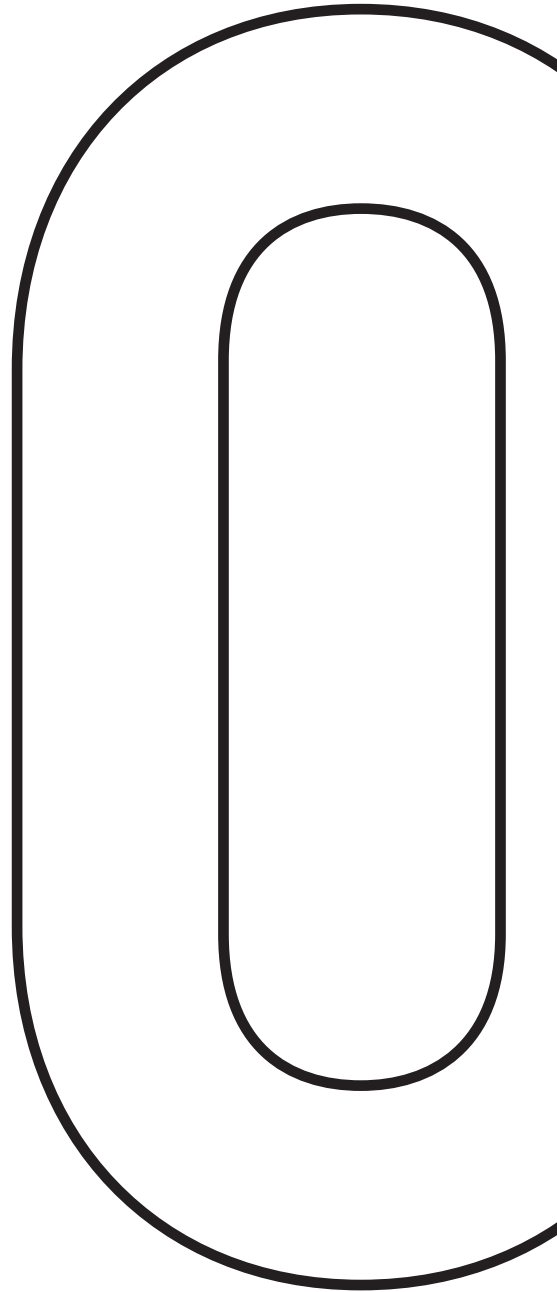
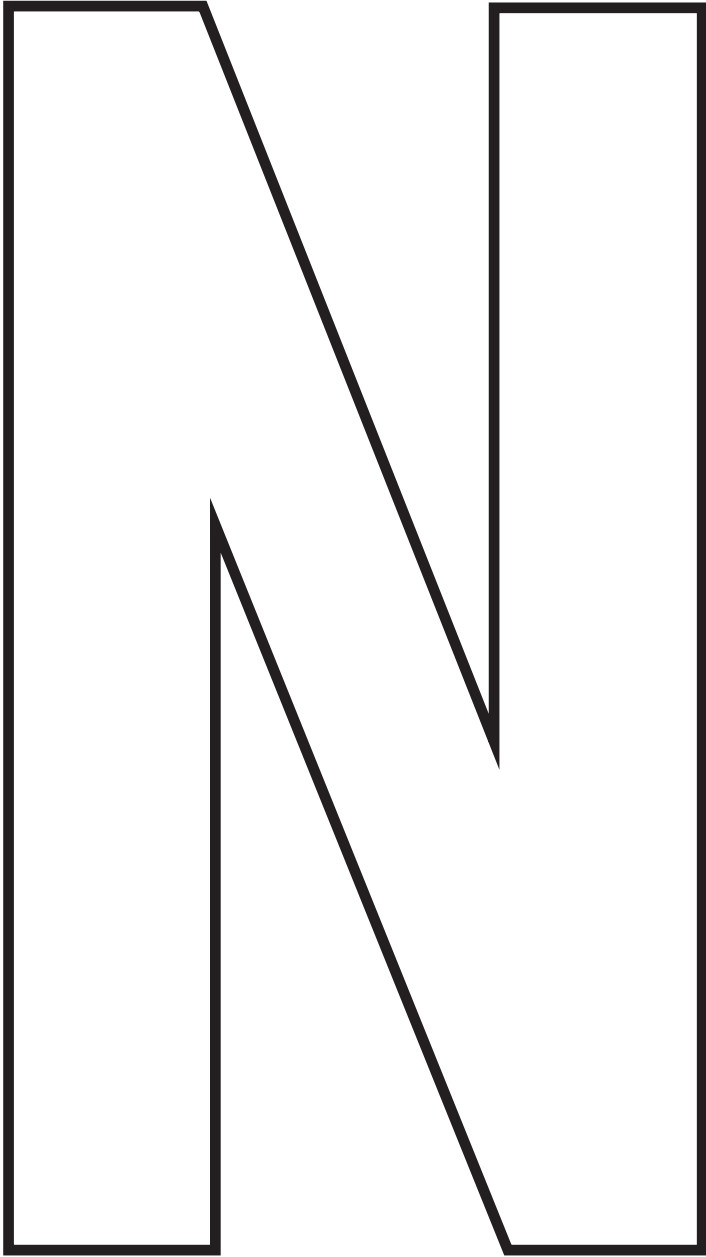
Call

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Unlearning Space—Spacing Unlearning¹

It is necessary to unlearn space in order to embody space.

It is necessary to unlearn how we see in order to see with our bodies.

It is necessary to unlearn knowledge of our body in three dimensions
in order to recover the real dimensionality of our body.

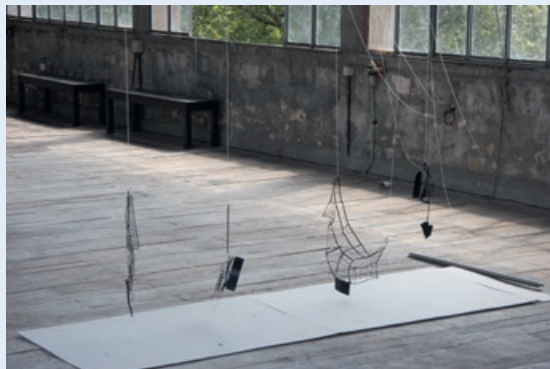
Let's dance space.

Let's respace our bodies.

Let's celebrate the felt feeling of presence.



Monika Sosnowska (POLAND, 1972)



Atelier Calder, Saché, France, 2014.