

**Jean Tinguely, Méta-Malevich "Formes mouvementées," 1954–55**, painted metal elements on painted wooden box with wooden pulleys, rubber belt, metal fixtures, and electric motor, 24 $\frac{3}{8}$  x 19 $\frac{5}{8}$  x 3 $\frac{1}{8}$  in. (62 x 50 x 8 cm). Private collection (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph provided by Sotheby's)

Between 1953 and 1954, having recently arrived in Paris, Jean Tinguely scavenged the trash heaps at the margins of the city in search of scrap metal. Back in his studio, he cut and painted the material into white rectangles and red circles, mounted the forms on wooden boards, and—with the addition of tiny motors—set each shape to rotate in slow circles. What resulted were animated paintings that set the Bauhaus and Constructivist abstraction of the 1920s, still widespread

in postwar Paris, into endless motion. Years later, Tinguely would make the avant-garde references of the series explicit, showing the kinetic reliefs under titles such as *Méta-Malevich* and *Méta-Kandinsky*.

**Marina Isgro**

## Modernism in Motion: Jean Tinguely's Meta-Mechanical Reliefs, 1954–59

Today Tinguely remains best known for his frenetic drawing machines and his spectacular, autodestructive mechanical performances of the 1960s. Yet the artist's early reliefs, to which he devoted more than five years of his career, offer a key to understanding the development of kinetic art in this period. The mechanized reliefs occupy a liminal historical position: they demonstrate an allegiance to the legacy of modernist painting, on the one hand, and to emerging concerns about real-time action, duration, and indeterminacy, on the other.

Although Tinguely was not the first artist to produce kinetic or manipulable art in the postwar period, his exhibitions of the meta-mechanical reliefs at Paris's Galerie Arnaud in 1954 signaled a decisive consolidation of activity in this realm.<sup>1</sup> His overt references to geometric abstraction in his moving art stood out within a larger group of European kinetic artworks in the 1950s—Yaacov Agam's rearrangeable reliefs, Pol Bury's turning *Plans mobiles*, and others—that drew their formal vocabulary from this language. These moving objects constituted a significant intervention in the postwar recovery and reconstruction of abstraction.

Despite a recent increase in the scholarship on kinetic art, however, this early moment in the genre's development has yet to be fully explored.<sup>2</sup> Histories traditionally locate the roots of moving art in isolated experiments of the 1920s and early 1930s, from the virtual volume of Naum Gabo's *Kinetic Construction* (1920) to the reflective surfaces of László Moholy-Nagy's *Light Prop for an Electric Stage (Light-Space Modulator)* (1930).<sup>3</sup> Yet, as Pamela Lee has noted, these heterogeneous examples are insufficient to account for the field's dramatic postwar growth.<sup>4</sup> I further argue that these precedents cannot fully explain the form that much kinetic art took in the 1950s: wall-hung constructions whose visual elements mirrored those of abstract painting.

This essay explores the postwar development of kinetic art through a close study of Tinguely's meta-mechanical reliefs, beginning with an analysis of their relationship to their painted namesakes. I argue that Tinguely used actual movement to model a longstanding artistic dilemma: where to position abstract elements in relation to one another and to the picture plane. With their constantly shifting parts, Tinguely's reliefs bring into real time the fraught process of reworking that lay concealed behind the finished works of the prewar avant-garde. In the most complex of these reliefs, Tinguely makes the impossibility of compositional resolution palpable by constructing groups of moving fragments that promise, yet always fail, to consolidate into neat wholes. At the same time that Tinguely brings modernism's latent doubts to the fore, however, he also gestures toward a solution:

All translations are by the author unless otherwise noted.

1. The critic Roger Bordier felt that Tinguely's Arnaud show was the "most decisive and unique *a priori*" of these early exhibitions. Bordier, "Mouvement, mouvements," in "Art cinématique," special issue, *Cimaise* 162–63 (January–March 1983): 10.

2. See Pamela M. Lee, *Chronophobia: On Time in the Art of the 1960s* (Cambridge, MA: MIT Press, 2004), which examines kinetic art as part of a larger argument concerning artists' treatment of time in the 1960s; and Christina Chau, *Movement, Time, Technology, and Art* (Singapore: Springer, 2017), which treats the history of kinetic art in relation to the contemporary moment. Some discussion of the movement's early history appears in Lynn Zelevansky, *Beyond Geometry: Experiments in Form, 1940s–70s* (Los Angeles: Los Angeles County Museum of Art; Cambridge, MA: MIT Press, 2004). For the South American context, see Monica Amor, *Theories of the Nonobject: Argentina, Brazil, Venezuela, 1944–1969* (Berkeley: University of California Press, 2016).

3. This lineage seems to have originated with the curator Pontus Hultén, who cited Gabo, Moholy-Nagy, and Marcel Duchamp as origin points for kinetic art in his text and chronology for the 1955 exhibition *Le mouvement*; he reiterated it in seminal exhibitions such as *Bewogen Beweging (Moving Movement)*, which opened at the Stedelijk Museum, Amsterdam, in 1961.

4. Lee, *Chronophobia*, 102–3.

5. See Yve-Alain Bois, "Force Fields: Phases of the Kinetic," *Artforum* 39, no. 3 (November 2000): 146.  
6. See Jean-Robert Arnaud, "Editorial," in "Art cinétique," special issue, *Cimaise* 162–63 (January–March 1983): 7.

7. The works fall into several distinct series: the *Méta-Malevich* reliefs, with simple, primarily white shapes on black backgrounds; the polychrome *Méta-Kandinsky*s and *Méta-Mortensen*, which include a greater number and variety of elements; the *Blanc sur noir*, *Blanc sur blanc*, and *Noir sur blanc* series, with minimal color and larger, irregular metal elements; and the *Oeufs d'onocrotales*, *Stabilités*, and *Probabilités*, in which elements cluster together to suggest overall shapes. Tinguely also created the related freestanding *Méta-Herbins*. See Andres Pardey, ed., *Jean le jeune: Jean Tinguely's politische und künstlerische Basler Lehrjahre und sein Frühwerk bis 1959* (Basel: Museum Jean Tinguely, 2002).

8. Specifically, Tinguely may have encountered motorized sculptures by Alexander Calder, made in the early 1930s, which include geometric elements in primary colors. Calder first showed motorized mobiles in a widely reviewed exhibition at the Galerie Vignon in Paris in February 1932. His work also appeared in 1947 at the Kunsthalle, Bern, and it is possible that Tinguely encountered it there; see Beat Wismer, "Why Should a Picture Always Be Static? Why Can't It Change? Jean Tinguely's First Decade, from Meta-Art to Auto-Destructive Installation," in *Tinguely*, exh. cat. (Amsterdam: Stedelijk Museum, and Düsseldorf: Museum Kunstpalast, 2016), 35–36. The artist, however, denied that he had seen Calder's work before he moved to Paris; Heidi Violand, "Jean Tinguely's Kinetic Art, or a Myth of the Machine Age" (PhD diss., New York University, 1990), 42 n7. Pontus Hultén writes that the similarities between the works "result from the similarity of their points of departure." Hultén, *Jean Tinguely: Méta* (London: Thames and Hudson, 1975), 37. In the 1950s, Agam produced his first manipulable kinetic works, with white elements on a black background; these appeared at Paris's Galerie Craven in 1953.

9. Catherine Millet, *Conversations avec Denise René* (Paris: Éditions Adam Biro, 1991), 84.

10. Moholy-Nagy's belief in the essential dynamism of life and the instability of matter clearly informed Tinguely's thinking. Yet these early reliefs cannot easily be understood according to Moholy-Nagy's vision of sculpture as an evolution from the solid block to the weightless "virtual volumes" of kinetic art. While Tinguely did create some works concerned with virtual volume (see note 50), the reliefs move too slowly and have too little dimensionality to produce such effects. See László Moholy-Nagy, *Vision in Motion* (Chicago: Paul Theobald, 1947), 219–41.

11. Jean Tinguely, "The Artist's Word," extracts from an interview with Charles Georg and Rainer Michael Mason, June 1976, in Pontus Hultén, *Jean Tinguely: A Magic Stronger Than Death*, exh. cat. (New York: Abbeville, 1987), 347. Tinguely made this claim as early as 1962, however: "Painting didn't satisfy me. The results always seemed static. I began experimenting, and by 1953 I realized

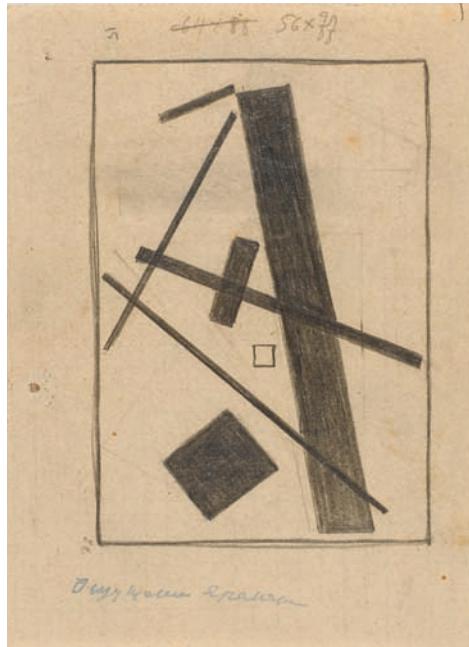
to cede the task of composition to the artwork itself and to accept the unforeseeable results. Tinguely's reliefs and their critical reception reveal how early kinetic art, far from being a historical "flash in the pan," grappled with urgent questions about the legacy of modernism, the nature of time-based art, and the changing terms of artistic intention.<sup>5</sup>

Tinguely first encountered the work of the historical avant-garde in the 1940s in Basel, where he attended classes at the Kunstgewerbeschule (School of Arts and Crafts). When he moved to Paris in 1953, he discovered a landscape still marked by the legacy—and in some cases, the continued presence—of the early twentieth-century artists he had studied. Many had entered the orbit of the Salon des Réalités Nouvelles, a loose group of artists who worked primarily in geometric and concrete tendencies.

Tinguely brought his reliefs to the Galerie Arnaud, an institution known for its support of abstraction. Receiving a positive response, he exhibited them there from May to June, and again from November to December 1954.<sup>6</sup> These initial reliefs share a simple, pared-down appearance. Most consist of white, and occasionally red or blue, metal rectangles and circles projecting on thin spindles from the front of a black wooden box. A small motor, wheels, and a belt on the reverse of the box rotate each element at a different, yet constant, speed, creating a flow of slowly changing compositions. Unlike manipulable art or hanging mobiles, these objects move independently of human gesture and air currents, relying instead on electricity to power their motion. Tinguely pursued this series through 1959, varying the colors, shapes, and numbers of surface elements to explore a range of formal possibilities.<sup>7</sup>

The reliefs drew from a variety of sources, including sculptures and kinetic works made by Alexander Calder in the early 1930s and by Agam in the 1950s.<sup>8</sup> The clearest references, naturally, are to the painters themselves. For example, the elongated rectangles of the early reliefs find clear parallels in Kazimir Malevich's drawings and paintings. The gallerist Denise René, meanwhile, proposed that the artworks grew out of Tinguely's frequent visits to the studio of Auguste Herbin.<sup>9</sup> What is clear is that Tinguely intended these kinetic works to respond directly to painting. While he shared important elements of his thinking on movement with such figures as Moholy-Nagy, the shallow, wall-mounted reliefs depart from the latter artist's definition of kinetic art as essentially concerned with sculptural volume.<sup>10</sup> Tinguely himself explained this connection in several interviews. He attributed his embrace of kineticism to his failure as a painter—specifically, his inability to complete paintings, which he said "paralyzed" him. "I could never finish and could go on working on a painting for months, until the canvas was worn out—scraping it off, doing it again, never letting the paint dry," he said. "Movement was an escape from the petrification, the ending."<sup>11</sup> The meta-mechanical reliefs, Tinguely implies, allow the process of painting to extend into infinity.

Reviewers of the Arnaud shows similarly located Tinguely's kinetic reliefs within the realm of abstract painting. In the exhibition brochure for the May 1954 show, R.V. Gindertael called the works "automata," yet he noted that they were more akin to paintings than to sculptures. Specifically, he wrote, the works generate "a suite of multiple compositions" that we perceive as "a single animated painting."<sup>12</sup> In a review in *Art d'aujourd'hui*, Roger Bordier made a similar



**Kazimir Malevich, Composition 6 t (Suprematism: Sensation of Time), 1916**, pencil on graph paper,  $5\frac{3}{4} \times 4\frac{1}{4}$  in. ( $14.7 \times 10.8$  cm). Stedelijk Museum Amsterdam, on loan from the Stichting Khardzhiev (artwork in the public domain; photograph © Foundation Khardzhiev / Stedelijk Museum Amsterdam)

**Auguste Herbin, Composition on the Word "Vie," 2, 1950**, oil on canvas,  $57\frac{1}{2} \times 38\frac{1}{4}$  in. ( $145.8 \times 97.1$  cm). Museum of Modern Art, New York, Sidney and Harriet Janis Collection (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph © Museum of Modern Art / Licensed by SCALA / Art Resource, NY)

that the machine gave me a way to leave things ‘unfinished’—an opening onto infinity which paint couldn’t approach.” Tinguely, quoted in William R. Byron, “Wacky Artist of Destruction,” *Saturday Evening Post*, April 21, 1962.

12. R.V. Gindertael, in *Tinguely*, exh. broch. (Paris: Galerie Arnaud, 1954), n.p.

13. Roger Bordier, “Tinguely à la Galerie Arnaud,” *Art d’aujourd’hui* 5, 4–5 (May–June 1954). It is unclear to what extent the average gallery visitor would have been able to stop and start the mechanism; more likely the works ran continuously.

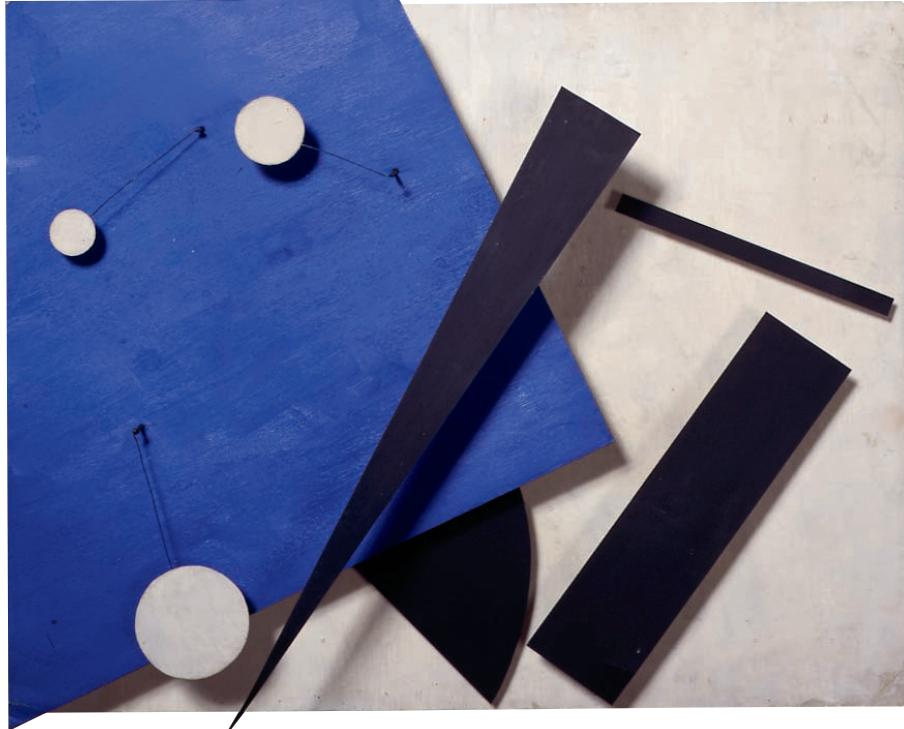
14. Hultén, Jean Tinguely: Méta, 16. For a comprehensive account of Hultén’s role in shaping Tinguely’s career, see Stephanie Jennings Hanor,



point: Tinguely’s reliefs “moved closer not to sculpture, but deliberately to plastic painting.” Bordier, like Gindertael, described the works as producing multiple compositions; he noted that the “simple press of a button” allowed one to select and freeze a particular arrangement.<sup>13</sup> While these early reviewers both linked Tinguely’s work to painting, they also shared another basic assumption: that individual compositions could be identified within the reliefs’ mechanical flow.

Late in 1954, Tinguely received a letter from Pontus Hultén, a young critic and curator who had seen his exhibitions at Arnaud and who would go on to become the most influential promoter of his work. It was Hultén who christened the works “meta-mechanical reliefs”; he intended the prefix to signal how the works functioned both “with” and “beyond” the mechanical.<sup>14</sup> Several years later, Tinguely would show the Arnaud reliefs under the title *Méta-Malevich*, though Hultén observed that the frivolity of this title would have been unacceptable at the time of their creation.<sup>15</sup>

In April 1955, several of Tinguely’s reliefs and other works appeared in the groundbreaking kinetic exhibition *Le mouvement* at Denise René’s Parisian gallery, which Hultén played a role in organizing. The exhibition showcased work by a new wave of artists—including Agam, Bury, Jesús Rafael Soto, Tinguely, and others—who aimed to bring motion into art through perceptual effects, the use of motors, or viewer participation. It marked the debut of kinetic art as a distinct genre and provoked a polarized response from critics, who perceived in it wildly different pictures of kinetic art’s relation to the artistic tradition. First to respond was Bordier, who published a long essay in *Aujourd’hui* surveying the rise of what he termed “the transformable artwork.” He argued that the invention of kineticism



**Jean Tinguely, *Trois points blancs*, 1955,** wood panel painted white with eight differently shaped and painted sheet-iron elements; back: wooden wheels, rubber belts, metal mountings, electric motor,  $19\frac{3}{4} \times 24\frac{1}{2} \times 8\frac{1}{4}$  in. ( $50 \times 62.5 \times 21$  cm). Museum Tinguely Basel (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph by Christian Baur, © Museum Tinguely, Basel)

"Jean Tinguely: Useless Machines and Mechanical Performers, 1955–1970" (PhD diss., University of Texas, Austin, 2003).

15. Hultén, Jean Tinguely: *Méta*, 46. Tinguely used the title *Méta-Malevich* in Hultén's exhibition *Bewogen Beweging*. He had previously shown *Meta-Kandinsky no. 3 (partie A)* (1955) at the Kaplan Gallery, London, in the fall of 1959. Tinguely himself, decades later, emphasized the flippant aspects of the reliefs. Their message, he told Catherine Francblin in 1988, was that "*malévitichisme*' was screwed." Tinguely quoted in "Jean Tinguely: Farces et attrapes," interview by Catherine Francblin, *Art Press*, no. 131 (December 1988). Certainly, an irreverent attitude pervades Tinguely's work throughout his career. Yet the reliefs' message is more complex than the artist's later rhetoric suggests.

16. Roger Bordier, "Propositions nouvelles: Le mouvement, l'œuvre transformable," *Aujourd'hui: Art et architecture*, no. 2 (March–April 1955): 12–17.

17. Léon Degand, "Les expositions: Le mouvement, nouvelle conception de la plastique," *Aujourd'hui: Art et architecture*, no. 3 (May–June 1955): 14. Echoes of the debate resonated in

marked a dramatic paradigm shift—one in which the art object "ceased to be a unique, eternal given."<sup>16</sup> In the journal's next issue, Léon Degand, a seasoned defender of abstraction, delivered a scathing reply to Bordier's article. Kinetic artists, he contended, borrow their vocabulary wholesale from geometric abstraction and annex motion to it, without intervening in the artistic tradition in any substantial way.<sup>17</sup> A closer look at Tinguely's reliefs shows that the works represent neither a total break with tradition nor a mere copy of geometric abstraction: they constitute an extension and critique of this vocabulary from within. As we have seen, early descriptions of the reliefs pointed to their potential to generate "multiple compositions"—that is, a series of distinct and potentially independent arrangements. Tinguely's story about his lack of success as a painter suggests a more convincing model: one that depends not on the machines' success in generating multiple compositions, but on their failure. Tinguely, that is, proposes that the reliefs are better understood as a constant experimentation with different arrangements, each of which fails to hold and immediately dissolves. As the motor runs on a *Méta-Malevich*, the place and orientation of each piece gradually changes: a vertical line becomes a horizontal one, a rod suddenly pokes out beyond the bounds of the support. The relations among parts change, too. Placed at different distances from the surface, the shapes cross paths and overlap. Some reliefs, such as *Trois points blancs* (1955), include large fixed planes behind which smaller moving elements disappear and reappear, creating a peekaboo effect. Such works introduce variation not only in the arrangements of elements but also in their apparent shape and number, as they fleetingly come together and repeatedly disintegrate.

Of course, the continuous rearrangement of the reliefs is quite different from the process of painting, scraping, and repainting that Tinguely had aban-



**Piet Mondrian's New York studio after his death, 1944** (photograph by Fritz Glarner, © Kunstmuseum Zürich and Estate of Fritz Glarner)

subsequent issues. See Roger Bordier, "Quelques notes complémentaires sur le mouvement,"

*Aujourd'hui: Art et architecture*, no. 4 (September 1955): 17; and Lawrence Alloway, "L'intervention du spectateur," *Aujourd'hui: Art et architecture*, no. 5 (November 1955): 25.

18. A few of the reliefs—for instance, an untitled *Stabilité* from 1959 (Stedelijk 2016, cat. 32)—move with a more clocklike, periodic movement. The majority, however, move fluidly at a constant speed.

19. An early reviewer of Pol Bury's work made this connection, writing that the artist's manipulable reliefs, the *Plans mobiles*, "surpassed in possibility the compositions made by means of cut papers which the initiators of abstraction made use of." (1954 review by L.-L. Sosset, "Les Expositions à Bruxelles," n.d., Fonds Pol Bury, Institut mémoires de l'édition contemporaine, Press, 1951–55.)

20. See Harry Cooper, "Looking into the Transatlantic Paintings," in *Mondrian: The Transatlantic Paintings*, ed. Cooper and Ron Spronk (New Haven: Yale University Press, 2001), 49.

21. *Ibid.*, 53.

22. Piet Mondrian, "Plastic Art and Pure Plastic Art" (1937), in *Modern Artists on Art*, 2nd ed., ed. Robert L. Herbert (Mineola, NY: Dover, 2000), 155.

23. *Ibid.*, 159.

doned. The metal shapes, discrete elements on a surface, function more like collage elements than like paint, with its tendency to dry and stick. Their movement from one arrangement to the next is largely fluid, and in it moments of erasure are conflated with moments of creation.<sup>18</sup> In this sense of separate elements shifting positions on a surface, Tinguely's process finds a surprising analogue: the use of paper cutouts, a practice taken up by abstractionists from the late 1910s onward as a compositional aid.<sup>19</sup>

The work of Piet Mondrian demonstrates how the use of cutouts accompanied an increasing hesitation about the principles of composition. Mondrian initially experimented with the technique because it allowed a freedom to revise less laborious than painting and repainting. Visitors to the artist's studio in the 1920s and 1930s recalled seeing him plan his paintings by manipulating strips of paper on top of canvases or on the floor.<sup>20</sup> Mondrian's use of this process intensified after his move to New York in 1940, when he began to employ black and colored tape as well as paper. It was around this time that his method entered a crisis. In Harry Cooper's words, Mondrian's work in New York conveys "an accelerating doubt about whether it is possible, or even desirable, ever to finish a painting."<sup>21</sup> From late 1940 to early 1944, the artist worked constantly, yet his obsessive revision ensured that he completed only three paintings.

Hints of this uncertainty appear in Mondrian's writing, too. In his 1937 essay "Plastic Art and Pure Plastic Art," the artist argues for a nonfigurative art governed by "fixed laws"—the exclusive use of pure primary colors, for example.<sup>22</sup> Yet the artist realized that compliance with these laws is not enough. In a discussion of the dimension of lines and shapes, he writes that the artist has considerable room for "individual expression" in this realm—and he concludes that this "freedom of choice" is "one of the most difficult problems" that he must face.<sup>23</sup> As much as



**Jean Tinguely, *Très stable* (from the series *Blanc sur noir*), 1956**, black wood panel with thirteen differently shaped metal elements, painted white; back: wood pulleys, rubber belt, metal fixtures, electric motors,  $39\frac{3}{4} \times 49\frac{1}{4} \times 13\frac{3}{4}$  in. ( $101 \times 125 \times 35$  cm). Private collection (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph © André Morin, provided by Galerie GP & N Vallois, Paris)

24. Alexander Calder, "What Abstract Art Means to Me," *Bulletin of the Museum of Modern Art* 18, no. 3 (Spring 1951): 8. Photographs of Mondrian's Paris and New York studios, covered with such rectangles, appeared in *Art d'aujourd'hui* in June and December 1949, respectively. See illustrations in Michel Seuphor, "Le Mur," *Art d'aujourd'hui*, no. 1 (June 1949): n.p.; and in Mondrian, excerpts from "Le home—la rue—la cité" (1926), repr. in *Art d'aujourd'hui*, no. 5 (December 1949): n.p.

Mondrian insisted on the rules that bind visual art, he understood that painting should not be trapped within a closed system of calculation. Yet, as his writing and artistic practice show, he found the necessity of reconciling subjective decision-making with his tightly constructed system troublesome. For Mondrian, the ease of rearrangement that cutouts allowed went hand in hand with an increasing doubt about the solidity of abstraction's foundations.

A well-known story recounted by Calder suggests the relevance of Mondrian's practice to kinetic artists. When asked to account for his entrance into kineticism, Calder recalled that he visited Mondrian's studio in 1930 and felt a desire to put the older artist's forms into motion. What is particularly interesting is that it was not Mondrian's paintings that inspired Calder, but precisely the cutouts: "I was particularly impressed by some rectangles of color he had tacked on his wall in a pattern after his nature," he said. Calder told the painter that he wanted to make the forms "oscillate," though Mondrian objected to the idea.<sup>24</sup> The notion that elements might slide around the surface of a painting, and the almost three-dimensional fluttering effect of paper pinned lightly to a surface, find a logical extension in the elements of Tinguely's reliefs that rotate on their thin metal axles. This consonance is particularly visible in a work such as *Très stable* (1956), in

25. Similar concerns can be located in the work of many artists, for instance, Jean Arp, whose collages were always “animated by the impossibility of a terminal point,” as Briony Fer has written; Fer, *On Abstract Art* (New Haven: Yale University Press, 1997), 73. On the problem of the arbitrary in abstraction, see Yve-Alain Bois, “Strzemiński and Kobra: In Search of Motivation,” in *Painting as Model* (Cambridge, MA: MIT Press, 1990), 123–55.
26. Hultén, *Jean Tinguely: Méta*, 7. Franz Meyer similarly suggests that the artists of the historical avant-garde worked “within a stable, self-contained immutable system,” one that no longer sustained conviction in the postwar period. Meyer, introduction to Christina Bischofberger, *Jean Tinguely, Catalogue raisonné: Sculptures and Reliefs* (Küschnacht/Zurich: Edition Galerie Bruno Bischofberger, 1982–90), 7.
27. Pontus Hultén, “Vicarious Freedom, or, On Movement in Art and Tinguely’s Meta-mechanics” (1955), in Hultén, *Magic*, 35.
28. “Jean Tinguely,” *Elle*, November 9, 1956.
29. On Tinguely and anarchism, see Violand, “Kinetic Art,” 22–38.
30. Umberto Eco, *The Open Work*, trans. Anna Cancogni (Cambridge, MA: Harvard University Press, 1989).
31. In 1960 Tinguely was a founding member of Nouveau Réalisme, a group whose leader, Pierre Restany, declared its indebtedness to Dada; in the United States, he became close friends with and exhibited alongside the artists associated with Neo-Dada. See Susan Hapgood, *Neo-Dada: Redefining Art, 1958–62* (New York: Universe, 1995), 44–51. On Tinguely’s relationship to Duchamp, see Dieter Daniels, “Often Neglected—But One of the Greats,” interview with Jean Tinguely, January 1987, in *Marcel Duchamp*, ed. Anja Müller-Alsbach, Heinz Stahlhut, and Harald Szeemann (Ostfildern-Ruit: Hatje Cantz, 2002), 155–67.

which the irregularly shaped elements give an impression of fragility, like scraps of paper that have fallen to the ground.

Mondrian’s example is emblematic of a palpable concern over the possibility of compositional resolution that had grown out of avant-garde art by the later 1920s and 1930s.<sup>25</sup> Tinguely explicitly foregrounded this concern by creating kinetic works whose constant revision ensures that they literally never end. In this light, his work cannot be read as a simple postwar invalidation of a European avant-garde that had always been perfectly secure in its choices, as some have argued. Hultén, for instance, understood Tinguely’s works as questioning the validity of one abstract composition over another; yet he maintained that this problem did not even occur to artists such as Malevich, Wassily Kandinsky, and Mondrian, whose paintings expressed a near-religious sense of faith and conviction.<sup>26</sup> Rather, I suggest, Tinguely pushed the sense of doubt that was already present in the earlier generation much further, making it visible on the surface and rendering its operations “live.”

It is important to clarify that Tinguely’s objects move within predetermined limits. They are not, as some have contended, an expression of absolute freedom. Hultén originated the latter view: in a 1955 essay, he reads the multiplicity inherent in the works as a demonstration of extreme liberty.<sup>27</sup> Tinguely himself also encouraged this reading. In a 1956 article, for instance, he made the hyperbolic claim that one of his reliefs would take at least ten thousand years before it repeated the same arrangement.<sup>28</sup> Both Hultén and Tinguely, at times, related this freedom to their own anarchist political commitments.<sup>29</sup> It is clear, however, that the dynamic of the reliefs is less one of complete openness than of flexibility within a preexisting set of parts. The objects function as something like “open works,” their parts rotating within a predetermined field of possibilities.<sup>30</sup>

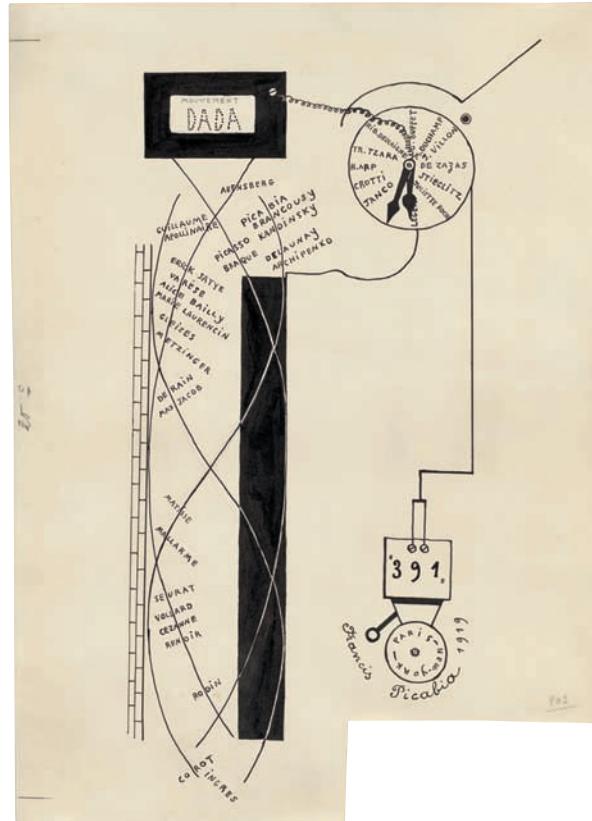
In sum, how might we conceptualize the relationship between the reliefs and their sources? I have argued that the objects are neither copies nor caricatures of their source material, but rather a radical extension of the implications of their namesakes’ work; they highlight the anxiety inherent in composition that those earlier artists would not have made so explicit and embrace movement as a way to postpone the resolution of the finished object. The reliefs continue to work within the vocabulary of Mondrian, Malevich, and other abstractionists, yet in their constant turning, they draw attention to an uncertainty at the heart of that language.

To anchor the reliefs solely within the history of European geometric abstraction, however, ignores another of Tinguely’s reference points: the legacy of Dada. With their refusal to settle into a finished state, the reliefs recall the motif of the nonproductive machine so central to that earlier movement. Tinguely, of course, had concrete ties to Dada. Having first encountered Marcel Duchamp’s work in the early 1940s, by the 1960s he would be seen as a major representative of the Neo-Dada tendency.<sup>31</sup> In Tinguely’s early reliefs, the combination of Constructivist and Dada references suggests that the artist intuited a deep compatibility between these apparently disparate lineages: he sensed that the potential for endless rearrangement in abstract composition, when pushed far enough, might resemble the irrational networks of Dada machinery.

Francis Picabia created the prototype of the Dada machine in his “mechanomorphic” drawings of the 1910s and early 1920s. In these works, such as *Dada Movement* (1919), incongruous elements—gear wheels, text, symbols, and abstract

**Francis Picabia, Dada Movement**

(*Mouvement Dada*), 1919, ink and pencil on paper, 20 1/8 x 14 1/4 in. (51.1 x 36.2 cm). Museum of Modern Art, New York (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph © Museum of Modern Art / Licensed by SCALA / Art Resource, NY)



32. David Joselit, "Dada's Diagrams," in *The Dada Seminars*, ed. Leah Dickerman (Washington, DC: National Gallery of Art, 2005), 232. George Baker has compared Calder's mobiles to the diagram, arguing that we look to Dada, rather than to Mondrian, for the source of Calder's kinetic work. Baker, "Calder's Mobility," in *Alexander Calder and Contemporary Art: Form, Balance, Joy*, ed. Lynne Warren (London: Thames and Hudson, 2010), 94–109.

33. In addition to the *Méta-Kandinskys*, Tinguely made several other early works with what would later be seen as a Neo-Dada aesthetic. In two reliefs from 1955 titled *Méta-mécanique sonore*—the first of which he showed at the Salon des Réalités Nouvelles—he included found objects, such as bottles, tins, a saw, and a funnel, that create tiny, jangling noises as they move. The artist later explained, "My contraptions do not make music; my contraptions use sounds and I play with those sounds; I sometimes build sound-mixing machines to mix sounds and then let the sounds go, give them their freedom." Tinguely in Hans Emmerling, *Auf Tod und Leben—Tinguely: Skizzen zu einem Porträt*, televised interview, Saarländerischer Rundfunk, 1988; quoted in Sandra Beate Reimann, "Méta-Harmonie," in *Méta-Harmonie: Music Machines and Machine Music in Jean Tinguely's Oeuvre* (Basel: Museum Tinguely, 2016), 25. Tinguely's insistence on creating a sequence of sounds, rather than music, signals his rejection of the motivated progression of tones implied by the latter term.

34. G.P.F., "Des Bilderschlossers Kunstmotoren: Elektrische Blechplastiken von Jean Tinguely in der Galerie Schmela," *Der Mittag*, February 3, 1959. I thank Leah Chizek for assistance with this translation.

shapes—link together to form diagrams of imaginary, functionless machines. As David Joselit has written, these drawings demonstrate an “expansive” model that attempts to relate disparate elements—in contrast to the “implosive” model of Cubism, which shatters the object into disjoined fragments. Yet this connective activity does not lead to increased coherence, to an image that is restored to wholeness. Rather, it generates a “free play of polymorphous linkages” across the drawings’ surfaces.<sup>32</sup>

A similar kind of expansive connectivity appears in a series that Tinguely made between 1955 and 1956, later called the *Méta-Kandinskys*. While in the majority of the meta-mechanical reliefs Tinguely concealed his wheels, belts, and motors on the reverse of the work, in the *Kandinskys* the rubber belts become a design element. In *Méta-Kandinsky I* (1956), for instance, black rubber belting zips across the surface of the work, linking differently colored circles: the belting runs a long path from a white circle toward the center of the long canvas to an ocher one on the far right; then to a larger half-black, half-white one below, and briefly back up to a tiny red one; then all the way to a black element at the far left. Turned on, the belt pulls the circles into motion in different directions and at different speeds.

The “inside-out” quality of the *Méta-Kandinsky* reliefs makes visible a condition of all the meta-mechanical reliefs: that the elements do not move independently but rely on an unruly network of wheels and belts. As *Méta-Kandinsky I* shows, no clear principle prescribes why one particular element should be attached to any other. But once connected, each piece affects the next, pulling it



Jean Tinguely, *Méta-Kandinsky I, also called Wundermaschine*, 1956, wood panel with nine differently shaped and painted sheet-iron elements, wooden wheels, iron-wire axles, rubber belts, electric motor, 15½ x 40½ x 13 in. (39.8 x 103.2 x 33 cm). Museum Tinguely, Basel (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph by Christian Baur; © Museum Tinguely, Basel)

clockwise or counterclockwise in a zigzagging web of moving parts. There is a logic here—the position of each piece dictates that of its neighbor—but no solid ground underlies the system as a whole. With this deliberate play of connection without coherence, Tinguely hints at the instability behind geometric abstraction’s apparent order.<sup>33</sup>

In addition to the Dadaesque interrelation of their internal parts, the machines establish an external connection: to the steady flow of electricity from their installation sites. A review of Tinguely’s 1959 exhibition at the Galerie Schmela in Düsseldorf made light of this fact, remarking that “the city’s public works thus play their part—albeit anonymously—as patrons in modern art’s success, delivering 220 volts at 6 amperes.” Nonetheless, the reliefs serve no clear function: they “cannot be used as mixing machines or electric razors.”<sup>34</sup> With their dependence on the electric grid, Tinguely’s works refute the autonomy frequently claimed by modern art.<sup>35</sup> They reframe art not only as useless but also as actively consuming, by literally expending public resources. Like Dada’s diagrams, then, Tinguely’s reliefs borrow the interconnected structures of machines but are deeply inefficient. They link to the city’s infrastructure only to drain energy, while their elements pull each other along in busy webs of activity that never yield a finished product.

As we have seen, movement is the primary vehicle for Tinguely’s critique—it enables the artist’s fields of metal parts to escape resolution, to circulate endlessly in Dadaesque networks. This literal movement is, finally, what sets Tinguely apart from his historical precedents. By introducing movement, Tinguely immersed his works in the flow of real time—and he soon discovered he could shape their durational form in a variety of ways. In 1961 Tinguely created an object that made that fact explicit: he trimmed one of his 1955 reliefs to fit the face of a grandfather clock and gave it the ironic title *Swiss Made*.<sup>36</sup> This nonfunctional clock hints at how Tinguely understood time not as a regular, homogeneous march forward, but as a malleable flow that he could manipulate for his own ends.<sup>37</sup> In the reliefs, Tinguely draws on viewers’ faculties of memory and anticipation to emphasize further the lack of compositional resolution at stake in the objects.

35. Moholy-Nagy provides an interesting comparison here; he, too, struggled with the slippery question of whether kinetic art should serve functional ends. Joyce Tsai has recently shown how, in 1930, the artist conceived of his *Light Prop* as a “total work” meant to transform the senses; by the end of his life, however, he had lost faith in technology’s transformative potential and described the work more simply as a mobile or kinetic sculpture. Tsai, László Moholy-Nagy: *Painting after Photography* (Oakland: University of California Press, 2018), 89.

36. Christina Bischofberger gives the work’s date as 1961, though the back of the relief carries the date 1955. When the work was recently sold at Christie’s, the auction house speculated that a 1955 relief had been cut down to its circular form in 1961, when the work was commissioned by the Swedish artist Oscar Reutersvård. Bischofberger, *Jean Tinguely, Catalogue raisonné*, 158. A comparison of the work in its current state with an archival photograph shows some discrepancies in the shapes of elements, perhaps resulting from the replacement of parts.



Jean Tinguely, *Swiss Made*, 1955/61, painted metal and mechanical clockwork, diameter 11½ in. (30 cm). Private collection (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph © Christie's Images / Bridgeman Images)

37. Peter Selz early noted the potential of kinetic art to shape the viewer's experience of time. In a symposium related to his 1966 exhibition *Directions in Kinetic Sculpture*, he prompted artists to think about how they could manipulate "the way sculpture develop[s] in time" through the elements of speed and duration. Selz, "The Berkeley Symposium on Kinetic Sculpture" (1966), in Selz, *Art in a Turbulent Era* (Ann Arbor: UMI, 1985), 293–94; see also Selz, *Directions in Kinetic Sculpture* (Berkeley: University of California, 1966). For an exemplary discussion of temporal modulation in the work of Pol Bury, see Lee, *Chronophobia*, 116–25.

38. Bordier, "Tinguely à la Galerie Arnaud," 30.

39. Gindertael, *Tinguely*, n.p.

40. Tinguely, "For Statics" (1959), in Bischofberger, *Jean Tinguely, Catalogue raisonné*, 88.

41. Hultén, "Vicarious Freedom," 35.

42. Harold Rosenberg, "Movement in Art," *Vogue*, February 1, 1967, 213.

Early critics diverged in their understanding of the works' temporal qualities. As I have noted, Bordier reported that Tinguely's machines create many distinct compositions, any one of which the viewer may choose by turning the device off.<sup>38</sup> In this interpretation, a meta-mechanical relief would resemble a manipulable object by Agam, in which a viewer moves parts to produce an arrangement that subsequently stands on its own. In contrast, Gindertael—who also perceived a "suite" of compositions in Tinguely's reliefs—observed that these configurations ultimately flow into a "single animated painting."<sup>39</sup> In the former reading, temporality is a side effect that results from presenting different pictures consecutively. In the second—more sophisticated—interpretation, duration is central to the work's meaning.

Tinguely himself embraced the idea of temporal flow. In a 1959 manifesto, he enjoined his readers to "forget hours, seconds, and minutes" and "live in the present."<sup>40</sup> Hultén interpreted the reliefs along similar lines: "There is no beginning and no end, no past and no future, only everlasting change," he wrote in 1955.<sup>41</sup> With their emphasis on the present moment, both statements typify the terms normally used to describe kinetic art. Harold Rosenberg, the New York critic of action painting, summarized this position in his 1967 essay "Movement in Art." There, he argues that kinetic art represents the apex of a transformation of "the art object into the art event." In its rush to set its viewers adrift in "a sea of occurrences," it marks nothing less than "the end of contemplation."<sup>42</sup> Kinetic art's immersion in real time, Rosenberg contends, blocks the suspension of time characteristic of previous art viewing, instead sweeping up the viewer in a whirl of events.

This common argument, however, assumes that viewing real-time action always produces a pure experience of "the present." Clearly this is not the case, as



any perception is necessarily colored by our memories of the past and our expectations of the future.<sup>43</sup> The experience of viewing Tinguely's reliefs, too, resists a simple reduction to the experience of the present moment. The works are better understood through a more nuanced framework.

In his 1968 essay "The Experience of Kinesis," Michael Kirby provides one such framework. He shows how kinetic artworks, although they move in real time, can generate distinct modes of temporal experience. The four-part scheme he offers for classifying kinetic works also suggests new avenues for understanding Tinguely's reliefs.<sup>44</sup> Many of these works fit most closely into Kirby's third category. In this model, an artwork changes, but makes no "extended dynamic claims to the past or future"; a sculpture that rocks back and forth in a circumscribed arc would fall into this category.<sup>45</sup> Most of Tinguely's reliefs include many parts that rotate at different speeds, making it difficult for a viewer to track their precise movements. But if the works' appearances are always different, they are also always the same, operating within a limited field of possibility.

This group of reliefs partakes in what I argue is a dominant tendency within kinetic art of the 1950s and 1960s: the enactment of constant activity, without "event." To differentiate between the event and eventlessness is to distinguish the bare fact of something taking place—a change in position or state—from a notable, and rarer, occurrence that stands out because it marks a culmination, turning point, or resolution. If an element performed a truly unexpected action, such as changing color or moving across the surface, the work would prompt viewers to produce memories and, in a way, generate a "past" for itself. It is partly the fact that these artworks conform to a general horizon of expectation that makes them difficult to remember. While the mode of eventlessness is perhaps easier to perceive in traditionally narrative-based forms such as literature, it has clear applications to time-based sculptural art.<sup>46</sup> In Tinguely's reliefs, parts constantly move but follow no narrative arc; their activities lack climaxes and resolutions. In their constant movement, they call attention to the absence of things truly happening.

The most complex of Tinguely's reliefs bear a slightly different relation to time, one that borders on Kirby's first mode. In this mode, viewers experience time actively charged with expectation. These reliefs belong to series called the *Oeufs d'onocrotales*, the *Stabilités*, and the *Probabilités*, which Tinguely created after his initial Malevich-style works. In the *Oeufs d'onocrotales* (Pelican eggs), the artist assembles groups of white, irregularly shaped elements that appear to be the fragments of a single form, such as a broken egg. The slow movement of the elements creates the expectation that they will eventually cohere and return to their original shape. Tinguely deliberately cultivates this sense of anticipation by using elements that seem to have been cut along a single boundary line—elements that theoretically could be rejoined, like puzzle pieces—and by placing them tantalizingly close to each other on the wooden surface. Yet no matter how long a viewer watches the turning pieces, the moment of resolution never arrives.<sup>47</sup>

This experience of time as frustrated anticipation both belies readings of Tinguely's work as expressing a pure present and differs from the steadier state of the Malevich-style reliefs. It also foreshadows the temporal experience of the artist's later, spectacular machine performances. Works such as *Hommage to New York* (1960), Christina Chau has recently argued, display a similar treatment of duration. The engineer Billy Klüver, describing the mechanical assemblage's

43. Edmund Husserl famously argued that the present has "width": it coexists with retention and protention, the involuntary processes of memory and anticipation that allow us to experience the world around us as continuous, rather than as a series of distinct "now" moments. That is, we always passively remember and anticipate events as we experience the present: there is no such thing as an experience of "pure" presentness. For Husserl, this structure of time explains the phenomenon of surprise, which occurs when an event contradicts our implicit anticipation. See Dan Zahavi, *Husserl's Phenomenology* (Stanford: Stanford University Press, 2003), 82.

44. Michael Kirby, "The Experience of Kinesis," *Art News* 66, no. 10 (February 1968), repr. in *The Art of Time: Essays on the Avant-Garde* (New York: E.P. Dutton, 1969). Kirby's analysis clearly draws from Husserl's phenomenological theory of time.

45. *Ibid.*, 253.

46. Michael Sayeau has recently suggested that a de-emphasis on the event is a characteristic feature of modernist literature, one seen in the novels of Robert Musil, Marcel Proust, Virginia Woolf, and others. Such works privilege everyday goings-on, emphasize continuity over dramatic change, and ultimately resist neat resolution; their structure, Sayeau proposes, is "a side effect alongside the more familiar temporal effects of modernity: progress, acceleration, and teleological distractedness." Sayeau, *Against the Event: The Everyday and the Evolution of Modernist Narrative* (Oxford: Oxford University Press, 2013), 10.

47. The frustrating dynamic of the *Oeufs* recalls another early instance of kinetic art: Alberto Giacometti's *Suspended Ball* (1930–31), in which the titular ball hangs over an elongated wedge; the shapes of the two forms suggest that they might be joined, yet the slightly too-short length of the string prevents them from ever meeting.



**Jean Tinguely, Stabilisation définitive no. 1 (from the Oeuf d'onocrotale series), 1958,** black wood panel with seven differently shaped metal elements, all painted white; back: wood pulleys, rubber belt, metal rods, electric motor 115 V, 39½ x 34¾ x 7½ in. (100.2 x 88 x 20 cm). Private collection (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph by Studio Ferrazzini-Bouchet, provided by Musée Barbier-Muller)

autodestruction in the Museum of Modern Art's Sculpture Garden, recalled his own experience of anxious waiting punctuated by occasional, unpredictable moments of collapse. By protracting the process of its own breakdown over an extended period, *Hommage* demonstrated Tinguely's "intention to manipulate a sense of time—one that draws out, prolongs, and becomes excruciating as a result of anticipation."<sup>48</sup> The evidence suggests that Tinguely experimented with different temporal modalities in his early reliefs and continued to draw on these modes in his later, larger-scale works. Yet it is important to note that, while *Hommage* had a clear beginning and end, the reliefs cannot be said to possess a similar narrative arc.

Tinguely clearly saw metaphorical resonances in the reliefs. He named some of them *Éclosion* (Hatching, or Blooming) and *Spirale éclatée* (Exploded spiral), suggesting their resemblance to objects in the process of formation or destruction. In 1956 he titled two works *Yokohama* and *Yokohama II*, referring to the Japanese city destroyed by American bombing in World War II (and devastated by an earthquake two decades earlier). *Yokohama II* resembles many of the *Oeufs*. Its cluster of black elements on a white background consists mostly of circles set alongside the irregular, leftover scraps of metal from which those circles have been cut. Drawing a comparison between the literal destruction of war and the destruction of form, Tinguely suggests the impossibility of return to an original, unbroken state. As Lee has written of durational art in the 1960s more generally, in these works "time . . . becomes a figuration of uncertainty about the mechanics of historical change itself."<sup>49</sup> The reliefs point toward a past moment and gesture toward a future one, yet they remain suspended in a state of irresolution.

In hindsight, then, Hultén's claim that the meta-mechanical reliefs have "no past and no future" fails to account for the nuance of the works' temporal nature.<sup>50</sup> While the works move in real time, they play with memory and expectation in a range of ways; their "eventless" quality can be understood as an avoidance, staving-off, or suspension of compositional resolution. (The German Zero artist Heinz Mack expressed a similar sentiment when he described the effect of infinite vibration in his work as a means to evade "the sadness of finality."<sup>51</sup>) In the *Oeufs* and related works, the prolonged suspense that viewers feel takes on a symbolic weight. While Tinguely's works critique their forebears by refusing to reach a finished state, they also evidence skepticism about the possibility of neat resolution in a more expansive—even historical—sense.

We have seen how the reliefs' moving parts model the anxiety that had long surrounded abstract composition—one visible in the writings and practices of prewar modernists, but concealed in their finished works. We have also seen how Tinguely shaped the durational aspect of the reliefs to underscore his point. As much as these works serve as a commentary on Tinguely's artistic inheritance, however, they also propose a new model for what art might be. With their many parts constantly generating new relationships among themselves, their precise appearance at any moment is hard to predict; it lies beyond the reach even of Tinguely himself. The artist explained in a 1966 interview with Alain Jouffroy, "I constructed these reliefs as paintings in which poetry intervened despite me; they work all by themselves and place themselves in the infinite."<sup>52</sup> In this new artistic model, Tinguely shares responsibility for the work's appearance with the object itself, and in turn asks viewers to accept this indeterminacy.

48. Chau, *Movement*, 50.

49. Lee, *Chronophobia*, 8.

50. Hultén, "Vicarious Freedom," 35. Tinguely did produce a handful of works that might be said to have "no past and no future," including two titled *Constance indéterminée* (1955) in which rapidly turning elements generate ghostly volumes. In 1958 he collaborated with Yves Klein to create additional works in this vein. In an exhibition at Galerie Iris Clert in Paris titled *Pure Speed and Monochrome Stability*, the pair showed spinning monochrome discs that create dematerialized clouds of color. Although the collaboration was short-lived, Tinguely's encounter with Klein encouraged his interest in dematerialization, which would come to a head in his autodestructive machine performances. See Klein, "'Pure Velocity and Monochrome Stability': An Account of the Exhibition in Collaboration with Jean Tinguely at Galerie Iris Clert," in *Overcoming the Problematics of Art: The Writings of Yves Klein*, trans. Klaus Ottman (Putnam, CT: Spring Publications, 2007), 30–37.

51. Heinz Mack, "Resting Restlessness," in *Zero*, ed. Otto Piene and Mack, trans. Howard Beckman (Cambridge, MA: MIT Press, 1973), 41; first pub. *Zero*, no. 2 (1958).

52. Tinguely quoted in Alain Jouffroy, "Tinguely," *L'oeil*, no. 136 (April 1966).



**Jean Tinguely, *Yokohama II*, 1956,** white wood panel with seventeen differently shaped, black metal elements; back: wood pulleys, rubber belts, metal fixtures, electric motor 110 V,  $51\frac{1}{2} \times 67\frac{3}{8} \times 12\frac{1}{8}$  in. ( $130 \times 171 \times 40$  cm). Private collection (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph © André Morin, provided by Galerie GP & N Vallois, Paris)



**Jean Tinguely, *Maschinenbild Haus Lange*, 1960/2004,** wood panel painted black with five rectangular, sheet-iron elements painted white; interior: wooden wheels, rubber belts, metal rods, electric motor,  $25\frac{1}{2} \times 25\frac{1}{2} \times 3$  in. ( $65 \times 65 \times 8$  cm). Museum Tinguely, Basel (artwork © 2019 Artists Rights Society [ARS], New York / ADAGP, Paris; photograph by Christian Baur, © Museum Tinguely, Basel)

This is not to say that Tinguely relinquished his artistic agency entirely. It remains present in the selection of elements, the choice of colors, the speed and circumference of movements, and even the initial decision to work with kinematic flux. Fixed parts and mechanical laws predetermine the elements' paths, and there are clear limits on the extent of their activities. Yet the unforeseeable quality of the constant flow of compositions, once the work has been set in motion, represents a considerable erosion of authorial control.

Tinguely's meta-mechanical reliefs can be seen as an early moment in art's gradual embrace of liveness and indeterminacy in the late 1950s and early 1960s, one visible in the rise of Happenings, process art, and performance. This tendency took on its own flavor in the realm of kinetic art. Electric motors generate repetitive rotational movement; artists, seeking to render their works less predictable, had to resist this inherent quality. A common strategy was to create systems so complex that they exceed the ability of the human mind—even the artist's own—to identify patterns or pinpoint moments of repetition. Such artworks create the impression, if not the reality, of continual newness. (We can think, for example, of Pol Bury's fields of quivering wires, or the erratic palpitations of Gianni Colombo's Styrofoam grids.) Many artists took pleasure in the fact that they could not anticipate the precise activities of their works; Robert Breer spoke

of the “Pygmalion situation” he created when releasing his wandering Float sculptures into the world.<sup>53</sup>

When these artworks first appeared, observers struggled with how to evaluate objects whose action was not entirely within the artist’s foresight. Clement Greenberg grappled with this point in a review of a 1943 Calder exhibition. While calling Calder “one of our best artists,” Greenberg nonetheless complains: “More seems to be wanted. This particular world lacks history. Lots of things go on in it but nothing happens; for its laws have no necessity and are not sufficiently determined by a driving purpose working itself out variously and progressively in fulfillment of the will or inherent nature of its creator.”<sup>54</sup> That is, Greenberg argues that the absence of a guiding subjectivity prevents the mobiles from producing meaningful events. In their jumble of mere “happenings,” they fail to generate “history,” which the critic understands as a linear process directed toward specific ends.<sup>55</sup>

In the ungoverned meandering of Calder’s mobiles and the mechanical turns of Tinguely’s reliefs, the parameters of the artistic experience lack temporal boundaries and lie beyond the artist’s command. For Tinguely, the “going on” without “happening” characteristic of his reliefs was precisely the point. In his endless protraction of the artistic process, he proposed another vision of time’s passing—one more subject to fluctuation and variability. By accepting the flow of images that resulted along the way, he acknowledged the limits of his own artistic agency.

Tinguely carried the relief series further in one final project. In 1960, for an exhibition at the Museum Haus Lange in Krefeld, Germany, he designed a Malevich-style relief called *Maschinenbild Haus Lange*. Viewers who purchased the exhibition catalogue received a plan of the relief with building instructions, which they could use to fabricate the object independently of the artist. Upon completing the construction, they could send a photograph to the museum and receive a signed label from Tinguely, to be affixed to the back of the work.<sup>56</sup> The project shows how Tinguely’s ambition to undercut subjective composition—by placing his reliefs in the flow of time and allowing their arrangements to take shape beyond his control—found its logical endpoint in the complete withdrawal of the artist’s hand.

*Maschinenbild Haus Lange* would be Tinguely’s last major engagement with the relief format; after 1959, his focus had shifted to drawing machines, performance-based works, and large-scale kinetic sculptures. But the meta-mechanical reliefs stand out as perhaps his deepest engagement with the art historical tradition. The reliefs strikingly undermined the principles of abstraction, pointing to long-simmering ambivalence about whether any abstract composition could be superior to any other. At the same time, the works extend beyond their painterly context and resonate with larger ideas about time and change. Tinguely often spoke about ambient change as an essential quality of everyday life. “Maybe it is possible to make things that are so close to life that they exist as simply and changeably and permanently as a cat jumping, or a child playing, or a truck going by outside, and if so I would very much like to make them,” he once said.<sup>57</sup>

Tinguely’s reliefs give palpable form to a moment of artistic and philosophical transition. They live within the realm of modernist abstraction and its attendant discourses, but they also point forward: they foreshadow by more than a

53. Charles Levine, “An Interview with Robert Breer Conducted by Charles Levine at Breer’s Home, Palisades, N.Y., Approximate Date July 1970,” *Film Culture*, no. 56–57 (1973): 66.

54. Clement Greenberg, “Review of Exhibitions of Alexander Calder and Giorgio de Chirico,” *The Nation*, October 23, 1943, repr. in Clement Greenberg: *The Collected Essays and Criticism*, ed. John O’Brian, vol. 1, (Chicago: University of Chicago Press, 1988), 159.

55. Greenberg’s critique contains the seeds of Michael Fried’s later attack on Minimalism: Fried would famously charge that the movement’s stripped-down sculptural forms replaced full artistic “presentness” with a pointless “endlessness,” one that left viewers with the feeling of driving on a circular road. Fried, “Art and Objecthood” (1967), in *Art and Objecthood: Essays and Reviews* (Chicago: University of Chicago Press, 1998), 148–72. See Lee, 36–81, for an in-depth analysis of the complex role of temporality in Fried’s essay.

56. Jean Tinguely, “Maschinenbild Haus Lange: Bauanleitung,” single-page insert for exh. cat. Museum Haus Lange, Krefeld, 1960, rep. *Museum Tinguely Basel: The Collection*, ed. Andres Pardey, exh. cat. (Basel: Museum Tinguely, 2012), 397.

57. Tinguely quoted in Calvin Tomkins, *The Bride and the Bachelors: Five Masters of the Avant-Garde*, expanded ed. (New York: Penguin, 1976), 186.

decade the rise of postmodernism, with its rethinking of authorship and embrace of semiotic openness. In the mid-1950s—long before Roland Barthes would announce the death of the author in 1967—Tinguely adopted the voices of his artistic predecessors to articulate the fragility of artistic agency and meaning that those painters had only just begun to sense. His perennially unresolved reliefs announced the end of formal composition; his permanently shattered shapes suggested that something had broken and could not be recovered. But Tinguely sensed that something new could also take its place. With his reliefs, he asked viewers to accept art—and life—as a constant process of revision and remaking.

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