

1. Alexander Calder, *Grandeur-Immense*, 1935
 Drypoint etching for Anatole Jakovski's *23 Gravures*

A line relates, connects.
 It is an integral means of determining rhythm. Reflection shows, however, that what gives the just relationship in one direction constitutes individuality of parts in the other direction.¹
 — John Dewey

Liberating Lines

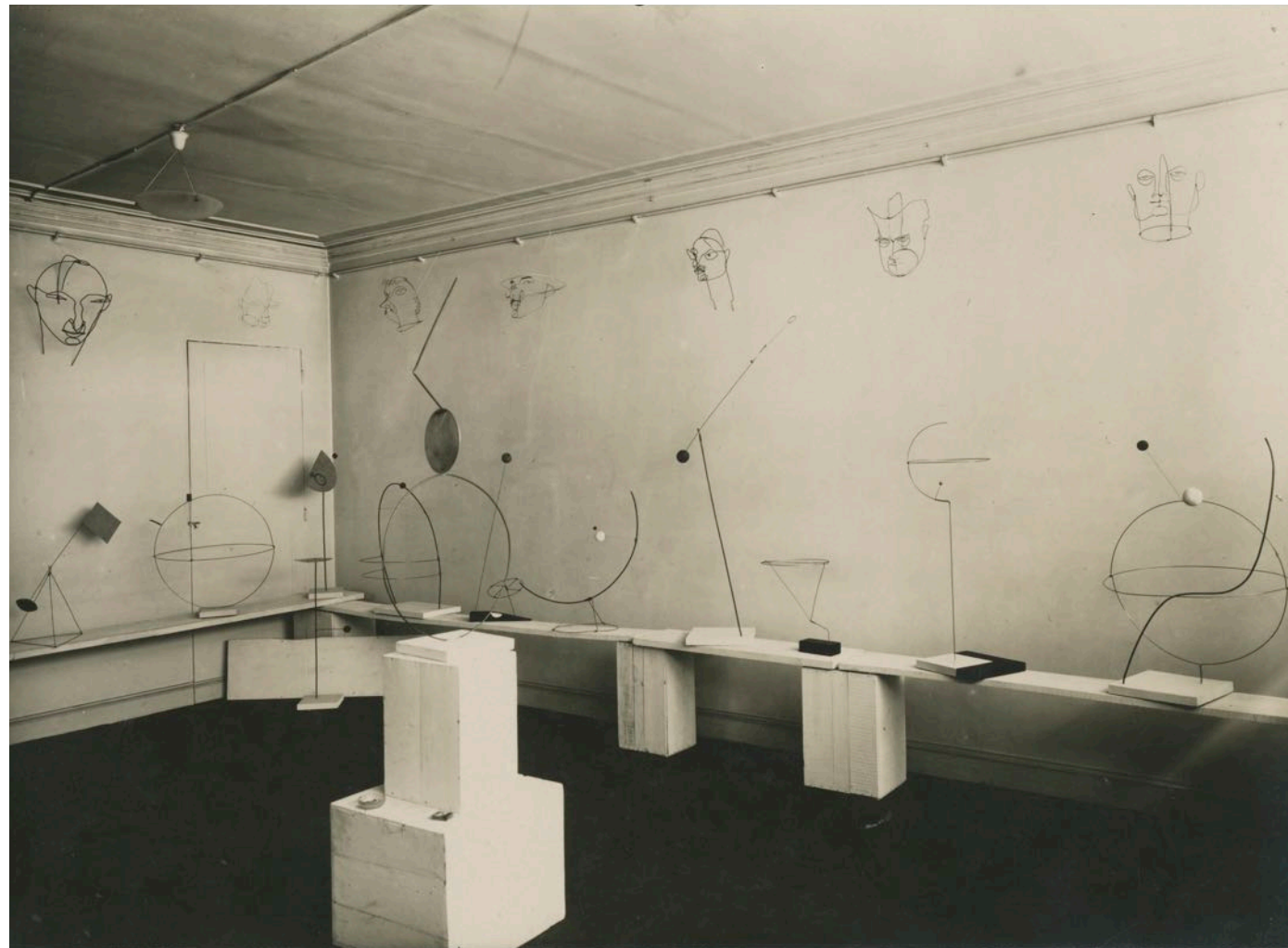
by Susan Braeuer Dam

In his preface to *23 Gravures*, a portfolio of etchings published in Paris in the summer of 1935, Anatole Jakovski proclaimed, “I salute you, painters, sculptors, engravers, fortune-tellers of good adventure, unique psychics of this beautiful spectacle that is the night, black and death.”² Among the artists lauded by the French-Moldovan critic on the eve of World War II were Jean Arp, Alexander Calder, Alberto Giacometti, Julio González, Jean Hélion, Wassily Kandinsky, Fernand Léger, Joan Miró, Pablo Picasso, and Marcel Duchamp (whose contribution to the portfolio was mysteriously stolen in the production process). Though Calder had moved back to New York from Paris exactly two years prior to the publication date, in part due to the political upheavals in Europe, he clearly maintained his stance at the forefront of the international avant-garde, in this case as the only American in Jakovski’s camp (fig. 1).

While Calder has since been viewed in relation to many of his European contemporaries, his apparent kinship with Picasso is particularly striking. Both were born in the nineteenth century to artist fathers working in the classical tradition, yet both played the hands they were dealt with unflinching ingenuity, perhaps out of sheer will to be only themselves. Picasso’s father was José Ruiz y Blasco, a realistic painter and art teacher from Málaga. Calder’s father was Alexander Stirling Calder, a well-known creator of large public sculpture from Philadelphia, who was also the son of another famous sculptor, Scottish-born Alexander Milne Calder. Before the age of ten both Picasso and Calder began to make their own works of art, and this self-ruling discipline, ushered in by a conventional lineage, at once grounded and augmented their innovations. Both eventually settled in Paris, where they interrogated the

very nature of artistic genres while simultaneously respecting the integrity of those genres. André Breton embraced both artists to different degrees, yet they remained unsympathetic to his dictatorial ways. Neither artist aligned himself with Surrealism, though both exhibited in major Surrealist shows in the 1930s and 1940s.³ Throughout it all, they took a quiet interest in each other's art and shared many of the same friends and supporters—among them Marie Cuttoli, Henri-Pierre Roché, and Christian Zervos.

However much their paths seem to align, Picasso and Calder were distinct in their endeavors. While connections are often drawn between them, the truth is that they forged ahead in individual yet protean ways, encouraging infinite interpretations. Perhaps nowhere is this more apparent than in reference to their sculptures of the 1920s—celebrated as “drawings in space”—that so radically liberated line from two dimensions into three.



2. Installation view of Alexandre Calder: *Volumes-Vecteurs-Densités / Dessins-Portraits*, presented at Galerie Percier, Paris, 1931

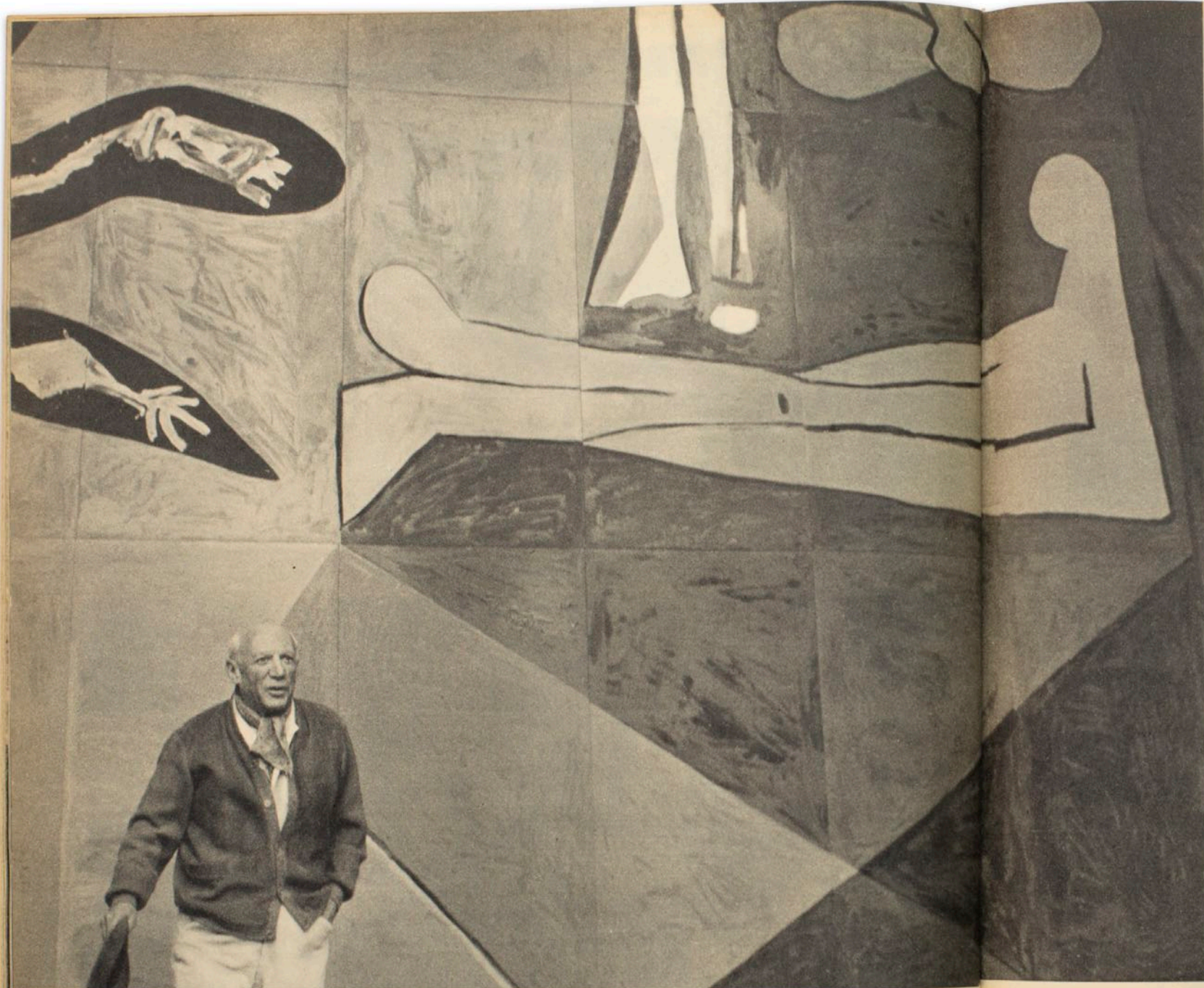
Encounters

Calder and Picasso first met on 27 April 1931, with interactions thereafter being few and far between. “Picasso came, very early, to my show at Percier,” wrote Calder, “and I was introduced.”⁴ *Alexandre Calder: Volumes–Vecteurs–Densités / Dessins–Portraits* was Calder’s premiere of abstract sculpture in sheet metal, wood, and wire, and it also included about a dozen of his famed wire portraits, along with a series of single-line drawings (fig. 2).⁵ Even from this early point, one could intuit the galvanizing predilection for line that would come to emphasize the magnificent unity of Calder’s oeuvre, which was itself subject to reinventions over the course of seven decades. The following February, Picasso also made a point to see the Duchamp-organized *Calder: ses mobiles* at Cuttoli’s Galerie Vignon, Calder’s first show of mobiles, ingeniously named as such by Duchamp. Calder, bemused in retrospect, wrote, “I heard [Picasso] had been at Gal. Vignon (He comes to new shows hoping to pick up something he can use—I guess) (mechant moi!).”⁶ This rare display of ferocity was only natural coming from Calder, an artist who valued “that sensation of construction with a clear conscience,” as he once described his intuitive process to Ben Nicholson.⁷ Picasso and his contemporaries surely recognized in Calder this integrity of intuition, and in his works a tangible presence of continual becoming.

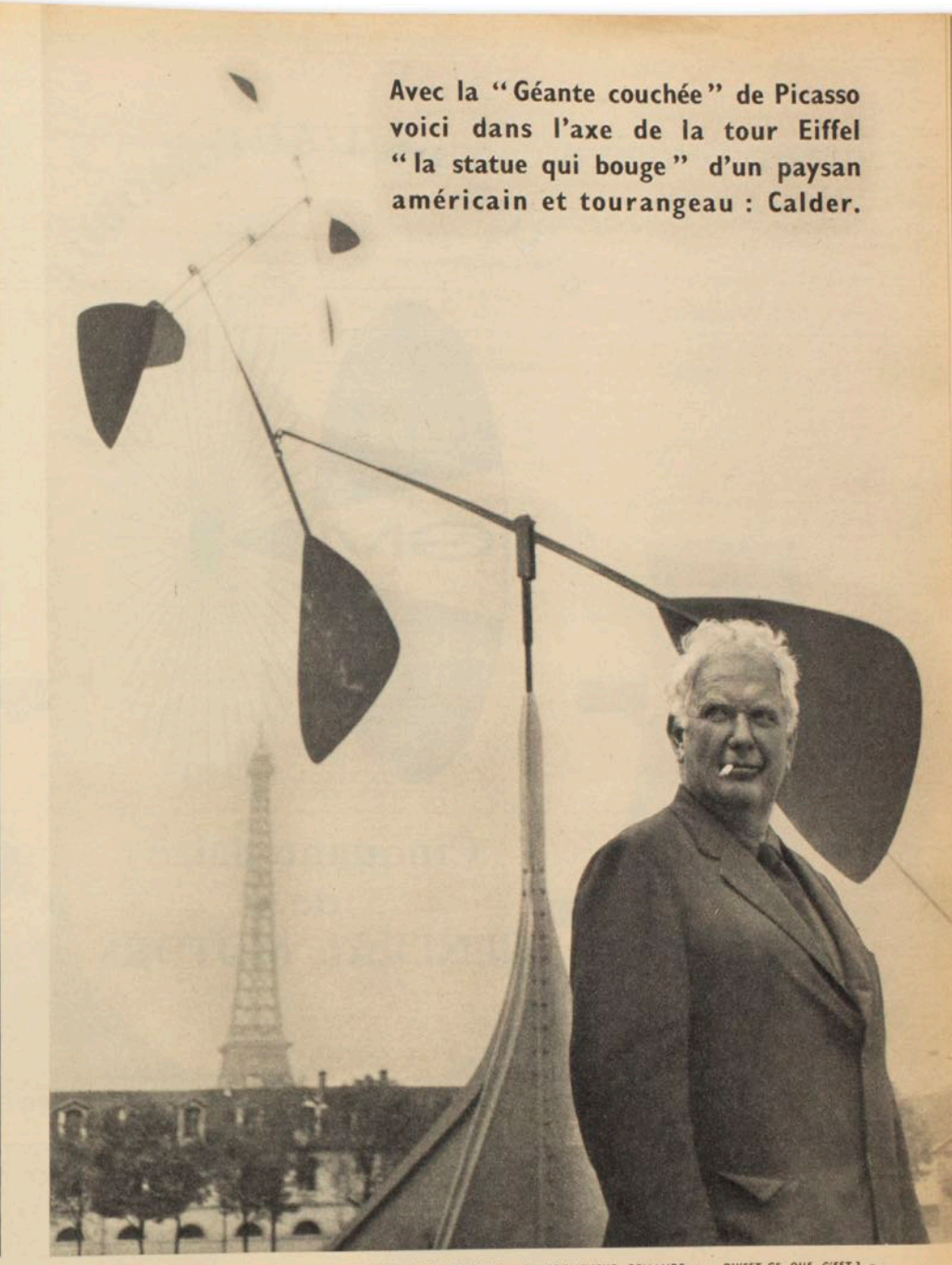
Art-world arbiters drew connections between the artists from the start. The wire portraits in the Percier show hung high on the wall above the abstract objects; as one reviewer wrote, “The shadows of these little linear constructions trace a sort of drawing on the white wall in the manner of Picasso.”⁸ This parallel was echoed six years later in a review of Calder’s solo show of non-objective works at the Mayor Gallery in London: “Among the nicest pieces are plain wire objects. These, seen against a white wall, are rather like certain abstract drawings of Picasso, and might be used to explain the structure of some aberrated atom, only instead of one drawing you have an infinite number as they turn about on their strings.”⁹

Calder preferred to place or hang his wire portraits, like his mobiles, against an artificial light, with shadows not only conflating drawing and sculpture but multiplicities of perception in two, three, and four dimensions. The transparent volume of a hanging wire sculpture challenges the brain to perceive depth, and as the object spins on its string, the projected shadow moves in and out of focus, creating a three-dimensional effect within two dimensions, all occurring within the fourth dimension of time. “The shadows have their seasons, too”—to quote John Updike’s poem *Penumbrae*—and seasons, too, have immeasurable contours.¹⁰ It is in this equivocal realm that the perceptual lines of Calder’s wire objects thrive, like vestigial remnants, saying much with very little.

In July 1937 came the artists’ fabled encounter at the Paris World’s Fair, as documented in photographs by Hugo P. Herdeg (commissioned by *Cahiers d’Art*). There, Calder’s *Mercury Fountain* was installed in proximity to Picasso’s *Guernica*, at the entrance of Luis Lacasa and Josep Lluís Sert’s Spanish pavilion. With Picasso’s imagery of insurmountable destruction set



POUR DECORER LE PALAIS DE L'U.N.E.S.C.O. A PARIS (INAUGURATION EN NOVEMBRE) L'INTELLIGENZIA MONDIALE A MOBILISE L'ART D'AVANT-GARDE. LE DOYEN, PICASSO, A LIVRE ICI SA



Avec la "Géante couchée" de Picasso voici dans l'axe de la tour Eiffel "la statue qui bouge" d'un paysan américain et tourangeau : Calder.

PREMIERE COMMANDE OFFICIELLE : 80 M. 60 ANS APRES EIFFEL, CALDER DONNE A PARIS UNE « BÊTE EN FER ». LE PROMENEUR DEMANDE : « QU'EST-CE QUE C'EST ? »

L'UNESCO : SCANDALE AU COIN DE LA RUE

DEPUIS le 1^{er} septembre, l'avenue de Suffren a un tic. A un moment donné, comme au commandement, tous les gens qui y passent s'arrêtent et regardent en l'air. On dirait qu'on vient de les interpellé. Mais vous pouvez chercher : il n'y a personne — sauf un objet, une « chose » monumentale peinte en noir qui évolue avec une lenteur ironique juste à l'angle du nouveau palais de l'U.N.E.S.C.O. Les passants regardent, hochent la tête et repartent, songeurs. Pour un moment, quels qu'ils soient — dactylos, ouvriers, avocats, militaires de l'Ecole — leur destin personnel et le souci des affaires du monde sont restés accrochés

à ce complexe de tiges et de pales qui leur a dit à chacun : « Vivez, soyez heureux, la vie n'est pas aussi laide que vous le croyez. » En 1958, année des fusées pour la lune, avec ce fascinant « mobile », l'art moderne est descendu dans la rue.
Vu du ciel, le nouveau palais de l'U.N.E.S.C.O. — 7 étages, 800 bureaux, 4 ans d'études, 2 ans et demi de réalisation, 60 000 mètres carrés bâtis, plus de 3 milliards de francs — a la forme d'une étoile. Entre les murs et l'avenue, devant le festival de verre et de ciment de sa façade en demi-lune perchée sur des pilotis obliques, une tige d'acier supporte

en équilibre instable sur sa pointe, une autre tige. A cette tige horizontale d'autres sont accrochées. Elles sont ornées de sept pales, comme d'énormes feuilles. Ou des rames. Mais ce n'est pas l'eau que les rames vont brasser. C'est l'air. Et quand le vent se lève, même faiblement, le système tout entier se met en mouvement, avec la solennelle lenteur des grands oiseaux de proie qu'on voit très haut dans le ciel se laisser porter en silence par des courants occultes. Tel est le « mobile » d'Alexander Calder, citoyen américain de Roxbury (Connecticut) et gentleman-farmer de Saché (Indre-et-Loire).

Il y a déjà trente ans que ce massif, poupin et joyeux personnage de soixante ans, aux cheveux blancs, toujours vêtu d'une magnifique chemise rouge groseille, édifie à travers le monde, de Tokyo à Rio de Janeiro, ces statues d'aluminium ou d'acier conçues pour bouger au gré des vents, comme nos pensées se composent et varient au gré du hasard qui les inspire. Depuis trente ans, Calder a reçu beaucoup d'hommages (« ingénieur en certs-volants, ferronnier du mouvement,

Jean-François Chabrun
(Suite page 81.)

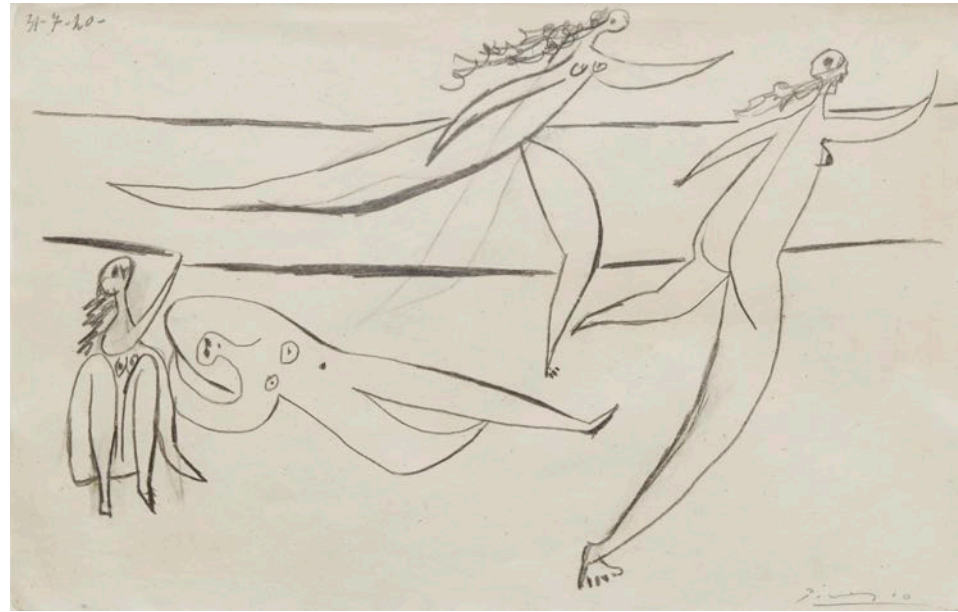
against Calder's fountain of fluid mercury mined in Almadén, during those summer months in Paris no two works could have seemed more diverse in their affirmation of the Spanish Republic. Two decades later, for the 1953 São Paulo Biennial, Picasso's *Guernica* again commanded a space near Calder's sculptures, which filled the ground floor of Oscar Niemeyer's Pavilion of States. As one critic so eloquently put it, "[Picasso's] painting and [Calder's] artistic intents in motion gradually but effectively transmitted to me the clear perception that the world and its charms, imponderables and mysteries... are always out there, in a state of desuetude, waiting for their revelation at the hands of poets."¹¹ In 1958, the two artists joined Arp, Miró, Isamu Noguchi, Rufino Tamayo, and others in commissions for the UNESCO headquarters in Paris—designed by Marcel Breuer, Pier Luigi Nervi, and Bernard Zehrfuss—with Picasso's *The Fall of Icarus* and Calder's *Spirale* (fig. 3).

Beyond the limelight, Calder and Picasso crossed paths from time to time. In 1952, Calder and his wife Louisa had lunch with Picasso and his family at the home of Cuttoli. They reconvened the following year, during the Calders' yearlong sojourn in Aix-in-Provence. In an unpublished manuscript, Calder writes amusingly about the second encounter:

Louisa and I drove from Aix to have lunch with Cuttoli and Laugier at Antibes. After lunch I asked if we could see Picasso. So Marie took us to Vallauris—on the way we saw a sign "16 Potiers veulent vous montrer leur travail" [*16 Potters want to show you their work*]. Finally we came to a shop, where there were pretty bad things, mostly, but a few Picassos. We stood around a while, and finally le maître appeared—Mme Cuttoli had sent in word that she was there. He was quite cordial, and took us into the shop and showed us things. Finally he showed a platter, with a bull-fight in the middle, and decorated around the rim with raised ridges. I said "Ça c'est pour que la viande ne dérape pas" [*That's so the meat doesn't slide*]. I didn't notice, but a friend standing behind me later told us that he got red in the face. I haven't seen him since.¹²

Archival photographs from the 1950s speak to a Picasso-Calder narrative. In one from 1954, Picasso stands in his Vallauris studio, surrounded by sheet-metal sculptures of Sylvette David, his model at the time, with a mobile hanging high above him (fig. 4). While the mobile's origin is unknown—the creator was neither Calder nor Picasso—its presence is evocative. Photographs taken by Herbert Matter of Calder's Roxbury studio desk in 1950 (figs. 6-7) show Picasso memorabilia, namely a photograph of *Femme assise dans une chaise* (1938) and a 1947 catalogue from Buchholz Gallery/Curt Valentin that features *Femmes devant la mer* (fig. 5) on the cover (1920). This drawing was one of two Picassos in Calder's collection, the other being an oil painting, *Mandoline, cruche et verre* (1959). While a constellation of connections takes many forms within these flexibly framed encounters, a statement made by Picasso distills the crux of both innovators' works: "To me there is no past or future in art. If a work of art cannot live always in the present it must not be considered at all."¹³





5. Pablo Picasso, *Femmes devant la mer*, 1920
6-7. Alexander Calder's desk in his Roxbury studio, 1950

Drawing in Space

As so often happens in art world praxes, completely disparate artists who have never interacted begin to think about similar things and how to achieve them. Such is the case with Picasso and Calder, who shared a spirit of iconoclasm that revealed itself through “drawing in space,” or the delineation of non-space.

It is a common misconception that the phrase originated with Julio González in 1932, writing in reference to Picasso’s diagrammatic iron maquettes from 1928. Rather, it was coined in 1929 to describe Calder’s figurative wire sculptures, which he had formally realized in 1926 (though he had been using wire to sculpt since childhood). These works were a new type of massless sculpture in which expressive lines of wire defined spatial volumes suggestive of forms, be they animals, personalities of the day, friends, or mythological figures. Instead of calling them “sculpture,” Calder was known to call them “objects,” to indicate his break from the tradition of sculpting in marble, bronze, and clay. As he later remarked in an interview in 1959, “What I want to avoid is the impression of mud piled on the floor.”¹⁴

The earliest documented use of “drawing in space” in terms of Calder’s practice appeared on 2 February 1929 in a review of *Sculptures bois et fil de fer de Alexandre Calder*, the solo show at Galerie Billiet-Pierre Vorms, Paris. Writing for Paris-Midi, a critic announced:

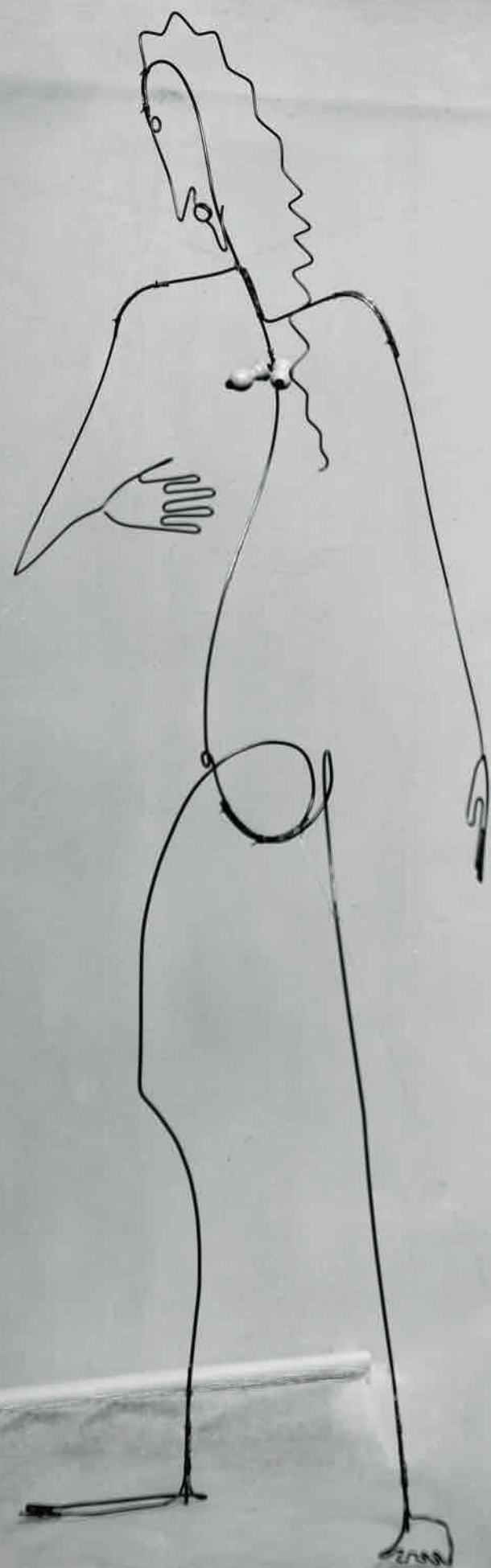
The Independants had accustomed us to wire sculptures. Mr. Alexander Calder personally takes over the perilous exercise. Horses rear up, riders brace themselves, dancers throw to the sky legs more rigid than doorbell wires. It looks like a drawing in space. One can imagine the patience of the sculptor armed with pincers and pliers and uncoiling around his stele the spool of copper wire that he will twist and untwist to give birth to figures. Games for drawers with vigorous wrists.¹⁵

On the following day, the phrase again appeared in Paul Fierens’s review of Calder’s work at the Salon de la Société des Artistes Indépendants, Grand Palais des Champs-Élysées, published in *Journal des Débats*. Writing in reference to *Romulus and Remus* and *Spring* (fig. 8), both large-scale wire sculptures from 1928 that incorporated classical themes, Fierens remarked:

A humorist, ultimately, the great success of laughter of the present Salon: Calder. With wire and some pieces of wood, in an amusing form, that he arranges in the right place, he constructs a figure that resembles a Modigliani drawing and he crouches Romulus and Remus under the absent body of the nourishing she-wolf. The serious people shrug their shoulders. We must admit that the joke didn’t seem bad to us. This drawing in space, which Calder didn’t invent, he uses it with the pretty verve of a caricaturist and even something more.¹⁶

Four months following Fierens’s review, Edouard Ramond wrote of Calder’s practice in Paris Montparnasse:

Whether this wire bends itself poorly into a curve, whether it clings inappropriately and will be the end of all sculpture: we will have before our eyes the metal portrayal of a drawing in space, we won’t have a well-evoked mass.¹⁷



That Calder gained recognition at a time when the notion of transparency was among the most crucial of the avant-garde's concerns may have prompted critics, in the manner of Fierens, to throw into question who "invented" what—despite the fact that Calder was the first to literally draw in space with wire, bringing to sculpture a state of transparency like none other. It is often mistakenly surmised that Calder was informed by the Cubists, Futurists, and Constructivists, who had sought to achieve transparency through a variety of unconventional means (including glass, Plexiglas, celluloid, and wire), yet he was unaware of their experiments when he arrived in Paris to expand upon his practice in 1926. It was not until three years later, in a statement from January–February 1929—written around the same moment that works such as *Romulus and Remus* and *Spring* were making a splash at the Grand Palais—that he situated himself within the discourse:

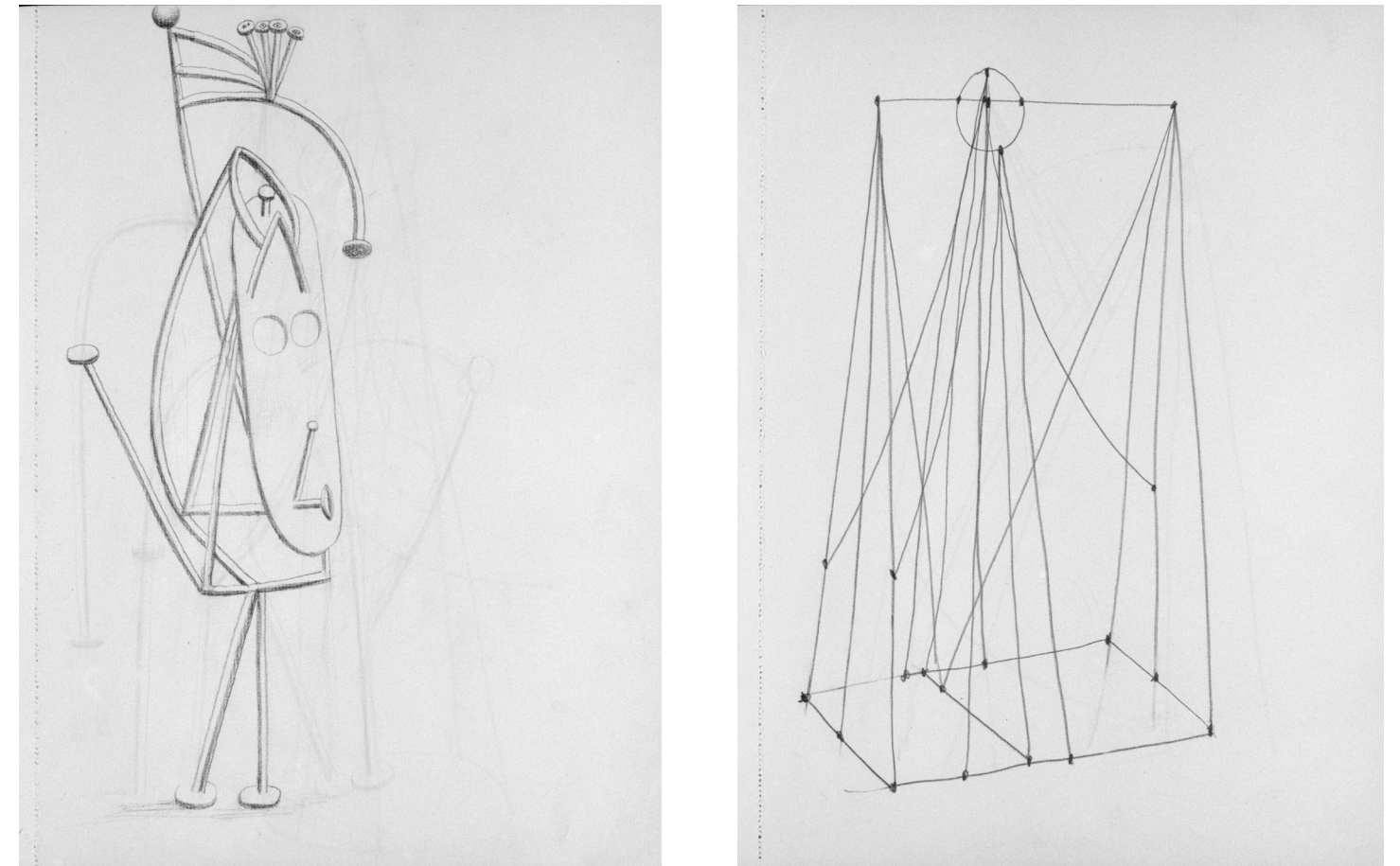
There is one thing, in particular, which connects them [the wire sculptures] with history. One of the canons of the futuristic painters, as propounded by Modigliani, was that objects behind other objects should not be lost to view, but should be shown through the others by making the latter transparent. The wire sculpture accomplishes this in a most decided manner.¹⁸

Three years after the term "drawing in space" appeared in the Parisian newspapers in relation to Calder, a variation on the phrase emerged, in a completely different context, in a manuscript by González known as "Picasso sculpteur et les cathédrales." Interestingly, the 1932 text was not published in its entirety until 1978, more than four decades after it was first written. In what remains one of the most revealing documents on his collaboration with Picasso, González writes:

Only a cathedral spire can indicate a point in the sky where our soul rests in suspension. As in the restlessness of the night, the stars mark out points of hope in the sky. [so too] this immobile spire marks out an infinite number of them to us. It is these points in the infinite which are the precursors of this new art: To draw in space.¹⁹

Picasso and González's partnership began in the spring of 1928 on the occasion of Picasso's commission to create a monument for his longtime friend, Guillaume Apollinaire, who had died ten years prior.²⁰ That fall they translated Picasso's line drawings, which were made in Dinard the previous summer, into four iron constructions, or maquettes for the monument (figs. 9-11). Picasso sought inspiration not from the requirements of the Society of the Friends of Apollinaire, who had a traditional bust in mind, but rather the very writings of Apollinaire—specifically *Le poète assassiné*, in which Tristouse Ballerinette responds to l'Oiseau de Bénin's concept for a monument for the larger-than-life Croniamantal: "A statue of nothing, of a void, that is magnificent."²¹ Two of Picasso's maquettes were submitted to the committee in 1928. They were never formally accepted, and it was not until 1962 that an enlarged version was made, this time as a model for a monumental version constructed in 1972 for the Museum of Modern Art, New York.

Much as he drew inspiration from the work of Apollinaire, Picasso was fascinated by celestial maps. In a statement attributed to Picasso, which



9-10. Pablo Picasso, Two drawings for sculpture projects, 1927

relates to his 1924 series of dot-and-line drawings from Juan-les-Pins—often suggested as conceptual blueprints for his maquettes—the artist remarks:

I'm a great admirer of celestial maps. They seem beautiful to me irrespective of their meaning. So one fine day I started drawing a huge number of points linked by lines and blots that seemed suspended in the sky. I had the idea of using them in my compositions, introducing them as purely graphic elements.²²

Taken together, González's, Apollinaire's, and Picasso's words lend the maquettes for a monument to Apollinaire a chimeric presence beyond figuration or abstraction, one that engages both spatial and temporal notions of monumentality by way of constellating lines that seemingly collide light years away. In 1948, Daniel Henry Kahnweiler added another layer of imagery to them when he wrote:

The wire constructions... constitute a sort of drawing in space, but at the same time form the first step toward the conquest, by sculpture, of a domain that had previously never belonged to anything but architecture: the creation of space. They are, in fact, not only line drawing in space, but they define it in fragments.²³

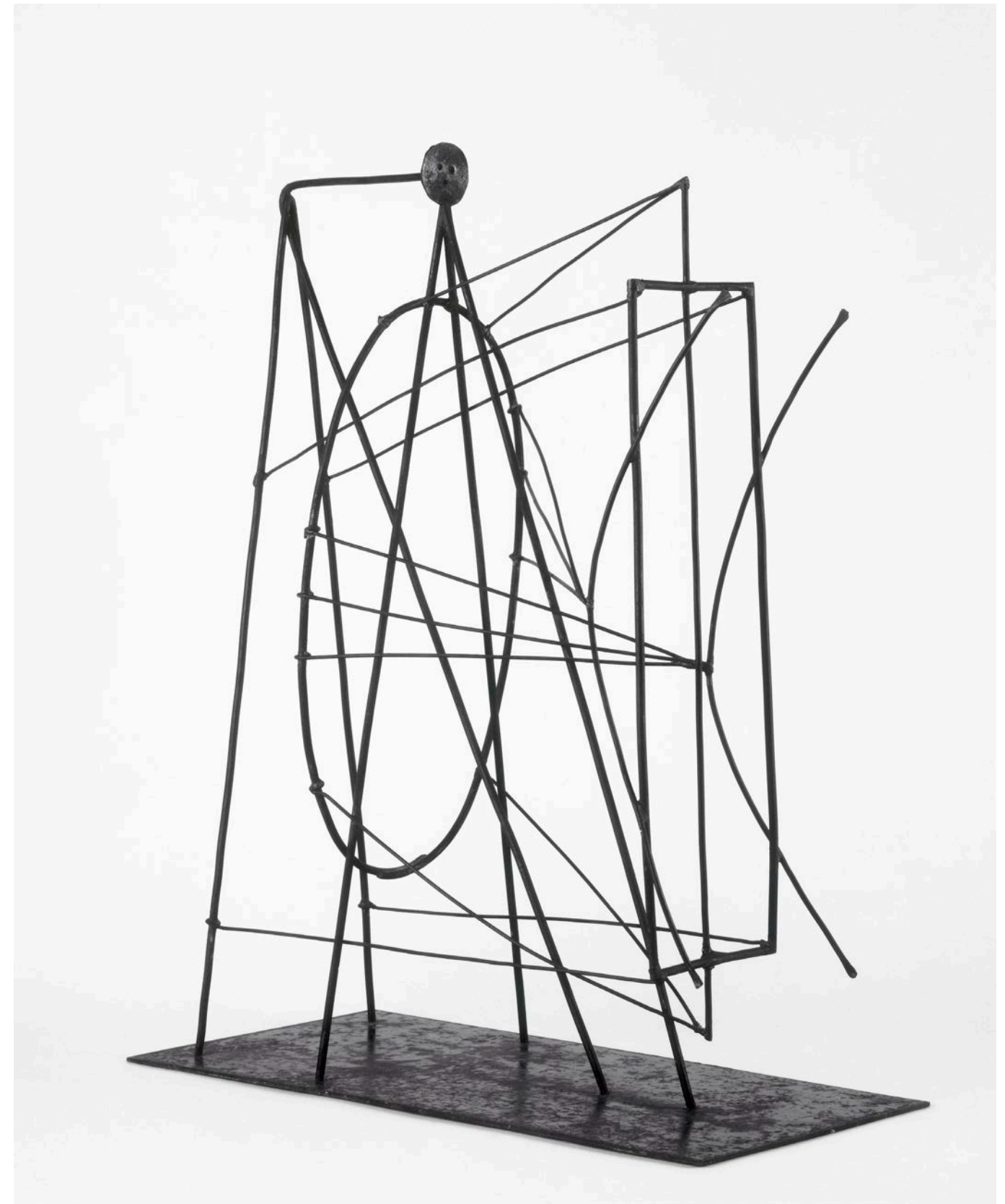
While “drawing in space” can be pinpointed to that famed Picasso-González collaboration, it transcends any hard-and-fast designation in terms of Calder’s output. Although it was coined to describe his figurative wire sculptures, “drawing in space” also conjures the gestural lines of his abstract compositions from the early 1930s, and the lines of energy that went on to define the mobiles’ wire armatures drawn effortlessly and yet immaterially in space, whose elements engage in compositional stunts. It even conjures the edges of steel sheets in his monumental works from the 1950s onward, which resonate in the moment of release between the mass and the massless. Writing in 1933 for *Cahiers d’Art*—two years before he produced 23 *Gravures*—Jakovski precipitated this immense measure of Calder’s line:

Although it was only a medium for modeling, wire soon became an autonomous element to which Calder would subordinate everything else. But this wire was no longer the same, it had lost its weight: a delicate ellipse of india ink drawn across the firmament with the pen: a trajectory of unknown solid bodies that had to be discovered—and those bodies were as precise, as unreal, as that curve described across space: the sphere.²⁴

Calder’s Lineage

In 1929, one of Picasso’s maquettes for the monument to Apollinaire appeared in *Cahiers d’Art*. This particular *revue* was distributed around the same time as the newspapers that first described Calder’s wire sculptures as “drawings in space.”²⁵ Whether or not Calder saw the reproduction of Picasso’s maquette, his own developments in wire were already mature. And while his fabled experience in Piet Mondrian’s studio the following year would spur his transition into abstraction by way of its impressive environment-as-installation, it would be a nuanced shift at best—merely an awakening to a language for which, since childhood, Calder had already been honing a singular dialect.

“Spontaneity’ is the result of long periods of activity,” writes Dewey, “or else it is so empty as not to be an act of expression.”²⁶ Calder’s enterprise in wire originated not from the European avant-garde but rather his American roots. It began with observing his father and grandfather in their studios, both classical sculptors who bent rod and wire into armatures to support their clay exercises. The very wire sculptures, *Romulus and Remus* and *Spring*, that were shown in the 1929 Salon, and that Fierens described as “drawing in space,” can be considered Calder’s way of engaging the traditions of his father and grandfather and updating them. These two objects were part of a series made in 1928 (the third being *Hercules and Lion*) that introduced not only the size but the subject matter commonly associated with classical art. *Spring* stood more than seven feet tall and referenced the allegory of Spring, and *Romulus and Remus* was over ten feet wide, referencing the myth of the founders of Rome.²⁷ Moreover, *Spring* was a pun on the medium—the young



11. Pablo Picasso, *Figure 1928*. Offered as a maquette for a monument to the poet Guillaume Apollinaire

woman holding a flower could “spring” back and forth when pulled—and *Hercules and Lion* could rotate with air currents as it hung from the ceiling, projecting shadows of the subjects’ convolutions on the wall. These works at once marked Calder’s maturity in wire, distinguished him from his forebears, and signaled the intentions he had yet to realize in scale and presentation.

Whereas Picasso was drawn to fire and metal, welding iron with an acetylene torch, Calder was immediate in his approach, respecting the integrity of the raw material. “It must be the twitching of my fingers—even naked (without pliers),” he once declared, “which makes me want to be plastik!”²⁸ That Calder was exposed to the American Arts and Crafts movement in Pasadena, California, in the early 1900s lent to his process what Mário Pedrosa once called a “spiritual prescience for the actual material.”²⁹ This quality marked his earliest known sculptures, *Dog* and *Duck* (both 1909), bent into formation from trimmed brass sheeting. Among his first all-wire sculptures, made prior to moving to Paris, was a valentine for his mother done in 1925. The following spring, while living in an apartment in New York City on West 14th Street, he created from a single piece of wire a sundial in the shape of a rooster—an apparatus at once pragmatic and miraculous in that it channels an immaterial notion. One cannot help but make the conceptual leap from the sundial, wherein shadows guided by the sun tell time, to the wire portraits that he began to make in Paris the following fall, wherein the shadows actuate an experience in the viewer’s present time by engaging a perceptual totality.

Another significant event in terms of Calder’s development occurred on 9 June 1922, while he served as a fireman in the boiler room of the *H.F. Alexander*, sailing from New York to San Francisco via the Panama Canal:

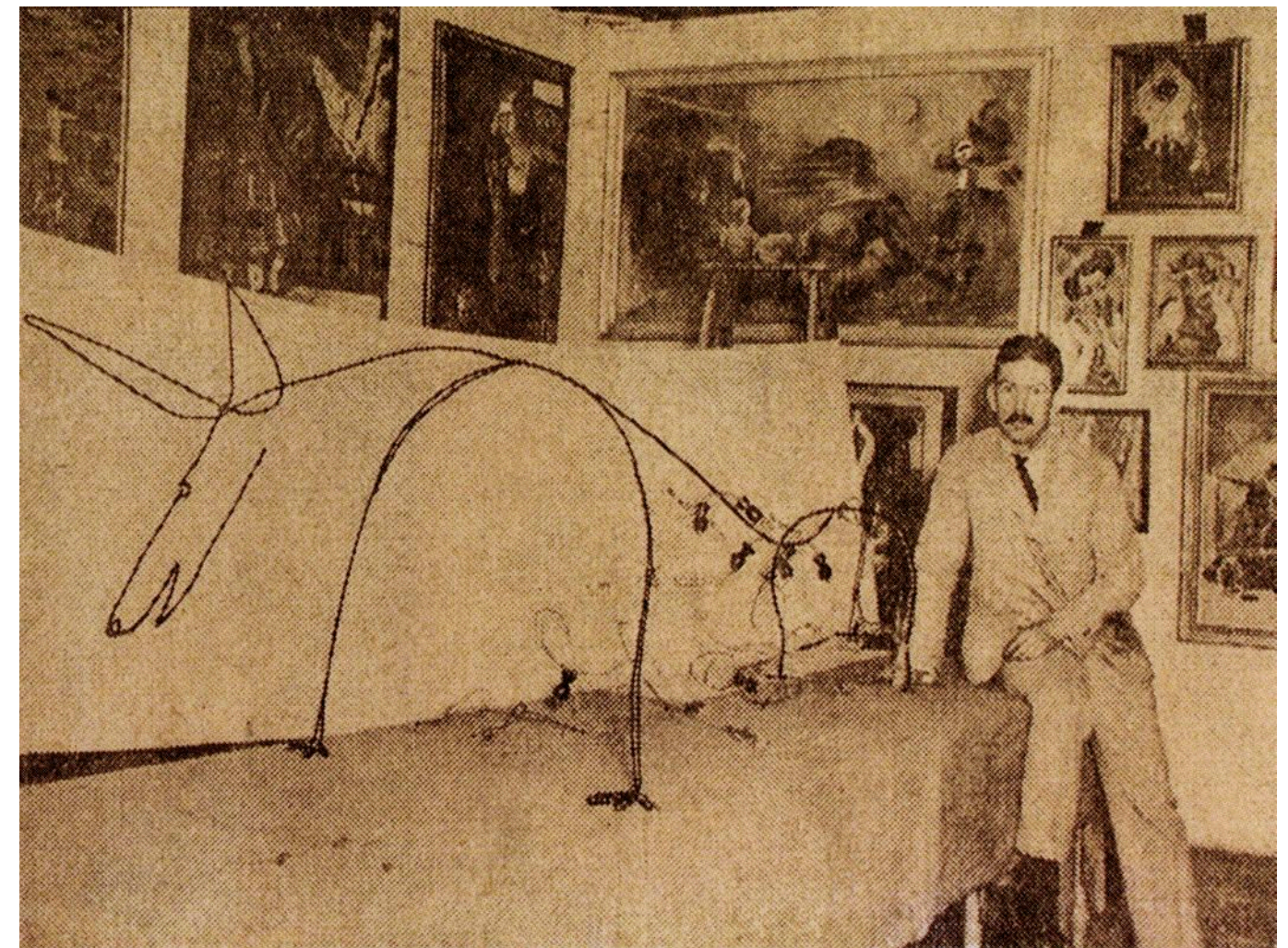
It was early one morning on a calm sea, off Guatemala, when over my couch—a coil of rope—I saw the beginning of a fiery red sunrise on one side and the moon looking like a silver coin on the other. Of the whole trip this impressed me most of all: it left me with a lasting sensation of the solar system.³⁰

It was not the actual planets or stars that impressed Calder—an unfortunate misinterpretation that has been perpetuated over time—but rather the invisible forces at play in the universe, or the immeasurable immensity of our existence. While his abstract objects, particularly those from his 1931 Percier exhibition, evoke this sensation of the sublime through massless spheres and radiating vectors, its nascent form emerges in those early “drawings in space” by way of vibrations, actual articulations, gestural evocations, and perceptual complexities. They were neither indicators of outer space nor creators of defined space, in the manner of Picasso’s maquettes, but rather activators of the immediate, surrounding space, works that open up the shape of our aesthetic experience by representing “aliveness,” even boundlessness.

Although they evolved in Paris, Calder’s wire sculptures premiered in New York in 1928, where critics—in advance of their Parisian counterparts—used graphic terminology to describe them. “With wire alone he has outlined in space a score of subjects, ranging from a head of Coolidge to a sway-back horse,” one wrote when *Josephine Baker I* (1926), *Calvin Coolidge* (1927), and other figures made their New York debut in *Wire Sculpture by Alexander Calder* at the Weyhe Gallery.³¹ When Calder exposed the “virtues

and vices,” to quote the artist, of *Romulus and Remus* at the Twelfth Annual Exhibition of the Society of Independent Artists (fig. 12) at the Waldorf Astoria hotel (where *Spring* was also on view), another critic wrote: “The body and limbs were sketchily expressed with a single thickness of wire, while the paws, eyes, mouth, ears and other features were expressively done in coils, kinks and loops of wire.”³² These writers suggested the hybrid nature of Calder’s vernacular—one that wed two longstanding genres, which James Johnson Sweeney would later crystallize in his introduction to Calder’s famed 1943 retrospective at the Museum of Modern Art, New York:

[The wire works] were now three-dimensional forms drawn in space by wire lines—much as if the background paper of a drawing had been cut away leaving only the lines. The same incisive grasp of essentials, the same nervous sensibility to form, and the same rhythmic organization of elements, which are virtues of a drawing, were virtues of this new medium.³³



12. Alexander Calder with *Romulus and Remus* at the Twelfth Annual Exhibition of the Society of Independent Artists, Waldorf Astoria Hotel, 1928

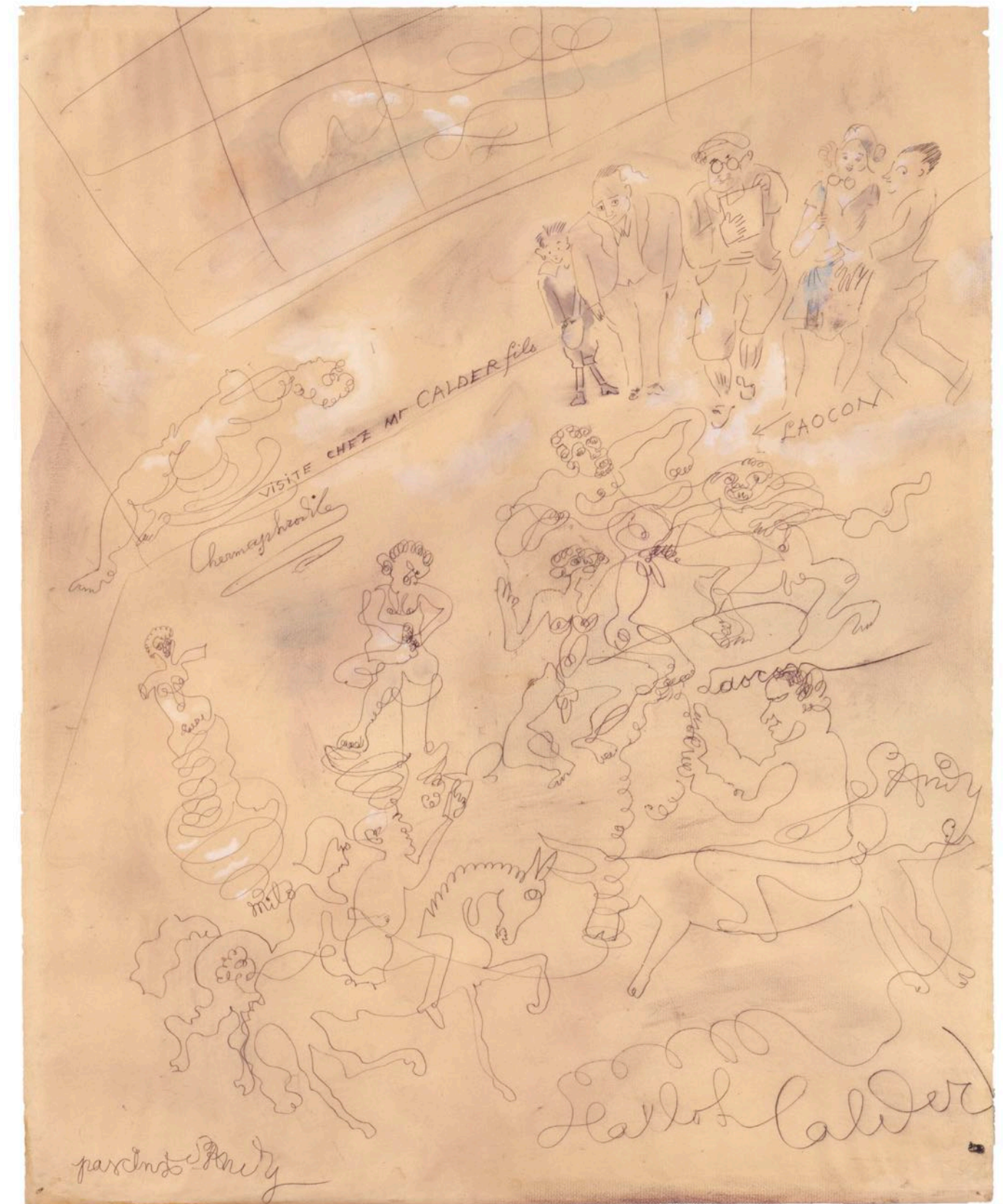
Single-Line Drawings

To understand the significance of “drawing in space,” it is important to touch upon its avant-garde precedent. Single-line drawing, or continuous line drawing, was a varied practice during the early twentieth century on both sides of the Atlantic. It manifested by way of drafting exercises, caricatures, and formal figurative and literary explorations, and its proponents ranged from Picasso and Henri Matisse to John Sloan and Boardman Robinson, both of whom taught Calder at the Art Students League, where he was enrolled from 1923 to 1925. In his autobiography, Calder credited Robinson as encouraging him to draw with “a pen and a single line.”³⁴

One of the most famous examples of the single-line style to emerge during this period was Picasso’s 1919 cover design for the piano reduction of Igor Stravinsky’s *Ragtime*, widely distributed in France and England by the early 1920s. Here Picasso’s distinct yet mellifluous line spoke to Stravinsky’s cross-fertilization (appropriating ragtime in his own highly original oeuvre), as it did to a visual condensation of sound. For Picasso, single-line drawing played a constituent role in his practice, reimagined in a multitude of styles, techniques, and subject matter, from the looping liveliness of his harlequins of the 1910s to the surreal nudes of the 1930s. One of those who directly imitated his style was Jean Cocteau, whose *Dessins* (1923) was an outspoken riff on Picasso. Notably, Calder’s wire portraits proved equally compelling for the French filmmaker, who in 1930 devised a self-portrait from pipe cleaners, which played a haunting role in his film *The Blood of a Poet*.³⁵

When Surrealism exploded on the Parisian art scene in 1924, André Masson inaugurated the notion of pure automatism set forth by Breton with automatic drawings, a technique of drawing without conscious control. Many of Masson’s contemporaries explored this approach, including Arp, Salvador Dalí, Max Ernst, Miró, and Kurt Seligmann. Many tapped into an unconscious realm through painting, as seen in Miró’s *The Birth of the World* (1925). Around 1928, Jules Pascin paid tribute to Calder in *Visite chez Mr. Calder fils*, a single-line drawing that renders Calder on a horse, creating Greek sculptural motifs out of “drawn” wire, including Hermaphroditus, Milo, and Laocoön, recalling the very allegorical sculptures that would come to inspire the phrase “drawing in space” (fig. 13).

The antecedents to these modern currents are vast. Cave paintings in Southern France, from the Chauvet-Pont-d’Arc (c. 30,000 BC), Lascaux (c. 15,000 BC) and Niaux (11,500–10,500 BC) are among the earliest known experiments in line, yet only the Niaux had been discovered by the early twentieth century. In Calder’s first treatise on drawing, called *Animal Sketching* (1926), in which he expressed the energy of animals in solid black strokes of ink, he drew upon this prehistory of originality: “The earliest men of which we have any record, thousands of centuries ago, expressed their sense of beauty



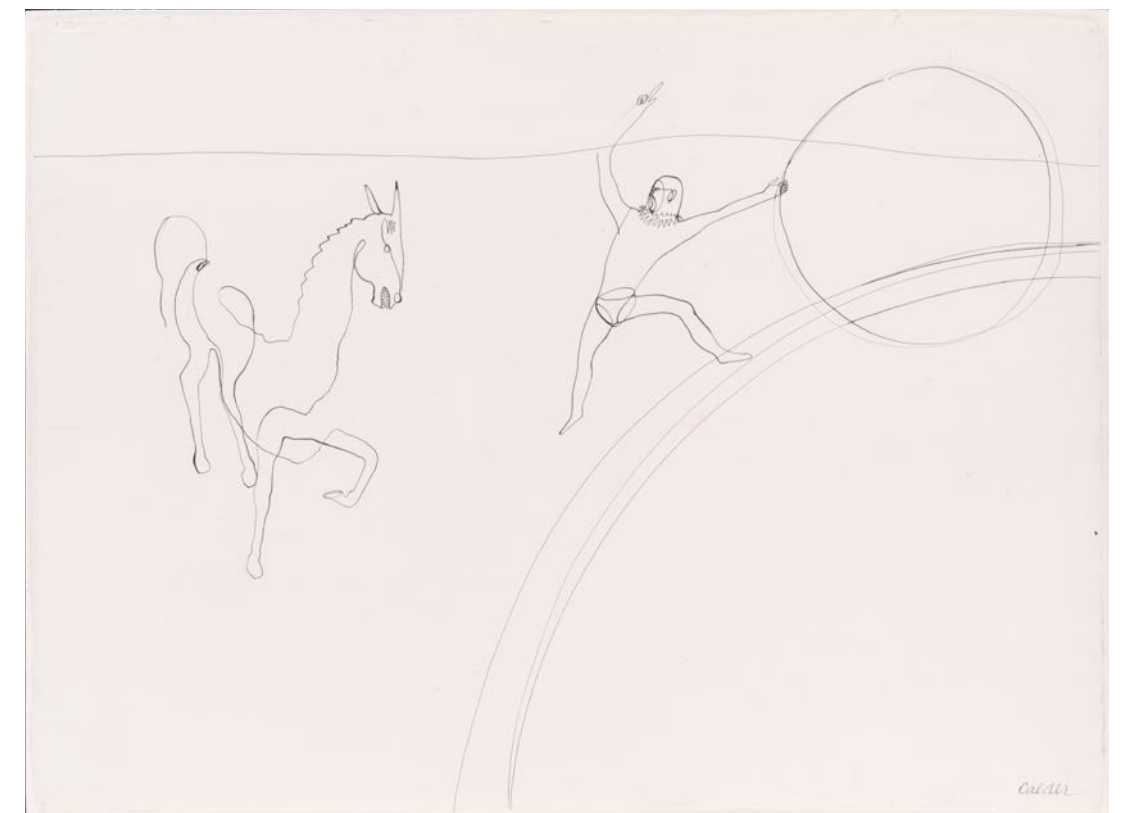
13. Jules Pascin, *Visite chez Mr. Calder fils*, c. 1928

by leaving pictures drawn on their cave dwellings.”³⁶ Legrand-Chabrier, the distinguished French cultural critic who specialized in the circus arts, also recognized the continuum in *Cirque Calder (1926–31)*: “Here is a dog who seems like a prehistoric cave drawing with a body of iron wire. He will jump through a paper hoop. Yes, but he may miss his mark or not. This is not a mechanical toy.”³⁷ Years later, Calder and his family visited the Lascaux caves—as did Picasso—which opened to the public after World War II.

Other sources include ancient engravings on Etruscan objects (700 BC); Nazca lines in the Peruvian desert (AD 200–600); the caricatures by seventeenth-century Italian sculptor Gian Lorenzo Bernini, especially his caricature of Cardinal Scipione Borghese; William Hogarth’s serpentine “line of beauty,” as defined in his treatise *The Analysis of Beauty (1753)*, prophetic of the hypocycloid curves in Calder’s 1940s standing mobiles;³⁸ John Flaxman’s outline engravings from the late 1700s and early 1800s; Jacques-Louis David’s and Jean-Auguste-Dominique Ingres’s neoclassical paintings, which had a particular importance for Picasso;³⁹ and Kubota Beisen’s brush-and-ink sketches, which inspired Robert Henri and Sloan in the late 1800s.

It is interesting to recount the voices coming from Calder’s stomping ground at the League. His teacher Sloan once proclaimed, “Line is the most significant graphic means we have. It is entirely a sign, a mental invention. You don’t see lines in nature, only contours of tones.”⁴⁰ Henri, though not one of Calder’s teachers, famously instructed his students not to follow any prescribed style, but rather to establish their *own* style, and this idea likely circulated in Calder’s classrooms as well. To seize the moment rather than look over one’s shoulder to the past, and to render what one sees with individual prowess, extends beyond Henri to the very foundations of the American intellectual tradition as espoused by Ralph Waldo Emerson: “Trust thyself: every heart vibrates to that iron string.”⁴¹ It also reverberates with Dewey, whose words conjure the very continuity of experience inherent in the process of single-line drawing: “In short, art, in its form, unites the very same relation of doing and undergoing, outgoing and incoming energy, that makes an experience to be an experience... The artist embodies in himself the attitude of the perceiver while he works.”⁴²

One of the many mysteries of Calder is that in 1930, after he had all but dismissed his figurative wire sculptures in favor of making nonobjective ones, he began to make a formal series of single-line drawings that explored the action and space of the circus. One of these drawings, *Horse Trainer with Hoop (1931)*, was on display in the gallery window at Percier, surrounded by *Féminité (c. 1930)*, a three-dimensional abstraction of Kiki de Montparnasse with a light-reflecting tin disc; *Densité I (c. 1931)*, a stabile of wooden spheres, a wooden cube, and uniting wires that emit weightless alacrity; and wire portraits of Calder’s wife Louisa, Miró, and Michel Tapié (figs. 14–15). In terms of the fluidity of Calder’s oeuvre, this display is revealing: If we consider Kandinsky’s proposition that line is a point in movement, then the lines of *Horse Trainer with Hoop* symbolically point backward and forward (and sideways), merging tradition with innovation, tracing a trajectory between drawing and sculpture, representation and abstraction, even individuality and universality. This sweeping view reverberates with Calder’s own description



14. Exterior of Galerie Percier, Paris, during the presentation of *Alexandre Calder: Volumes–Vecteurs–Densités / Dessins–Portraits*, 1931

15. *Alexander Calder, Horse Trainer with Hoop*, 1931

of his work, written in 1932: “Out of different masses, light, heavy, mid-
dling—indicated by variations of size or color—directional lines—vectors
which represent speeds, velocities, accelerations, forces, etc...—these directions
making between them meaningful angles, and senses, together defining one
big conclusion or many.”⁴³

Free as they were from habituation, both Picasso and Calder explored
line drawing in unpredictable ways, not the least by liberating line altogether
in those revolutionary sculptures from the 1920s. In 1949, Picasso sketched
various objects in space with a penlight, captured on camera by Gjon Mili,
and in 1956 he drew figures on transparent surfaces in Henri-Georges Clou-
zot’s film *Le mystère Picasso*. Both Calder and Picasso illustrated books, and
it was through a series of haunting drawings for E. E. Cummings’ *Santa
Claus: A Morality (1974)* that Calder returned to pure line just two years
before his death—a time when he was creating the most massive sculptures
of his career. “To know what you want to draw, you have to begin drawing
it,” Picasso told Brassai.⁴⁴ It is this visceral energy that underscores Calder’s
and Picasso’s explorations in line, at once fleeting and enduring, fortuitous
and perennial, exceptional and unceasing.

1. John Dewey, *Art as Experience* (New York: Perigee, 2005), 210. Based on Dewey’s series of lectures on art delivered at Harvard University in 1931.
2. Anatole Jakovski, “Preface,” *23 Gravures de Arp, Calder, Chirico, Ernst, Fernandéz, Giacometti, Ghika, González, Hélon, Kandinsky, Léger, Lipchitz, Magnelli, Miró, Nicholson, Ozenfant, Picasso, Seligmann, Taeuber-Arp, Torres-García, Vuilliamy, Zadkine* (Paris: Editions G. Orobitz et Cie, 1935). The portfolio was made to finance Jakovski’s ultimately unrealized *24 Essais*, on the same artists plus Marcel Duchamp.
3. Among the Surrealist exhibitions that included both Picasso and Calder were *Exposition surréaliste d’objets*, Galerie Charles Ratton, Paris (1936); *International Surrealist Exhibition*, New Burlington Galleries, London (1936); *Fantastic Art, Dada, Surrealism and Cubism and Abstract Art*, The Museum of Modern Art, New York (both 1936); and *First Papers of Surrealism*, Coordinating Council of French Relief Societies, Whitelaw Reid Mansion, New York (1942).
4. Calder, “The Evolution,” manuscript, Calder Foundation archives, 1955–56, 95.
5. Calder wrote on the back of a photograph of the exhibition, “Pay no attention to the portraits, the gallery insisted that I include them.” James Johnson Sweeney, *Alexander Calder*, exh. cat. (New York: Museum of Modern Art, 1943), 29.
6. Calder, “Evolution,” 95.
7. Calder to Ben Nicholson, 21 December 1934, Calder Foundation archives.
8. Pierre Berthelot, “Calder,” *Beaux-Arts*, vol. 9 (May 1931).
9. “Alexander Calder, at the Mayor Gallery,” *The New Statesman and Nation* (11 December 1937): 1016.
10. John Updike, “Penumbrae,” *Collected Poems 1953–1993* (New York: Knopf, 2012).
11. Willy Lewin, “Calder’s mobiles,” in *Calder in Brazil*, exh. cat., Roberta Saraiva, ed. (São Paulo: Pinacoteca do Estado de São Paulo, 2006), 220. Originally published in *Jornal do Comércio*, 11 October 1959.
12. Calder, “Evolution,” 97–99.
13. Picasso, quoted in *Exhibition of Paintings and Drawings by Pablo Picasso from a Private Collection*, exh. cat. (New York: Buchholz Gallery/Curt Valentin, 1945), n.p. Originally published in Alfred H. Barr, Jr., *Picasso: Forty Years of His Art*, exh. cat. (New York: Museum of Modern Art, 1939).
14. Calder, quoted in an interview by Yvon Taillandier, “Calder: Personne ne pense à moi quand on a un cheval à faire,” *XXe siècle*, 1re année, no. 2 (15 March 1959): 5.
15. Translated from the original French: “Les Indépendants nous avaient accoutumé aux sculptures sur fil de fer. M. Alexandre Calder reprend pour son compte personnel le périlleux exercice. Des chevaux se cabrent, des cavaliers s’arc-boutent, des danseurs jettent au ciel des jambes plus rigides que des fils de sonnette. On dirait d’un dessin exécuté dans l’espace. On imagine la patience du sculpteur armé de tenailles, de pinces et déroulant autour de sa stèle la bobine de fils de cuivre qu’il va tordre et détordre pour enfanter des silhouettes. Jeux de dessinateurs aux poignets vigoureux.” Gros, “Sculpture sur fil de fer,” *Paris-Midi*, 2 February 1929.
16. Translated from the original French: “Un humoriste, enfin, le gros succès de fou rire du présent Salon: Calder. Avec des fils de fer et quelques pièces de bois, de forme amusante, qu’il dispose au bon endroit, il construit une figure qui ressemble à un dessin de Modigliani et il accroupit Romulus et Rémus sous le corps absent de la louve nourricière. Les gens sérieux haussent les épaules. Avouons que la plaisanterie ne nous a pas semblé mauvaise. Ce dessin dans l’espace, que Calder n’a pas inventé, il l’utilise avec une jolie verve de caricaturiste et même quelque chose de plus.” Paul Fierens, *Journal des Débats*, 3 February 1929.
17. Translated from the original French: “Que ce fil s’incurve mal, qu’il s’accroche à mauvais escient et c’en sera fini de toute sculpture: nous aurons devant les yeux la figuration métallique d’un dessin dans l’espace, nous n’aurons pas une masse bien évoquée.” Edouard Ramond, “Sandy Calder ou... le fil de fer devient statue...” *Paris Montpamasse*, numéro spécial (15 June 1929), 36.
18. Calder, statement on wire sculpture, Calder Foundation archives, 1929.
19. Translated from the original French: “Il n’y a qu’une flèche de cathédrale qui puisse nous signaler une pointe dans le ciel où notre âme reste en suspens! Comme dans l’inquiétude de la nuit, les étoiles nous indiquent des points d’espoir dans le ciel, cette flèche immobile nous en indique aussi un nombre sans fin. Ce sont ces points dans l’infini qui ont été les précurseurs de cet art nouveau: *Dessiner dans l’espace*.” González, “Picasso sculpteur et les cathédrales,” published in Josephine Withers, *Julio González: Sculpture in Iron* (New York: New York University Press, 1978), 134, 141. Withers’s book marks the first time González’s manuscript was published in full, although the author points out that certain ideas were incorporated in “Picasso sculpteur,” *Cahiers d’Art*, vol. 11, nos. 6–7 (1936): 189, and “Notations,” *Julio González*, exh. cat. (Paris: Éditions du Musée d’Art Moderne, 1952). An abbreviated translation was published in Andrew C. Ritchie, *Sculpture of the Twentieth Century*, exh. cat. (New York: Museum of Modern Art, 1952), 30.

20. For chronological details on the Picasso-González collaboration, see Withers, *Julio González*, 1978, 21–38, 131–145; and *Picasso and the Age of Iron*, exh. cat., Carmen Giménez, ed. (New York: Solomon R. Guggenheim Museum, 1993), 262–67.
21. Werner Spies, “‘Of Nothing, of a Void’: The Monument to Apollinaire,” in *Picasso: The Sculptures* (Ostfildern-Ruit: Hatje Cantz, 2000), 117.
22. Picasso, “Letter on Art,” originally published in *Ogonek 20*, Moscovo (16 May 1926). See Francisco Calvo Serraller, “Calder: Gravity and Grace,” *Calder: Gravity and Grace*, exh. cat., Carmen Giménez, ed. (Bilbao: Museo Guggenheim, 2003), 7; and Giménez, *Age of Iron*, 261.
23. Translated from the original French: “Par contre, les constructions en fil de fer... constituent une sorte de *dessins dans l’espace*, mais forment, en même temps, le premier pas vers la conquête, par la sculpture, d’un domaine qui n’avait jamais appartenu qu’à l’architecture auparavant: la *création d’espaces*. Elles sont, en effet, non seulement dessin au trait dans l’espace, mais elles en délimitent des fragments.” Daniel Henry Kahnweiler, *Les Sculptures de Picasso* (Paris: Les Editions du Chêne, 1948), n.p.
24. Translated from the original French: “Alors qu’il n’était qu’un simple moyen de modelage, le fil de fer devient un élément autonome à qui Calder va subordonner le reste. Mais ce fil de fer n’était plus le même, il avait perdu de son poids: fine ellipse d’encre de Chine tracée avec le tirelignes sur le firmament; trajectoire des corps solides inconnus dont la découverte s’imposait et les corps étaient aussi précis, aussi irréels que cette courbe décrite dans l’espace: la sphère.” Jakovski, “Alexandre Calder,” *Cahiers d’Art 8*, nos. 5–6 (1933): 245.
25. Christian Zervos, “Picasso à Dinard: Été 1928,” *Cahiers d’Art*, no. 1 (1929). Ten issues were released in that year, so this one likely came out in January or February.
26. Dewey, *Art as Experience*, 75.
27. For an in-depth consideration of Calder’s allegorical wire sculptures, see Terry Erskine Roth, “Synthetic Statues,” *Calder: Sculptor of Air*, exh. cat. (Milan: 24 ORE, 2009), 44–53.
28. Calder, “Evolution,” 88.
29. Mário Pedrosa, “Calder, sculptor of wind-catchers,” in Saraiva, *Calder in Brazil*, 2006, 40. See also Mário Pedrosa: *Primary Documents*, Glória Ferreira and Paulo Herkenhoff, eds., MoMA Primary Documents series (Durham: Duke University Press, 2015).
30. Calder, *Calder: An Autobiography with Pictures*, Jean Davidson, ed. (New York: Pantheon, 1966), 54–55.
31. *Creative Art* (April 1928).
32. Calder, statement, 1929: “Copper Wire Wins Place in Art Show,” *New York Times*, 9 March 1928.
33. Sweeney, *Alexander Calder*, exh. cat. (New York: Museum of Modern Art, 1943), 19.
34. Calder, *An Autobiography with Pictures*, 67. In her own memoirs, Calder’s sister Peggy situates the practice in their childhood: “On dark, wintry afternoons, Sandy and I worked out a formula for drawing birds: one uninterrupted line flowed around the entire body, including in its journey the tail (a series of loops) and the wings (another series of loops).” From Margaret Calder Hayes, *Three Alexander Calder’s, A Family Memoir* (Middlebury, VT: Paul S. Eriksson, 1977), 17.
35. Man Ray’s photographs of Cocteau making his self portrait with pipe cleaners are often incorrectly dated to 1925. They were taken during the filming of *The Blood of a Poet*, which was released in France in 1932 but filmed in 1930. One photograph from the series shows Cocteau with Charles and Marie-Laure de Noailles, the film’s patrons, and Georges Auric, the film’s composer. In an interview from 1964, Calder referenced these portraits when describing Cocteau’s enthusiasm over *Cirque Calder* (1926–31), which he saw in 1926: “[Cocteau] was excited. He started making masks out of pipe cleaners, but they were sort of soft.” Calder, quoted in Cleve Gray, “Calder’s Circus,” *Art in America*, vol. 52, no. 5 (October 1964): 27.
36. Calder, “Introduction,” *Animal Sketching* (New York: Bridgman Publishers, 1926).
37. Legrand-Chabrier, “Un petit cirque à domicile,” *Candide*, no. 171, 23 June 1927.
38. For a further discussion on serpentine lines in Calder’s work, see Jed Perl, “Sensibility and Science,” in *Calder and Abstraction: From Avant-Garde to Iconic*, exh. cat., Stephanie Barron and Lisa Gabrielle Mark, eds. (Los Angeles: LACMA, 2013), 36–54.
39. See Serraller, *Gravity and Grace*, 12.
40. John Sloan, “Drawing,” *John Sloan on Drawing and Painting: The Gist of Art* (New York: Dover, 2010), 57. Revised republication of the work originally published by the American Artists Group, Inc., New York, in 1939.
41. Ralph Waldo Emerson, “Self Reliance,” *Nature and Selected Essays* (New York: Penguin, 2003), 177, originally published in 1841.
42. Dewey, *Art as Experience*, 50.
43. Calder, “Comment réaliser l’art?” *Abstraction-Création, Art Non Figuratif*, no. 1 (1932): 6.
44. Brassai, *Picasso and Company*, trans. Francis Price (Garden City, NY: Doubleday, 1966), 55.