Seeing Through an (American) Temperament: Max Ernst's Microbes, 1946-1953

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In 1952, the quintessentially American magazine *Life* published a four-page spread on Max Ernst's years in Arizona. Written under the title "Mite-size art is shown actual size," the majority of the article focused on a series of tiny gouache landscape paintings that Ernst called "microbes." The article began:

> In Paris 25 years ago, Surrealist Max Ernst used to paint huge landscapes of eroded earth and wastelands. In 1947 Ernst moved to Arizona where, surrounded by real wastes of arid land, he launched into a new series of parched panoramas. These, unlike his early paintings, were often no larger than postage stamps and were called 'microbes' because, says Ernst, 'they are small and dangerous for both the brain of the painter and the viewer.'[1]

While he was living in Arizona between 1946 and 1951, Ernst created at least seventy of these microbes.[2] They range in size from a half-inch on one side to over five inches, although most are between one and three inches, small enough to be reproduced at their actual size in *Life*. Ernst's interest in this series of work was sustained: he made these paintings over a period of at least five years, and they were exhibited frequently during his own lifetime.[3] Yet while the series was one of the most significant products of Ernst's time in the United States, the microbes are virtually unknown today.[4]

As the quote above from *Life* suggests, the microbes were both a continuation of Ernst's previous work in Europe and a break with it, combining surrealist techniques and ideas that had informed his paintings of the 1920s and 1930s with his new impressions of the United States. Because of the microbes'

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relative obscurity within Ernst's oeuvre, one objective of this essay is to outline their production and early exhibition and reception. Special attention will be paid to *Sept microbes vus à travers un tempérament (Seven Microbes Seen Through a Temperament)*, a book comprised of life-size reproductions of 31 microbes and a poem by Ernst, in which he positions the microbes as a distinctly surrealist, subjective interpretation of the American Southwest. Then I contextualize the microbes within the wider contemporary American art world and suggest that Ernst made these diminutive paintings in dialogue with the monumental works of the Abstract Expressionists, just as those artists were rising to prominence in the wake of World War II.

The Ferocious Southwest

Ernst's first look at the Arizona landscape was by all accounts revelatory. In 1940, with the help of Peggy Guggenheim, Ernst fled Europe for the United States, having already been interned twice as an enemy alien in France. After disembarking in New York in July, he joined other expatriate Surrealists in making a new, if temporary, life there, marrying Guggenheim (who was American) in December. In 1941, Ernst, Guggenheim, Ernst's son Jimmy, and Guggenheim's daughter Pegeen traveled to California to scout locations for Guggenheim's new museum. On their return trip cross-country the group stopped on the highway near Flagstaff, Arizona, where Ernst found himself in the midst of a landscape uncannily similar to those he had painted purely from his imagination in Europe. In his autobiography, Jimmy Ernst recalled his father's reaction:

> On a late afternoon, we got out of the car to watch a gigantic rattlesnake crossing U.S. 66 just outside Flagstaff, Arizona. As Max looked up at nearby San Francisco Peak, he blanched visibly, his face muscles tightened. The mountain's green tree line abruptly gave way to a band of bright-red rock beneath a peak cap of sun-created pure magenta. He was staring at the same fantastic landscape that he had repeatedly painted in Ardèche, France, not very long ago, without knowing of its actual existence […] That one look was to change the future of his life in America.[5]

In a television interview of 1967, Ernst remembered the incident similarly:

> There I found the old, familiar landscape that had continually been in my mind's eye, and which had repeatedly appeared in my paintings, too […] It was sheer accident that the landscape was there, and that my pictures were there, and had emerged at a point in time before I had ever seen the landscape.[6]

Indeed, earlier paintings like *The Entire City* from 1935-1936 (Kunsthaus Zürich), an image dominated by a hill of striated red earth with jungle-like vegetation at its base, eerily resemble the craggy peaks of the Arizona desert.

Although Ernst felt an immediate connection to the scorched Southwestern landscape that was so alien to his native Europe, it would be a number of years before he could fully immerse himself in it. In 1942, Ernst met the young artist Dorothea Tanning, who would become his wife. They spent the summer of 1943 in Arizona and in 1946, tired of New York and the continuing society drama generated by his divorce from Guggenheim, they moved permanently to Oak Creek Canyon, near Sedona, and began to build a house there. For both Ernst and Tanning, their years in Arizona were utopic, despite their lack of funds and the hard work that was necessary to make their new home habitable. Unlike New York, Arizona offered solitude and a fresh start amidst what Ernst called "the delicious deserts of Arizona."[7] Here, he wrote to a friend, since he could not return to Europe, "the ferocious fauna flora and rocks suit me enough so that I can wait and work a little bit…"[8]

Ernst began to create the microbes soon into his first year living in the Southwest. In his "Biographical Notes," which are organized by year, Ernst wrote "MICROBES" under the year "1946," a choice that indicates that these works best represent this period of his life. After describing his move to Arizona with Tanning that year and the construction of their home, he recalled the genesis, later publication, and exhibition of the microbes. Referring to himself in the third person, he wrote, "During a brief trip to the desert state of Nevada, Max Ernst paints the *Microbes*, paintings of miniscule size accompanied by poems. (All of them will appear, seven years later, in Paris, au 'Cercle des Arts' under the title *Sept microbes vu à travers un tempérament*, then in Germany, at the gallery 'Der Spiegel.')"[9] Because Ernst's autobiographical accounts can never be taken at face value, it is more likely that only the first microbes were created in Nevada or that his travels through the area were broadly inspirational.[10]

To make the microbes, Ernst used a technique that was at once meticulous and spontaneous. In photographs and film footage he is seen working on the tiny surfaces using a brush and magnifying glass.[11] One photograph, a close-up of Ernst's hands, shows him working delicately on a microbe, with five other examples on display nearby.[12] Yet while the finished compositions clearly required such miniaturist work, he began the paintings with automatic techniques consistent with the ideas of the surrealist movement. The *Life* article explained that Ernst began the paintings "by letting thin paint ooze around on canvas, or by imprinting a pattern in the painting with piece of grained wood or thread." Then when he "saw" the right image he "caught" it with a brush.[13]

The process was therefore presented as a variation on semi-automatic methods that Ernst had used in the past, such as *frottage* or *grattage*. "Imprinting

a pattern" is closest to a miniature variation of the decalcomania technique. Decalcomania involves placing a piece of thinly painted paper, cardboard, or glass over canvas and then removing it so that the slide and suction leave an unevenly colored and richly textured surface. Originally a decorator's technique, Oscar Dominguez first used decalcomania in 1935, inaugurating it as a surrealist method. The following year, surrealist leader André Breton declared decalcomania to be the only completely automatic visual art technique since it does not undergo further manipulation. The artist leaves the forms as is, only finishing the painting by giving it a suggestive title based on what the decalcomania results brings to their mind.[14] Rather than following Breton's ideal of leaving the chance result of the decalcomania technique untouched, Ernst used the results as an inspirational starting point and altered the pre-existing forms to more clearly reveal forests, cities, animals, and humans.

The best-known example of Ernst's use of decalcomania is *Europe After the Rain II* (Wadsworth Atheneum Museum of Art, Hartford), which he began in Europe in 1940 but completed in Arizona in 1942.[15] This painting depicts the aftermath of an apocalyptic storm that has overturned the entire world. The people and creatures that emerge to see the chaotic remains of the storm are dwarfed by rocks, vegetation, and debris that have the melting, metamorphic quality typical of the decalcomania technique. At 21 $^{9}/_{16}$ x 58 $^{3}/_{16}$ inches, however, *Europe After the Rain* is a much larger painting than the microbes and has a narrative quality that the individual microbes lack.

The *Life* article also maintains that Ernst began some of the microbes by "letting thin paint ooze around on canvas." This is reminiscent of a technique called "drip and drool" that Ernst felt influenced the Abstract Expressionists. In a 1960 interview, the poet and writer Edouard Roditi asked Ernst to confirm that he was the first to use the "drip and drool" technique, which consisted of allowing pigments to flow down the canvas and produce chance results. Ernst responded, "Yes, and Jackson Pollock and his friends who later became masters of the New York school of abstract expressionism all used to come to my New York studio to learn the trick of this shortcut."[16] Later in the interview he said that he was able to obtain automatist effects that allowed for free association with "*frottage*, or rubbing, or what was later called in New York 'drip and drool.'"[17] The microbes' appearance does suggest that Ernst used both these techniques—decalcomania and "drip and drool"—to achieve forms that serve as a starting point for the active association and interpretation that resulted in his final symbolic forms.

One microbe, *Adam and Eve Expelled from the Garden of Eden* (Fig. 1), portrays an overwhelming storm and is close in spirit to the larger apocalyptic decalcomania landscapes. Dated 1946-47, it is one of Ernst's earlier microbes and also one of his smallest at only a ½ inch in height and 1 $^{3}/_{8}$ inch in width. Yet Ernst managed to encapsulate an entire world in the small space. The majority of the miniscule

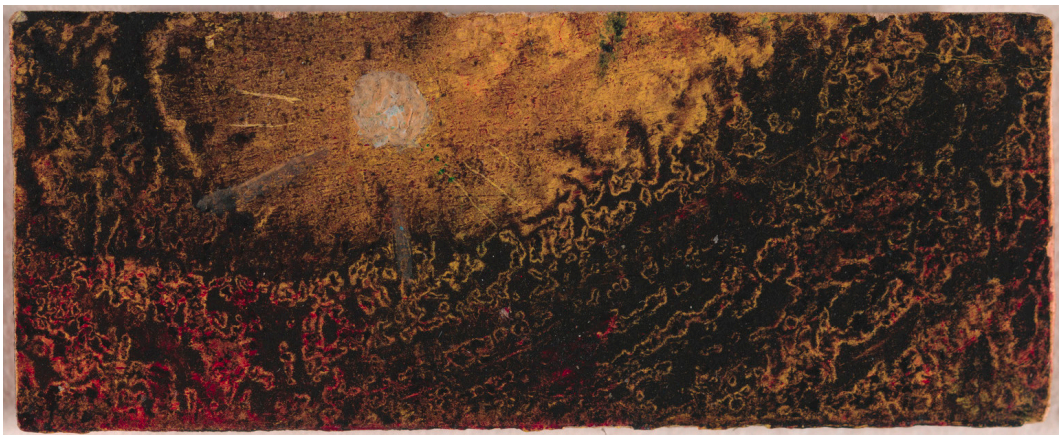

Fig. 1. Max Ernst, Adam and Eve Expelled from the Garden of Eden, 1946/47, gouache on cardstock, ½" x 1 3/8" (1.4 x 3.6 cm). The Museum of Modern Art, New York. Gift of Pierre Matisse in memory of Patricia Kane Matisse. © 2018 Artists Rights Society (ARS), New York/ ADAGP, Paris

composition is covered with a mix of yellow, red, and black paint that forms a mass of earth and lava rising in a wave from left to right while the white orb of the sun omits a golden glow at the top of the image. This mass has a texture and pattern similar to paintings known to be created with decalcomania. Adam and Eve of the title are not obviously present in the picture. Instead, the seething storm represents the earthly human strife that not even the divine sun, presiding over it, can fully pierce.

Other early microbes, also made in 1946 or 1947, are less complex in composition and coloring than *Adam and Eve Expelled from the Garden of Eden* but also portray landscapes with a fantastical, other-worldly character. *Nobility* is comprised of red and orange melting forms with smaller, more detailed shapes at the top that then melt into a molten mass at the bottom. The tiny image evokes natural forms in transition, such as the fingers of lava rock or burning trees. In contrast to this glowing painting, *Emotion* is dark, with algae-like plants reaching towards the moon or perhaps a dim sun. The wavy forms of the plants and shafts of light create an aquatic atmosphere.[18] Considering the wavy, tendril-like forms in *Nobility* and *Emotion*, Ernst may have relied more on the "drip and drool" technique—or a combination of "drip and drool" and decalcomania—to begin these compositions.

In her autobiography, Tanning remembered the changeable nature and almost celestial beauty of the landscape surrounding the Arizona home she shared with Ernst. Her poetic language conjures perfectly the red and brown of the earth

and the white light of the sky: "An electrical storm could hang a ball of white fire in the doorway […] There might be a week of red wind that tore at our wooden house. Kept us inside. Multiple veils of ruddy dust rose high, so high in the air that we could stare without blinking at the perfectly one-dimensional white plate that passed for the sun."[19] Another passage describes their small house in its lonely splendor, managing to evoke how temporary and fragile it felt in comparison to the surrounding wilderness:

> Alone it stood, if not crooked at any rate somewhat rakish, stuck on a landscape of such stunning red and gold grandeur that its life could be only a matter of brevity, a beetle of brown boards and tarpaper roof waiting for metamorphosis. Up on its hill, bifurcating the winds and rather friendly with the stars that swayed over our outdoor table, like chandeliers.[20]

The sheer variety of the microbes' fantastical imagery reflects the strangeness, diversity, and changeability of the landscape that Ernst and Tanning experienced. However, the microbes are by no means an accurate or dispassionate portrayal of the Southwest landscape but rather translations of Ernst's perception of his surroundings and imaginative visions. Many of Ernst's later microbes lose even the loose representational link to the landscape that these microbes from 1946-1947 display.

"Microbes and Paintings," 1947

Soon after he began making the microbes Ernst exhibited them in an exhibition called "Microbes and Paintings" at the Julien Levy Gallery in New York from March 18-April 5, 1947. There were 18 microbes displayed along with 14 larger paintings; the larger works were a mix of landscapes and more figural images.[21] Levy was a great promoter of surrealist art and had shown Ernst's work for the first time in 1932, which was also his first solo exhibition in the United States.[22] Unfortunately, "Microbes and Paintings" would be Ernst's last exhibition at the gallery since Levy's wealthy father no longer wanted to support his son's losing art venture.[23] Reflecting this change in circumstance, the catalogue was a simple folded sheet of paper with the exhibited works listed inside that lacked an essay or artist's comments.[24]

There is only one known document that mentions the exhibition's organization. In a letter from Ernst to Levy, written from Reno, Nevada, Ernst introduced the paintings, describing them as "the size of an air-mail stamp." He suggests, "They should be presented in a precise way, and I thought, as you are a silversmith now, you could make the frames yourself in silver."[25] It is unlikely that the microbes were ever presented in silver frames as that would have taken more time and money than was feasible.[26] Ernst's words make it clear, though, that he wanted

their display to echo the precious feel of the individual pieces.

While few, the reviews of the exhibition were generally positive, and critics favored the delicate novelty of the microbes over the larger paintings.[27] After describing some of the larger landscapes in the show one reviewer posited that the detail and tiny scale of the microbes were the artist's reaction to the vast spaces he was living in and that their unusual size reflected Ernst's own feeling of smallness and even insignificance. The reviewer claimed,

> The feeling of release found in the vast desert, the endless, firm horizon, and the clear night air find their expression in the moonlit, green abstractions in which rarefied repose is suggested by the long, thin horizontal lines. Another reaction to the great open spaces was concentration on the smallest details. The results are what Max Ernst calls "microbes," tiny oils, postage-stamp size, likely to appeal to those who want the master in capsule form.[28]

Edward Alden Jewell, the well-known critic at the *New York Times*, greatly preferred the microbes, calling them "much more magical and enthralling" than the larger paintings.[29] He wrote that the microbes were "based on fortuitous squeegee," demonstrating his general knowledge of Surrealist ideas about automatism. At the same time, his flippant words reduce the technique to a parlor game or child's trick and neglect its psychological basis.[30]

Of the reviewers only Ben Wolf of *Art Digest* commented on individual microbes rather than on the group's overall effect:

> The artist's "microbes" consist of a series of eighteen microcosmic miniatures, amazing, in many instances, for their illusion of depth and space and for their breadth of handling, transcending the tiny areas within which the artist has confined himself. Particularly noted is the microscopic *Here Walked Leonardo*, a fantastic landscape bringing to mind Jules Vernes's *Journey to the Center of the Earth*. In the same series, *Facility* is remembered. Surreal in approach, it is a convincing and subtle note.[31]

From afar, even from only a few feet away, visitors to the Levy exhibition would not have been able to see the imagery in the individual microbes. Only in approaching the works very closely would they have realized that each work contained a sweeping vista or a generalized landscape. Overall, the group of eighteen microbes provided a novel viewing experience for viewers accustomed to significantly larger paintings.

Seeing Through a Temperament

Ernst added significantly to the number of microbes over the next few years and in 1953 he seriously engaged with these works for the final time in his book *Sept Microbes vus à travers un tempérament*, which takes the reader on a journey through Ernst's particular interpretation of the Southwest.[32] Produced through the Parisian art book publisher Cercle des Arts in an edition of 1100, it includes a poem written by Ernst and thirty microbes reproduced at their original size on the cover and throughout the pages. The maquette for the book is inscribed "spring 1953" and it seems likely that the poem was written around this time as well.[33] There is usually only one microbe reproduced per page, with the exception of one instance where two and three share a page. The first hundred copies in the edition include a color etching by Yves Tanguy as the frontispiece. Although the poem contains a number of concrete references to the landscape, it is far from an objective account of the admittedly fantastic external appearance of the land. Instead, Ernst's words position the microbes as a distinctly surrealist interpretation of the American Southwest and reveal his own thinking about the interaction of the eye and mind with their surroundings.

The poem and microbes are divided under seven headings: *Colline* (Hill), Madeleine, *Lumière* (Light), *Coloradeau*, *Plantes-Soeurs* (Plant-Sisters), *Eternité* (Eternity), and *Dix Milles Peaux-Rouges* (10,000 Red Indians). The first heading, "Colline," is followed by the opening stanzas of the poem:

> *Vue à l'oeil nue*
> *cette colline est deux fois plus jeune que son âge*
> *pour vos beaux yeux nus*
> *elle se pare de plumes de plomb*
> *et d'un ciel secret et journalier*
> [Seen with the naked eye
> this hill is twice as young as its age
> for your beautiful naked eyes
> it decks itself with leaden feathers
> with a secretive, changeable sky]

Ernst's first line "seen with the naked eye" recalls Breton's famous opening line of "Surrealism and Painting" in 1928: "The eye exists in a savage state." In other words, the eye perceives purely, presumably unadulterated by the mind's intervention. Between Ernst's first and second lines is a microbe that portrays a clear blue sky and a craggy peak of red and orange earth with green vegetation clinging stubbornly to its sides (Fig. 2).[34] The marks, particularly those delineating the vegetation, are precise and give the small work a sense of texture and materiality. Furthermore, this first microbe is one of the most realistic in the entire book and represents the rugged

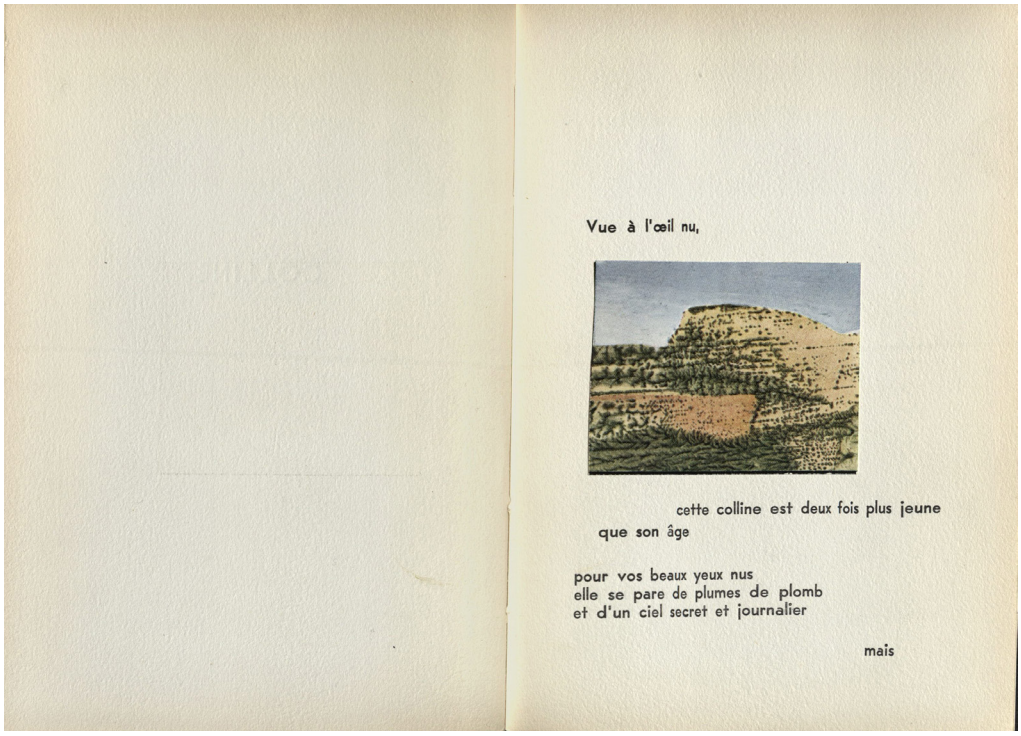

Fig. 2. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

hill of the Southwestern landscape as the naked, objective eye may perceive it: fresh and beautiful, with feathery greenery. Bringing to mind the stillness and heat of the Arizona afternoon, it is the clearest indication in all the microbes of the repose Ernst had found in his American retreat after years of upheaval.

Still under the heading "Colline," the poem counters this opening statement throughout the next four pages, describing the hill not as one might see it with a naked eye but as it is seen through an individual temperament:

mais
vue a travers un tempérament
elle s'enflamme
s'empourpre,
rugit,
trombone et bourdonne
dans les silences de l'espace
comme
une pyramide en colère qui
deux fois par siècle rit
rit

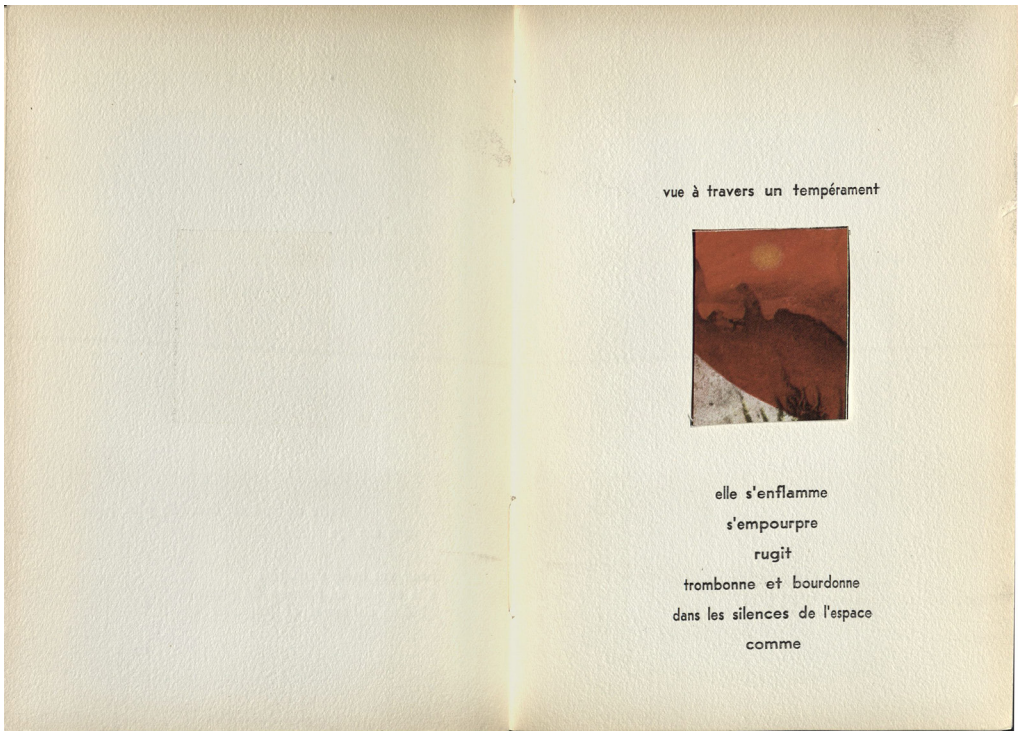

Fig. 3. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

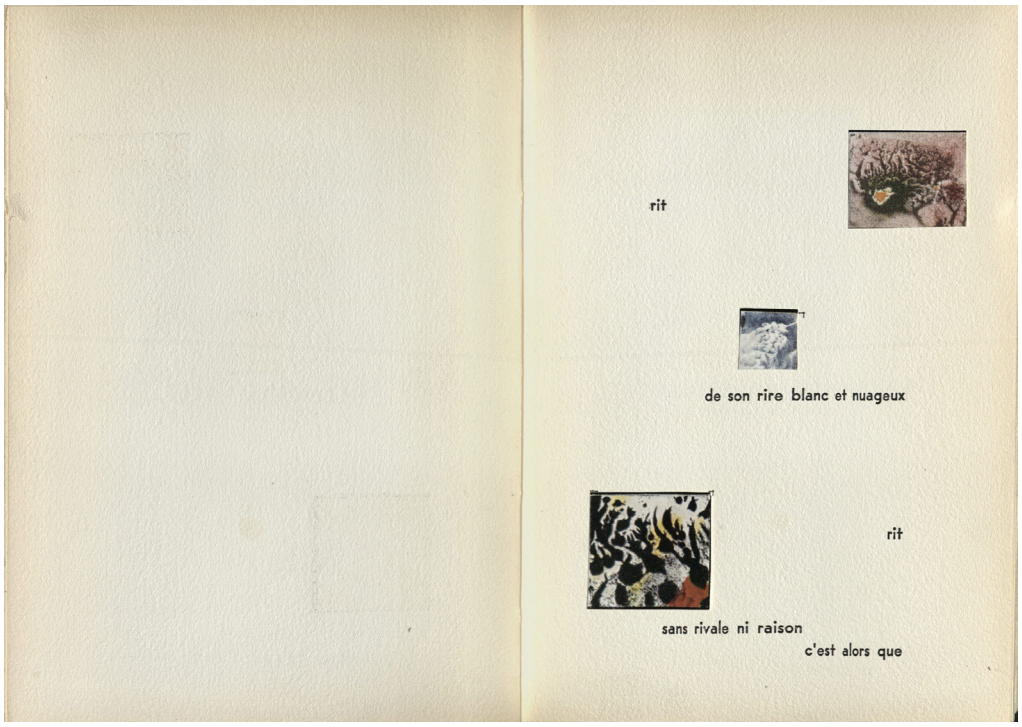

Fig. 4. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

de son rire blanc et nuageux
rit
sans rivale ni raison
c'est alors que
son terrible chant d'amour éclate
entre deux lits de glace
[but
seen through a temperament
it flares up
turns crimson
bellows
trombones and rumbles
in the silence of space
like
an angry pyramid that
laughs twice a century
laughs
its white and cloudy laugh
laughs
without rival nor reason
then
its terrible love song bursts forth
between two beds of ice]

The seven images that accompany this section of the poem are markedly more abstract than the first one. The first is a sea of red with a flowing mountainous shape in the center: an orange sky and sun are above while a white strip at the lower left signifies ice (Fig. 3). It is easy to imagine that this is the bellowing crimson lava or "love song" described in the poem. Other microbes in this section hint less about the ostensible subject matter. On a page that contains three microbes (Fig. 4) only the center image is connected to the accompanying text—"a white and cloudy laugh"—while the flowing and rhythmic forms of the other two more generally evoke chaos and movement. Seen through Ernst's temperament, the hill is no longer that of a tranquil Arizona afternoon but rather a seething, erupting volcanic mass. Ernst's turn from "the naked eye" to the emphasis of individual vision again parallels Breton's *Surrealism and Painting*. After opening with his statement about the "savage state" of the eye, Breton immediately discusses how he perceived, recognized, and remembered objects around him, ultimately concluding that vision is subjective. He closes the opening paragraph by stating, "there is also what I see differently from the way in which anyone else sees it, and even what I begin to see *which is not visible*."[35]

The next section of Ernst's poem "Madeleine" is short and serves to

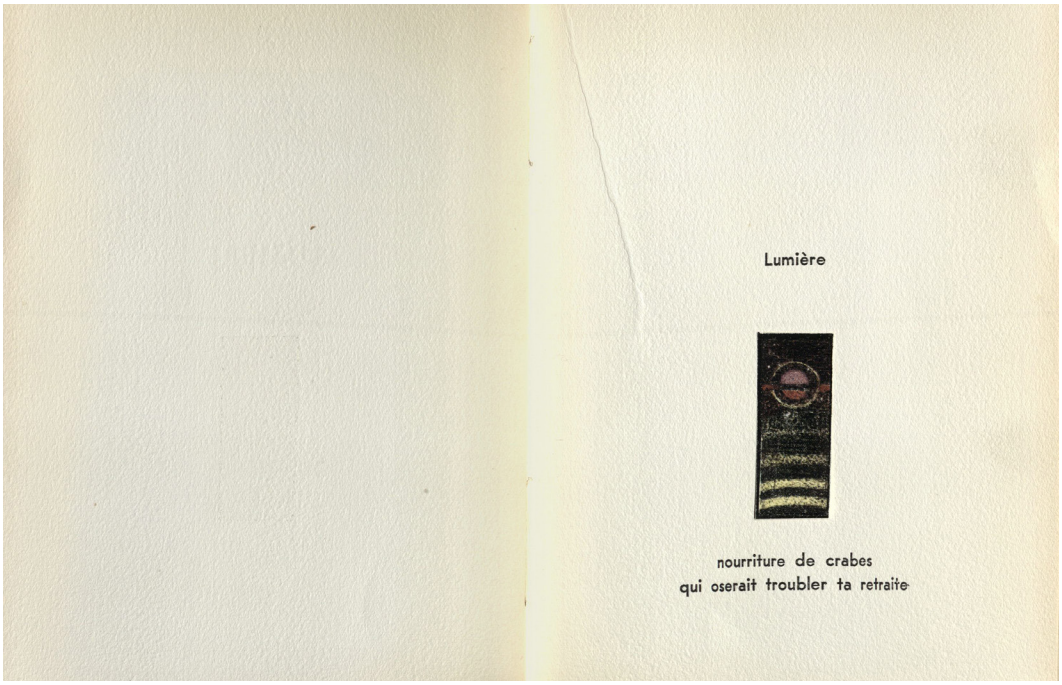

Fig. 5. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

stress the psychological basis of the artist's vision and creation. A madeleine is a French pastry but it is also shorthand for an object that provokes a memory or causes nostalgia.[36] The lines describe a mysterious aquatic atmosphere in which the madeleine is forgotten and disappears into a pile of tears, a verbal description that is echoed by the image on the page. For the Surrealist Ernst this deep ocean signifies the mind, where the madeleine or memory resides. The following section, "Light," describes light as crab food that disturbs the ocean floor retreat and signifies surrealist attempts to reach into the mind and understand its workings, thus bringing the unconscious to light. There is only one microbe reproduced under this heading, an image of a red and pink ball before a dark background (Fig. 5). Horizontal yellow stripes below it recall the rays of the sun that reach into the ocean. This microbe's vertical orientation stresses the depth and darkness of the ocean, characteristics that extend metaphorically to the mysterious character of the unconscious mind.

With the section "Coloradeau" Ernst returns the reader to a specific locale. "Radeau" means "raft" in French and this play on words refers to the state of Colorado. Ernst's poem describes elements that are distinct to a trip down the Colorado River, such as the scents of asphalt and limestone and "cruel greenery." He mentions jellyfish several times, conjuring their gelatinous, shifting forms and recalling the watery atmosphere of the previous two sections. Just as the words of the poem shift between generally realistic descriptions of the Southwest and more

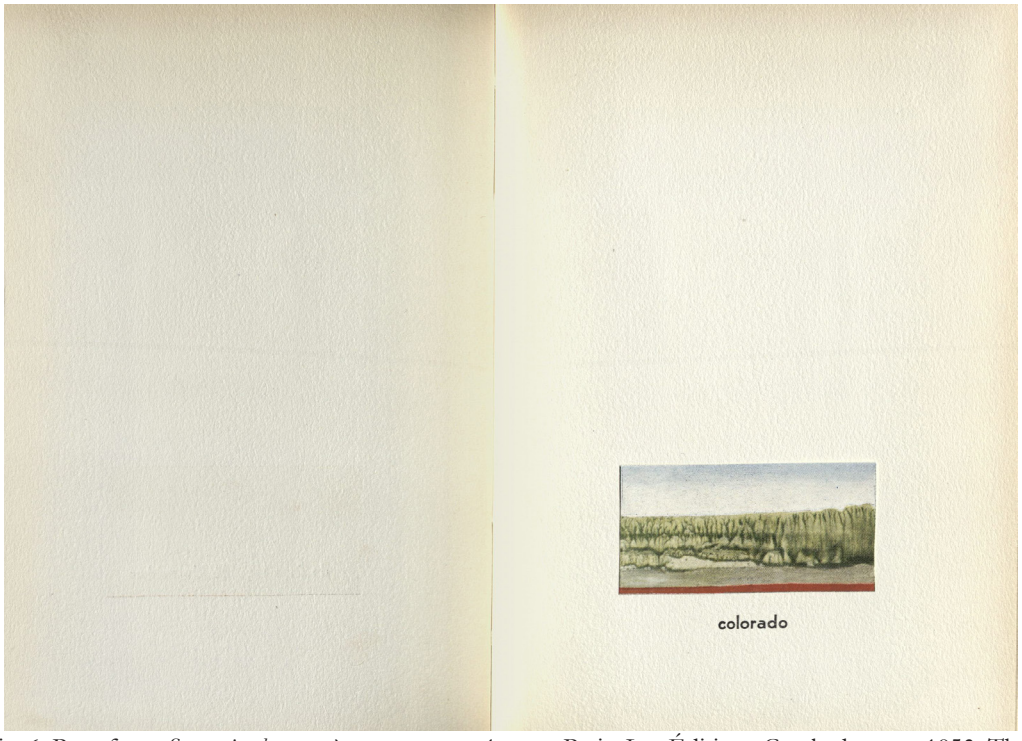

Fig. 6. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

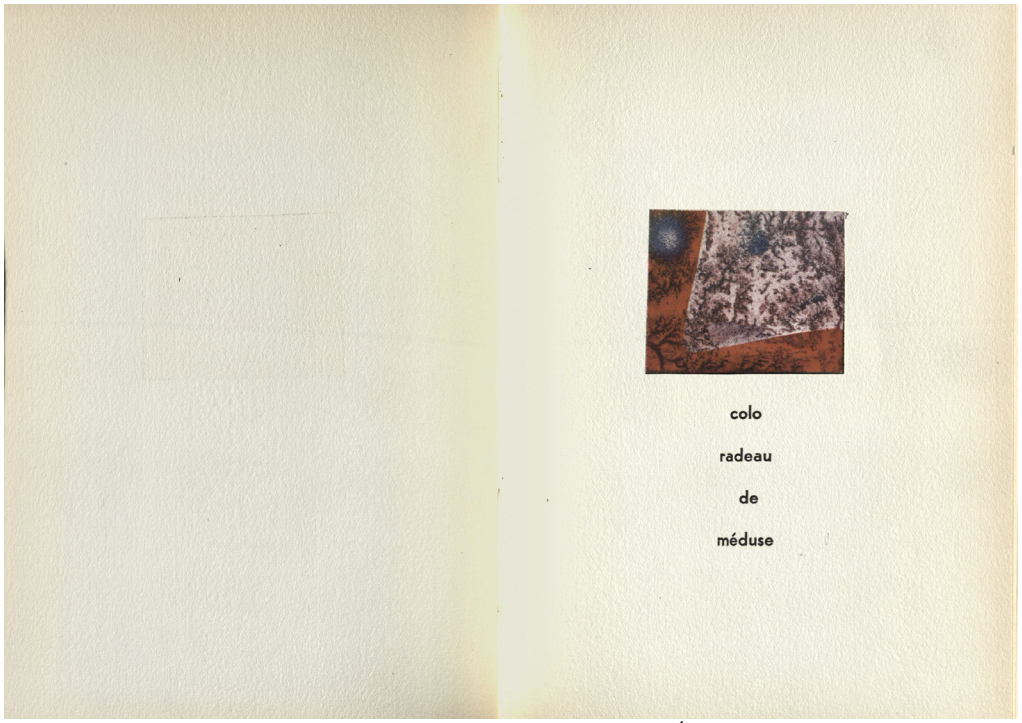

Fig. 7. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

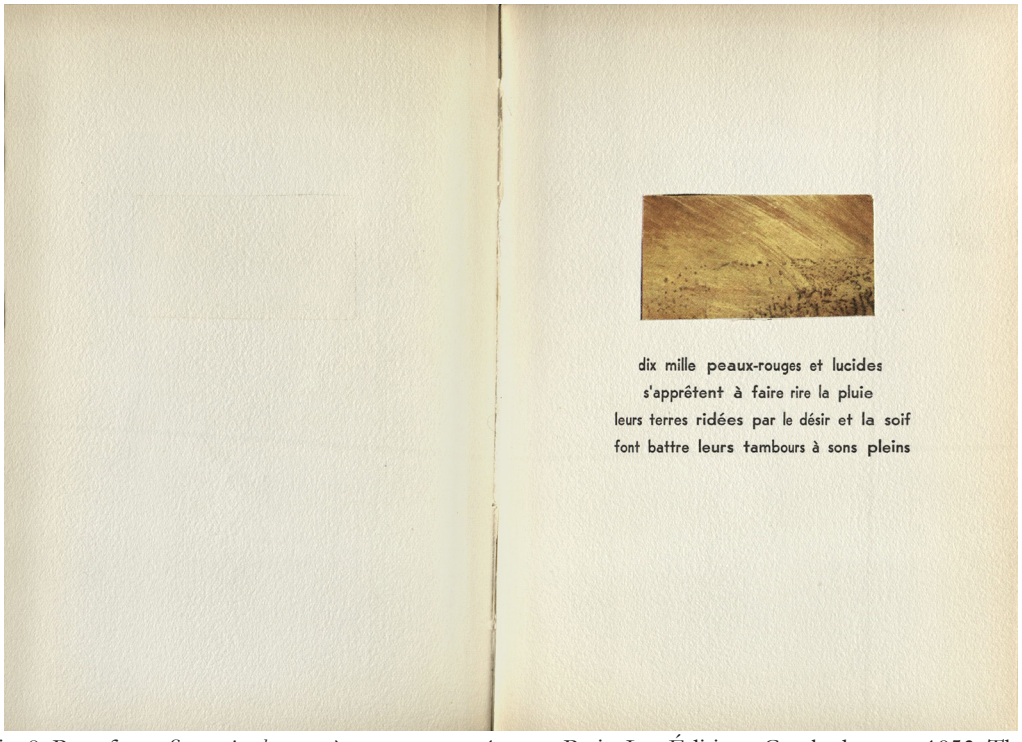

Fig. 8. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

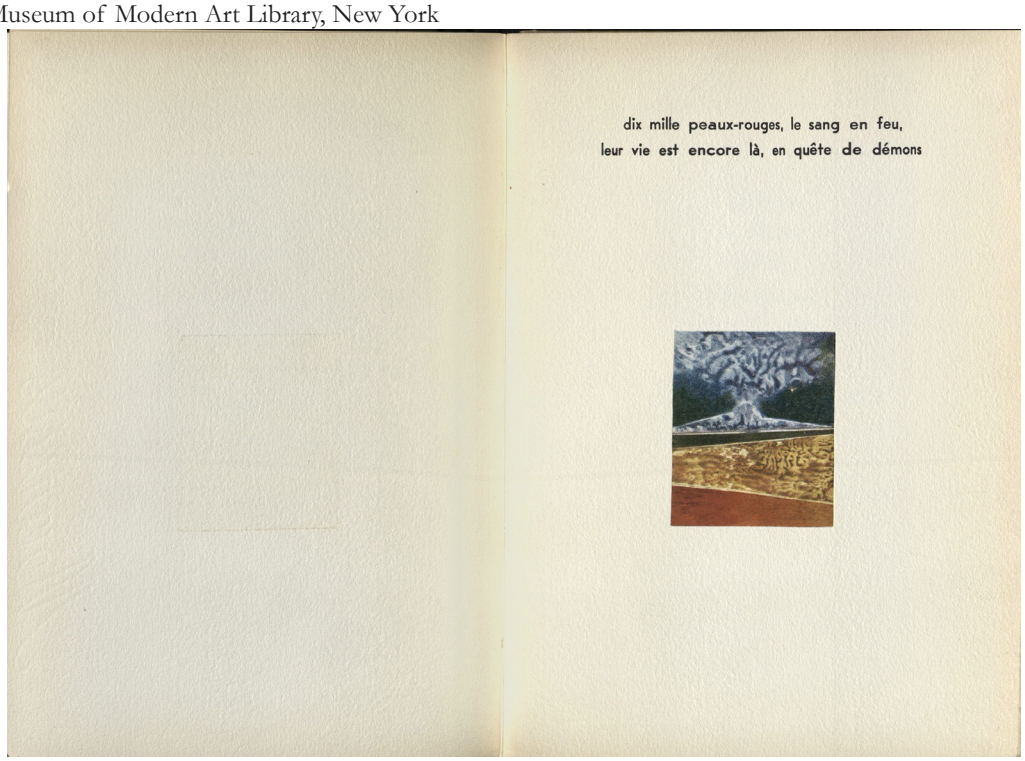

Fig. 9. Page from *Sept microbes vus à travers un tempérament*. Paris: Les Éditions Cercle des arts, 1953. The Museum of Modern Art Library, New York

imaginative and unrelated imagery, the microbes themselves shift between images that represent limestone cliffs and rolling greenery to more abstract and amorphous imagery (figs.6-7). It is known that Ernst and Tanning took a nine-day, 18-mile trip on the Colorado River rapids in rubber boats in 1956, three years after the book was published, but they may have experienced the area earlier as well.[37]

The next two sections, "Plantes-Soeurs" (Plant-Sisters) and "Eternité" (Eternity), are concerned primarily with the boundless, unceasing character of time. The three microbes reproduced on these pages are among the most abstract in the book, as if they denote multiplying or disintegrating celestial or earthly matter. The final section of the book, "10,000 Red Indians," describes Ernst's stereotypical view of the Native American population of the Southwest as a people who exist outside of time and are deeply connected to old traditions and to the land. The accompanying microbes in this lengthy section are also very abstract, again suggestive of a primordial mass (Fig. 8).

The book ends with the recognizable shape of a brightly colored erupting volcano (Fig. 9).[38] Thus the first and last images in the book are the most representational, showing a tranquil hill and then at the end its more violent counterpart, an erupting volcano, while the rest of the microbes are either enigmatic landscapes or wholly abstract in appearance. Ernst's deliberate movement from a few images that are indicative of a real landscape to a majority of images that are more obviously imaginary, fantastical, and nonrepresentational corresponds to the subject of the poem, which is Ernst's own imaginative capacity and his mind's projection of what his "naked eye" takes in. Through his words and the sequence of images, Ernst indicates these visions are filtered through the unconscious mind. The idea of subjective vision, the impossibility of ever perceiving and creating objectively, had long-standing currency within the surrealist movement, as seen in Breton's *Surrealism and Painting*. With the publication of *Sept microbes vus à travers un temperament* in 1953, Ernst reaffirms his dedication to this principle.

Ernst and the Abstract Expressionists

The microbes were created and exhibited in conjunction with the development and rising importance of Abstract Expressionism, and in the context of Ernst's affiliation with a number of the movement's artists during his time in New York. Throughout the 1940s and 1950s, the paintings of the New York School gradually came to dominate the contemporary art world and still dominate the written history of the period. Scholars widely agree that Surrealism in general and Ernst in particular influenced the development of Abstract Expressionism and of Jackson Pollock, the archetypal Abstract Expressionist painter.[39] In contrast, there has been little examination of Ernst's reaction to the new American art. In this vein, the microbes can be instructive. Their abstract qualities and often unified, undifferentiated compositions resemble contemporary Abstract Expressionist

works.[40] Their size, however, appears to run counter to the large scale of many Abstract Expressionist paintings, which is widely seen as a significant aspect of the work.

In Ernst's view, Pollock was the major figure of the New York School. Pollock created what are believed to be his first action paintings in 1946 and went on to develop the technique fully and on a larger scale in 1947.[41] In 1949, three years before Ernst's microbes appeared in *Life* magazine, *Life* ran an article on Pollock and his action paintings with the subtitle "Is he the greatest living painter in the United States?"[42] Although the *Life* article was not wholly complementary, noting that some felt his work was "decorative" and others found it "degenerate," it was still a coup, and Pollock kept copies on hand for friends.[43] Ernst had been living in Arizona for two years at this point but certainly would have known that Pollock's star was continuing to rise in the New York art world. In comparison, Ernst's own fortunes were falling. He had not had a dedicated dealer since the closing of the Levy Gallery and following his divorce from Guggenheim he had been excluded from her gallery, The Art of This Century, which closed in 1947.

For Ernst, who had been a pioneering figure throughout his career and an innovator of numerous techniques, including collage, *frottage*, and *grattage*, the feeling that his inventiveness was being superseded by a younger generation would have been particularly difficult. Jimmy Ernst related that during his last conversation with his dying father in 1976 Ernst still asked about the Abstract Expressionists and remarked on their fame.[44] Ernst also felt that he was not given enough credit for his impact on the younger Americans and was particularly adamant that he gave Pollock the idea for action paintings. He claimed this, for example, in the 1960 interview with Roditi, when he stated that Pollock and others came to his studio to learn the "drip and drool" technique. He followed this statement by saying that he never claimed that this method was truly novel, but rather simply a shortcut to a source of revelation and inspiration.[45]

His other statements about his influence on the younger generation were not as modest. In 1941, while at Roberto Matta's summer home in Cape Cod, Ernst swung a punctured can filled with paint over a canvas, creating the first of his "oscillation" paintings, which Betty Parsons then exhibited at the Wakefield Bookshop in New York.[46] Ernst later asserted that he showed Pollock this technique, saying that "it involved the whole body, which could do as it pleased, moving freely, and giving free rein to the emotions. One might even say—I think I have the right to say—that this lesson I gave to that young artist was the source of a certain style in art which now goes by the name of 'action painting.'"[47] Another time, he described the process similarly and then concluded, "Surprising lines thus drip on the canvas. The play of association then begins."[48] Ernst clearly maintained that dripping lines on a canvas was not an end in itself and required the artist's further intervention, based on associations, to become a finished work of art. The Abstract Expressionists

rejected this idea; while surrealist concepts about automatism and about art-making as a reflection of an artist's innermost emotions were essential to the early development of Abstract Expressionists, the younger artists quickly moved away from mediating practices such as Ernst's. Meanwhile, Ernst consistently adhered to the surrealist principle of creating paintings that manifest the images suggested by his unconscious.

In their genesis and appearance, the microbes have obvious parallels with Abstract Expressionist works but their size is divergent, likely deliberately so. Ernst never explained why he began painting in such a diminutive format. One explanation that has been offered is that the microbes were cheaper to make than larger format works. Anthony Penrose, the son of Roland Penrose, recalled that his father said that "Max's sales had practically dried up. He would set off on long journeys in his car towing a trailer lined with paintings wrapped in blankets, and return without one sold. He decided to paint small works that could be easily transported in a suitcase. Roland bought an exquisite example, *Microbe vu à l'oeil nu*, that despite its miniature scale (55 x 70 millimeters) perfectly conveyed the vastness of the canyons."[49] The implication is that when Ernst left the Sedona area on car trips to attempt to sell his paintings, he would not have needed the extra expense and inconvenience of a trailer. The microbes would also have been less expensive to ship to either coast, where the primary art markets were. In addition, he would not have needed many materials to create the microbes, making them more economical. Yet financial hardship is ultimately an unsatisfying explanation, as the additional cost of making and transporting paintings of a more conventional size, such as 4 x 6 inches or 8 x 10 inches, would have been negligible and their sale would likely have been more lucrative.

Rather than economy and practicality, Ernst's sense of humor and competitive nature likely drove the production of the microbes. Ernst's letters reveal a sharp intellect and appreciation of the comedic and absurd. He surely appreciated the irony of painting at such a reduced scale when surrounded daily with the vastness of the American landscape. Since he had previously created much larger paintings of uncanny similarity to Arizona, the microbes were comparatively even more paradoxical and unexpected. He was also an ambitious man and highly aware of his place in the art world and history. Therefore, the sheer strangeness of the scale and the challenge of encapsulating entire worlds into such a tiny format would have appealed to his inventive nature. Even Salvador Dalí, with his long-standing fascination with tiny things and with scale in general, did not create paintings of such a miniscule size as the microbes.[50]

The minuteness of the microbes had an unusual visual impact and demanded close viewing conditions, a type of peering that was antithetical to much of the work of the Abstract Expressionists, and Ernst would have been highly aware of this distinction. Although when Ernst made his first microbes in 1946 the movement

was not yet associated with enveloping canvas sizes, Abstract Expressionist paintings soon became larger and more imposing. As the movement gained in popularity, he likely became even more satisfied with the contrasting microbes' size. Abstract Expressionism is now known for large-scale paintings, seemingly meant to accommodate the sweeping gestures of action painting and large swaths of color field painting. Certainly its best-known members—Willem de Kooning, Jackson Pollock, Mark Rothko, and Clyfford Still—produced work on a large scale, particularly as their careers advanced.

Jeffrey Wechsler's exhibition and catalogue, *Abstract Expressionism: Other Dimensions*, surveys Abstract Expressionist works of "moderate or quite modest dimensions" and makes the argument that large size was not an essential component of Abstract Expressionism.[51] All the works that Wechsler included in his exhibition were, however, quite a bit larger than Ernst's microbes. Within the catalogue, Irving Sandler, longtime critic and historian of Abstract Expressionism, said that while large size was not necessarily central to all the Abstract Expressionist artists' thinking, they did make claims for the centrality of bigness. It became identified with American art and "worked to separate the whole idea of the New York School from the School of Paris."[52] He further made the intriguing claim that their goal was expansiveness and that internal scale, or "what made a painting look like larger than it was," was more significant than literal size. In this way, small paintings could have expansive internal scale too.[53] In terms of internal expansiveness, Ernst's microbes certainly have additional parallels to the work of the Abstract Expressionists.

Ernst addressed the internal scale of the microbes in the Roditi interview of 1960. Roditi suggested that the scale of Ernst's work, including the microbes, depended on the scale of his vision, as if sometimes Ernst dreamed he were a giant and at others times a Lilliputian. Ernst agreed: "I don't like to create on a large scale what I first visualized as very small, or vice versa. My microbes thus depict a world of the infinitely small."[54] The microbes encapsulate his vision of an otherworldly landscape, underwater vista, or cosmos, an expansiveness seemingly at odds with their size. Ernst's words also suggest his immersion in an internal vision, which has similarities to the immersive experience the Abstract Expressionists often sought to give their audiences. In total, the similarities between the microbes and the Abstract Expressionists' paintings—the abstract, all-over compositions, the "drip" technique, and an expansive internal scale—make Ernst's dedication to painting at a reduced size for six years both more remarkable and, considering his competitive nature, understandable.

Ernst's reception and reputation had been tremendous in the surrealist circle of the 1920s and 1930s, but the American art world was comparatively indifferent. Furthermore, the American art critic, Clement Greenberg, had an outrightly negative view of Surrealism. In 1944, Greenberg published "Surrealist Painting," which was a general indictment of the movement's art. He was particularly critical of

painters who worked in what he considered to be a representational style, including Ernst.[55] In the essay, Greenberg often refers to Leonardo da Vinci. Leonardo was an important figure for the Surrealists and they especially appreciated the passages in his *Treatise on Painting* that outlined how chance forms can inspire a painter. Leonardo suggested that artists look at old, dirty walls in order to see in them shapes like landscapes, battles, and people, which will then inspire new compositions.[56] Later in the treatise he suggested throwing a sponge against a wall and divining forms in the random spots it left. Like Ernst, Leonardo did not consider such chance marks to be a finished work and insisted that the painter must alter the marks in accordance with their own vision or risk being "but sorry landscape painters."[57] Ernst spoke of Leonardo a number of times, always in the context of using techniques like *frottage* or decalcomania.[58] For Greenberg, such processes were useless because they resulted in images that are attached to "the world of real appearances."[59] In other words, because they involved the artist's subsequent intervention, even methods that rely on chance like Ernst's were inevitably and negatively attached to representational modes of art making. Significantly, immediately after airing his negative view of Leonardo and the Surrealists who worked in a related vein, Greenberg invoked Ernst, comparing his volcano landscapes to scenic postcards.[60]

It is tempting to think of the title of Ernst's microbe *Here Walked Leonardo* (1946-47) as a rejoinder to Greenberg's criticism or at the very least a pointed indication of Ernst's continuing adherence to the general surrealist principles that guided his earlier surrealist work and that would continue to guide him going forward. *Here Walked Leonardo*, created two years after Greenberg's article was published, was in the Levy Gallery show and was cited as a particularly "fantastic" microbe in the *Art Digest* article cited above. Unfortunately, this microbe has not been identified and may be lost or simply no longer categorized under that name. However, it was almost certainly a landscape based on semi-automatic techniques and therefore exactly the type of work that Greenberg abhorred.

Ernst finished his last microbes around 1950, only returning to them in 1953, with *Sept microbes vus à travers un tempérament*. At this point he was again living in France, despite having become an American citizen in 1948; the book served as a farewell to his time in the United States and revisited the sense of timelessness and connection to the land that he had felt there. Ernst's series of microbes embodied this American experience and connected his surrealist ideas about the unconscious to the country he lived in for a decade. As he emphasized with *Sept microbes vus à travers un tempérament*, the microbes, whether they denote apocalypse, a calm afternoon, fire, water, the heavens, or are so abstract as to only evoke primordial matter, are his interpretation of the visual experience of the landscape. The microbes also reflect his experience of the American art world and the development of Abstract Expressionism, which he both affected and responded to while remaining dedicated to the surrealist concepts that engaged him throughout his career.

1 "Mite-size art is shown actual size," *Life* 32, no. 3 (January 21, 1952): 58-59, 61-62.
2 There are at least seventy-two works that can be considered microbes and most likely more because not all entries in the catalogue raisonné include measurements, not all microbes in the 1947 Levy Gallery exhibition can be accounted for, and the author knows of one extant microbe that is not in the catalogue raisonné. See Werner Spies, *Max Ernst, Œuvre-katalog*, vol. X (Houston, TX: Menil Foundation; Köln: M. DuMont Schauberg, 1987), nos. 2521-2533, 2536-2545, 2804-2819, 2871, and 2926-2957.
3 Significant exhibitions of the microbes in Ernst's life include "Max Ernst: Microbes and Paintings" (New York: Julien Levy Gallery, 1947); "Max Ernst: Gemälde und Graphik*, 1920-1950"* (Darmstadt: Mathildenhöhe and Hamburg: Amerikahaus, 1952); "Max Ernst, Paintings, Collages, Drawings, Sculpture" (New York: Bodley Gallery, 1961); and "Max Ernst: zweiundzwanzig mikroben" (Cologne: Galerie der Spiegel, 1965).
4 John Russell provides the most sustained discussion of the microbes in *Max Ernst: Life and Work* (New York: H. N. Abrams, 1967), 144-146. Although the microbes have rarely been exhibited in depth in the past 20 years, notable exceptions are "Fragments of a Personal Universe: Max Ernst Collages and Microbes" (Paris, F.I.A.C/ The Mayor Gallery and Timothy Baum, 1998); and "Max Ernst: A Natural History of the Mind" (New York, Carosso, LLC Fine Arts, 2003).
5 Jimmy Ernst, *A Not-So-Still-Life: A Memoir* (New York: St Martin's Press/Marek, 1984), 216.
6 Hannes Reinhardt, ed. *Das Selbstportrait. Grosse künstler und denker unserer zeit erzählen von ihrem leben und ihrem werk* (Hamburg: Wegner), 1967. Trans. in *Max Ernst*, VHS, directed by Peter Schamoni (Chicago, IL: Home Vision, 1991). While visiting Ernst in Arizona in 1946 Roland Penrose also realized that the landscape corresponded closely to Ernst's sensibilities and previous work, so much so that it seemed the artist had designed the landscape himself. Roland Penrose, *Scrap Book, 1900-1981* (New York: Rizzoli, 1981), 140 and Spies, *Max Ernst, Œuvre-katalog*, vol. X, no. 2540.
7 Max Ernst to Joë Bosquet, March 9, [1943?], trans. in Werner Spies, *Max Ernst: Life and Work* (New York: Thames and Hudson, 2006), 200.
8 Ibid.
9 "Lors d'un bref séjour dans l'État désertique du Nevada, Max Ernst peint des *Microbes*, tableaux de taille minuscule accompagnés de poèmes. (Le tout paraîtra, sept ans plus tard, a Paris, au 'Cercles des Arts', sous le titre de *Sept microbes vus à travers un tempérament*, plus en Allemagne, Galerie 'Der Spiegel.')" Max Ernst, "Notes pour une biographie," *Écritures* (Paris: Gallimard, 1970), 72. See also Max Ernst to Julien Levy, October 20, [1947], box 12, folder 7, Julien Levy Gallery records, Philadelphia Museum of Art Archives.
10 In the title of his 1942 autobiographical account, "Tissue of Truth, Tissue of Lies," Ernst made the mix of fact and fiction explicit. See Ralph Ubl, *Prehistoric Future: Max Ernst and the Return of Painting between the Wars*, trans. Elizabeth Tucker (Chicago: The University of Chicago Press, 2013), 2.
11 *Max Ernst*. VHS.
12 For the photograph, see "Mite-size art is shown actual size," 62. For another photograph, see Spies, *Max Ernst: Life and Work*, 196.
13 "Mite-size art is shown actual size": 62.
14 André Breton, "D'une décalcomanie sans objet préconu," *Minotaure* 8 (June 1936): 18.
15 Samantha Kavky, "Max Ernst in Arizona: Myth, mimesis, and the hysterical landscape," in *Res: Anthropology and Aesthetics* 57-58 (Spring/Autumn 2010): 212.
16 Edouard Roditi, "Max Ernst" (1960), in *More Dialogues on Art* (Santa Barbara, CA: Ross-Erikson, Inc., 1984), 38.
17 Ibid., 50.

18 See color images of *Nobility* and *Emotion* in *Max Ernst: A Natural History of the Mind*, plates 22 and 23. Thank you to Gale and Ira Drukier for allowing me to view these works in person.
19 Dorothea Tanning, *Birthday* (Santa Monica: Lapis Press, 1986), 81.
20 Ibid, 85.
21 See Spies, *Max Ernst, Œuvre-katalog*, vol. X, nos. 2505, 2508, 2509, 2511-2513, 2516, 2518, 2551.
22 "Exhibition Surréaliste by Max Ernst" (New York, Julien Levy Gallery, November 5-December 3, 1932).
23 For more on the Levy Gallery, see Ingrid Schaffner and Lisa Jacobs, *Julien Levy: Portrait of an Art Gallery* (Cambridge, Mass.: MIT Press, 1998). For Ernst's reaction to the closing of the gallery, see his letter to Levy, December [21? 27?], 1949, box 12, folder 7, Julien Levy Gallery records, Philadelphia Museum of Art Archives.
24 For the invitation and catalogue related to this exhibition, see box 35, folder 5, Julien Levy Gallery records, Philadelphia Museum of Art Archives.
25 Letter from Max Ernst to Julien Levy, October 20, [1947].
26 The microbes *Emotion* and *Nobility*, which were in this exhibition and then entered Levy's private collection, have frames that are covered in black paper and may be original.
27 The exception is Carlyle Burrows, who finds Ernst's new work to be less powerful and beautiful than in the past and focuses primarily on the larger paintings, saying only of the microbes that, "Some miniature sketches in color are also of interest in the show." "Art of the Week: Some Others," *New York Herald Tribune* (March 23, 1947): C8.
28 "Exhibition, Julien Levy," *ARTnews* 46 (April 1947): 43.
29 Edward Alden Jewell, "Academy By Itself," *The New York Times* (March 23, 1947): X7.
30 Ibid.
31 Ben Wolf, "Max Ernst Goes Microbe Hunting," *Art Digest* 21 (April 1 1947): 19.
32 Max Ernst, *Sept Microbes vus à travers un tempérament* (Paris: Éditions Cercle d'Art, 1953). Reprinted, without illustrations, in Max Ernst, *Écritures* (Paris: Éditions Gallimard, 1970), 310-319.
33 The maquette is in the Bibliothèque nationale de France, Réserve des livres rares, RES 8-NFV-49.
34 Thank you to Timothy Baum for allowing me to see the original microbe in person.
35 André Breton, "Surrealism and Painting (1928)," in *Surrealism and Painting*, trans. Simon Watson Taylor (Boston: MFA Publishing, 2002), 1.
36 The definition of a madeleine as "one that evokes a memory" developed from Marcel Proust's 1913 novel *Swann's Way*, in which he recalls an episode from his childhood after tasting a madeleine dipped in tea. "madeleine" Merriam-Webster, 2017, accessed January 17, 2017, https://www.merriam-webster.com/dictionary/madeleine
37 Tanning, *Birthday*, 86.
38 In 1952, the year before he published *Sept microbes vus à travers un tempérament*, Ernst gave 30 lectures on primitivism and modern art at the University of Hawaii and had an exhibition of paintings there on the subject of volcanoes. Coincidentally, while he was visiting, Hawaii had a series of strong volcanic eruptions. Robert Rainwater, ed. *Max Ernst: beyond surrealism: a retrospective of the artist's books and prints* (New York: New York Public Library: Oxford University Press, 1986), xiv and *Max Ernst*, VHS.
39 For detailed examinations of Surrealism and Abstract Expressionism, see Paul Schimmel, ed., *The Interpretive Link: Abstract Surrealism into Abstract Expressionism* (Newport Beach, Calif., Newport Harbor Art Museum, 1986) and Martica Sawin, *Surrealism in Exile and the Beginning of the New York School* (Cambridge, MA: MIT Press, 1995).
40 For a similar observation about the microbes and the works of the New York School, see Kavky, "Max Ernst in Arizona," 222.
41 Kirk Varnedoe, "Jackson Pollock's Life and Work," in *Jackson Pollock* (New York: MoMA, 1999), 47-50.

42 "Jackson Pollock: Is he the greatest living painter in the United States?," *Life* 27: 6 (August 8, 1949): 42-43, 45.
43 Dickran Tashjian, *A Boatload of Madmen: Surrealism and the American Avant-Garde* (New York: Thames and Hudson, 1995), 303.
44 Ernst, *A Not-So-Still-Life*, 261.
45 Roditi, "Max Ernst," 38.
46 Deborah Solomon, *Jackson Pollock: A Biography* (New York: Simon and Schuster, 1987), 180; and Sawin, *Surrealism in Exile*, 207-208.
47 *Max Ernst*, VHS.
48 Jean Cassou, *Max Ernst*, Musée National d'Art Moderne, Paris, 1959, n.p.
49 Anthony Penrose, *Roland Penrose: The Friendly Surrealist: A Memoir* (Edinburgh: National Galleries of Scotland, 2001), 134-135.
50 For a detailed examination of Dalí's treatment of smallness, see Roger Rothman, *Tiny Surrealism: Salvador Dalí and the Aesthetics of the Small* (Lincoln: University of Nebraska Press, 2012).
51 Jeffrey Wechsler, *Abstract Expressionism: Other Dimensions: An Introduction to Small Scale Painterly Abstraction in America, 1940-1965* (New Brunswick, N.J. : Jane Voorhees Zimmerli Art Museum, Rutgers, 1989), 62-64.
52 Ibid., 76.
53 Ibid., 82.
54 Roditi, "Max Ernst," 56.
55 Clement Greenberg, "Surrealist Painting," in *The Collected Essays and Criticism: Perceptions and Judgments, 1939-1944*, ed. John O'Brian (Chicago: The University of Chicago Press, 1986), 229. Originally published in *The Nation*, August 12 and 19, 1944.
56 Leonard da Vinci, *A Treatise on Painting*, trans. John Francis Rigaud (London: G. Bell and Sons, 1877), 84.
57 Ibid.,199.
58 See Max Ernst, "Beyond Painting," in *Surrealists on Art*, ed. Lucy Lippard (New York: Prentice Hall, 1970), 120-121; and Roditi, "Max Ernst," 38, 56.
59 Greenberg, "Surrealist Painting," 228.
60 Ibid., 229.