

Thread-skies

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The sky defines where we are in the big-picture sense, physically and metaphysically. As our most palpable infinity, it is synonymous with an unbound imagination. It seems silly to ask where we would be without the sky. There would be no "where" in which "to be." Imagining no sky is to imagine being without an imagination. Granted, it is a tall order to ask that the imagination transcend itself. If, however, the skies are indeed "the limits," then how we might imagine the sky is also to consider how the imagination sees itself, how the imagination envisages its cloak. Paradoxically, *Sky-wreck* is anything but imaginative in a traditional sense. Helen Mirra's methodology for developing *Sky-wreck* was explicitly modeled on a statement from Marcel Duchamp. She literally set out "to develop in space the principle of the sky"; this statement is patterned after one of Duchamp's notes included in *The Green Box*.

Perhaps make / a hinge picture. / (folding yardstick, book...) / Develop / the principle of the hinge / in the displacements / 1st in the plane 2nd in space¹

To the extent this methodology was overt—having been printed on the poster/ announcement for Mirra's exhibition—*Sky-wreck* was announced as a post-aesthetic endeavor in keeping with Duchamp's efforts to redirect art's focus from the aesthetic to the conceptual. Depending on the degree of literalness with which one reads *The Green Box*, this redirection also entailed blurring the boundaries between the poetic and the aesthetic, the cerebral and the visual. Duchamp wanted to find a means of expression somewhere between painting, writing, and sculpture. Written between 1911 and 1918, the fragmentary notes that constitute *The Green Box* were meant to accompany his seminal work, the *Large Glass*. Duchamp considered the notes "more important than the actual visual realization."² His intention had been "to reduce the Glass to as succinct an illustration as possible of all the ideas in *The Green Box*."³

A manual fragmentary prose-poem form, *The Green Box* captures Duchamp's thinking "from painting to Large Glass, and from Large Glass to ready-made."⁴ Under the rubric of the ready-made, the work of art became the form given to an idea. Duchamp's logic can be considered along an art historical trajectory culminating in minimalism and conceptualism, where the formalist art object ultimately found its ideational corollary in the languages of math (as in the systems and serial-based practices of minimalism) and/or the philosophical proposition (as in conceptual art). Using a scientific paradigm, the art work, and its attendant phenomenological experience, became manifestations of a rationally stated idea. By striking a balance between idea and object, the imagination was spared the task of visualizing. The sky had fallen as visual signification achieved degree zero.

Mirra would have little choice but to work from scratch. Her involvement with music and poetry, along with the nondescript quality of her objects and utter simplicity of her installations, make it seem as though she has forsaken the visual. Cloth is Mirra's most consistent, if not concrete, medium. Presented with minimal artisanal intervention and no structural support, Mirra's cloth-based works are the rematerialization of the art object on the most humble and anti-monumental of terms. On the floor, they mark the transition from the second to the third dimension in

millimeter increments, assuming an undeniable sculptural presence by describing and defining Euclidean volumes "1st in the plane 2nd in space" as in the works of Carl Andre. With only their shape, size and color to speak of, Mirra's cloth objects both fulfill and adhere to conditions of strict visual signification. Having purged all references extraneous to an irreducible visual or spatial experience, they exemplify the hallmark characteristics of minimalism, including its predilection for industrially processed materials. Lacquers, laminates, and plastics were chosen specifically for their lack of references to the natural world, memory of which was actively suppressed. Cloth, too, is an industrially produced material that could be said to participate in the further suppression of memory were it not for the fact that textile production is one of the oldest industrial processes known to humankind. With the handloom as proof, one could argue that cloth, well before the mechanization of textile mills during the industrial revolution, was the first industrially produced material. In essence cloth is anything but a material without memory. Cloth is literally the "textural correlate for memory and nostalgia."⁵

If cloth serves to counteract minimalism's active suppression of memory, particularly that of our highly mediated relationship to the natural world, then Mirra's content is something of a given. She could not help but resort to such themes as the sea, the landscape, and childhood—themes Romanticism reduced to a literal stand-in for memory itself. Mirra's work overall is characterized by an antediluvian sensibility, conjuring up childhood blankets, a time when the seas held mystery, or an anachronistic present, where people use looms, windmills, typewriters and record players. In addition, she considers the crafts of stitching and weaving to be translations of the repetitious manual labor associated with both rail and sail, antiquated modes of conquering distance.

Sky-wreck is the most recent addition to a body of work Mirra has developed out of an interest in voyages, mapping and topologies. These works, including *Portable Deck*, *Map of Parallel 52°N*, and *Sleepers (railroad ties)*, date from the past three years. In many respects, *Sky-wreck's* nearest conceptual sibling is *Under Potemkin*, a textual transcription of filmic imagery from Sergei Eisenstein's *Potemkin* typed onto a 16 millimeter strip of blue cloth neatly installed around the room at eye level so as to create a thin blue horizon line doubling as the expanse of sea and sky. This installation was not a spare poetry of the sublime, it was the sublime poetry encapsulated in the word "spare," encompassing both meanings of the word, becoming more through less. Like *Sky-wreck*, *Under Potemkin* combines word and object as a referential tag-team, signifying an absence our imagination is meant to fill. By referring to filmic imagery, the text, typed directly on the cotton banding, activates the imagination's capacity for visualization, ultimately substituting something for nothing. *Sky-wreck's* textual and textile components, however, are segregated. Its text elements—the geometric parameters used to determine the work and a poem by Paul Celan—were printed opposite each other on the walls leading into the gallery. The extent to which these different languages (math and poetry) are opposed to one another with respect to what they seek to describe is being brokered over *Sky-wreck's* textile component, which uses the visual trope of minimalism. By assembling three different forms of signification, the post-aesthetic imagination is being addressed as a dilemma in terms more explicit than in *Under Potemkin*.

¹ Marcel Duchamp, *Notes and Projects for The Large Glass*, introduction by Arturo Schwarz ed. (New York: Harry N. Abrams, 1986), 80.

² *ibid.* 7.

³ *ibid.* 7.

⁴ *ibid.* 4.

⁵ Brian O'Doherty, "Minus Plato," *Minimal Art, A Critical Anthology*, ed. Gregory Battcock (Berkeley: University of California Press, 1995), 254.

Sky-wreck functions both autonomously and as a visual signifier; it references the sky through only the most essential aesthetic elements, i.e., by being blue and expansive. Whether it is regarded as a rote visual signifier or viewed as an autonomous work of art, *Sky-wreck* is denied being “imaginative” by virtue of addressing its subject in a tautological manner. It is not so much a minimalist work of art as much as what Michael Fried called a “literalist” work of art. It is what it is, which is to say the sky. This, of course, is not to say that *Sky-wreck* isn’t a beautiful work of art. To the contrary, it revels in a formal, geometric logic, appealing to an unconscious craving for order and commensurability that are the basis for our most cherished theories of beauty. The arrangement of triangles lends *Sky-wreck* an uncanny relationship to the gallery space, particularly the structural truss-work and the neogothic interior architecture, whose angles imply a host of invisible triangles. In this respect, *Sky-wreck* could be enjoyed purely as an autonomous, site-specific artwork, referencing its own internal, serial logic (the formal relationship of the parts to the whole) and the formal relationship of the whole to its immediate environment. Viewed in this manner, *Sky-wreck* provides an irreducible phenomenological experience of the space it commands as sculpture. However, as a purely formal undertaking, *Sky-wreck*, outside of itself, refers to nothing, which brings us back to the sky.

But what kind of idea is the sky? Mirra gathered information from an array of disciplines—physics, philosophy, poetry, theology, fiction, and cultural criticism—and included it on the poster for her exhibition. These excerpts address the sky both directly and indirectly—her blue poster functioning as a *Green Box* of sorts. Touching on every branch of human knowledge, the sky is more than a thing and more than a concept. It encompasses the firmament, and indeed the universe. It is essentially everything and nothing, a daunting metaphor, a meta metaphor. Mirra designed the layout of her poster/invitation after Dr. Emmanuel Bronner’s peppermint soap label, which contains quotes from a notable roster of political and spiritual luminaries. With a belief system informed by the devastating events of World War II and the threat of nuclear holocaust posed by the cold war, Bronner (1908–1997) was a spiritual ideologue whose vision was to unite humanity. The point of Mirra’s research and its inclusion on the poster was not to re-invoke Bronner’s universalist aspirations (which, unfortunately, remain welcome at this point in human affairs), but to destroy any hierarchy between forms of knowledge. United under the Bronner-inspired design, the theological shares space with the philosophical, and the scientific with the cultural. Mirra was particularly inspired by Thales and the Milesian School, a pre-Pythagorean group of philosophers whose method of inquiry allowed them to subscribe to several ideas as to the nature of the cosmos. In keeping with them, Mirra considers her findings “all valid proposals as to what the sky could be.”⁶ These proposals include *Sky-wreck*, which takes its title from a poem by Paul Celan (1920–1970) and its form from a geometry synonymous with Buckminster Fuller’s (1895–1983).

Mirra’s approach to the sky was remarkably down to earth. As a strict adherence to visual signification would warrant, Mirra approached the sky at an elementary ideational level, i.e., as a blue dome whose radius is determined by our visibility to the horizon at sea level. Given the dome as a structural model, and cloth as the material out of which the work would be fabricated, a

lesson in geodesics was required to calculate the shape the work would assume. Geodesics is the geometry that expresses the shortest distance between two points on a mathematically defined surface. Buckminster Fuller—engineer, inventor, designer, cartographer, architect, philosopher, and self-proclaimed poet—was geodesics’ greatest champion and is best remembered for the geodesic dome, a structure that remains the most efficient means for enclosing spaces. With respect to the dome, geodesics involves an elaborate series of triangles of various sizes that, when adjoined, describe a three dimensional hemispherical form. *Sky-wreck*’s geometric parameters were stated on the poster as follows:

The sky as an eleven frequency icosahedral dome
1210 triangles
chord lengths of 420-600 meters
Wreck/patch is 1/11 of the sky
110 triangles
330 edges, 110 seams
at a scale of 1:333

An icosahedral dome is one having twenty triangular faces. The frequency refers to the number of breaks along a face’s edge that ultimately determine the larger number of triangulated subdivisions. The triangles are not equilateral, and the lengths of their sides, or the chord lengths, vary depending on each triangle’s placement within the structure. Mirra’s debt to Fuller, however, is much greater than her use of geodesics, as he is of central importance to the dilemma of the post-aesthetic imagination.

Fuller, like Bronner, was a stalwart utopianist whose grandest ideas involved bringing matter and energy into dynamic equilibrium so as to derive more with less. Rather than furthering the aims of the military-industrial complex, Fuller advocated that technology ought to be used to improve the material conditions required to sustain life while reducing the resources needed to do so. Fuller’s commitment to applied science was inspired by what he perceived as a shortcoming in the scientific imagination. This he communicated in an anecdote involving a meeting with the British novelist and physicist C.P. Snow. During their discussion, both mourned the loss of Renaissance humanism, to which they attributed a greater union between the sciences and the humanities. Whereas Snow saw the rift in culture as the fault of the humanities—namely, its aversion to modernity and industrialization—Fuller blamed science for having given up on palpable forms of representation. According to Fuller, after the discovery of electromagnetics in the mid-nineteenth century, scientists concluded that invisible forces could not be represented to the “layman” in the form of models. Fuller found this unacceptable and insisted that a tangible geometry remains the means by which to understand the world; he thought that we had simply chosen the wrong shape. Since squares were unable to hold their shape under particular forces, and nature was bound to become frustrated by an irrational number such as pi, Fuller believed that triangles were the basic structural element of nature. Triangulation could be used to model all natural phenomena.⁷ But in the face of twentieth-century subatomic particle physics, in which

⁶ From a conversation with the artist, 6 May 2001.

⁷ This anecdote conveyed in “A Profile of R. Buckminster Fuller” by Calvin Tomkins in *The Artifacts of R. Buckminster Fuller: A comprehensive collection of his designs and drawings*, Volume 1, ed. James Ward (New York: Garland) 1985.

Heisenberg's uncertainty principle clearly defined the limits of knowledge, Fuller's contribution to humanist inquiry could hardly be said to reside in the field of science. Attempting to resuscitate geometry in an effort to reanimate the imagination, Fuller's contribution resides more in the field of visual representation, as Mirra's work might suggest.

It is only by virtue of treating the sky geodesically, in which a tautological relationship could be drawn between the sky and its objective representation in the language of geometry, that Mirra could deploy minimalism as a visual trope. *Sky-Wreck* is extremely faithful to its art historical sources to the extent that it is a work of minimalism and is to be read as a work of minimalism whose tautological conditions remain in effect. By reinvoking visual signification's degree zero, Mirra's work indexes loss. Her work does not lament the loss of visual art's mnemonic function; it echoes this loss. Under these circumstances, *Sky-wreck's* textual elements take up the referential slack that allows the floor sculpture to be strictly visual. It can only share a tautological relationship with the geometric parameters that make the work a literal manifestation of an idea. However, this privileges mathematical forms of representation, which is contrary to Mirra's goal of having *Sky-wreck* be the grounds on which various forms of knowledge addressing the sky, be they scientific or ideological, can be considered equally valid. *Sky-wreck's* geometric parameters were the means to realize a visual signifier into which thoughts referencing the sky could be woven.

It is easy to see why Mirra would be drawn to Paul Celan, and to the poem for which *Sky-wreck* is named in particular. Its opening lines, *With masts sung earthwards / the sky-wrecks drive*, reference sea, earth and sky. Celan is the pre-eminent poet of mid-twentieth century Europe. The outbreak of World War II in 1938 forced Celan to remain in Romania after a year of medical studies in France. In 1941, after Hitler invaded Romania, Celan's parents were taken to labor camps in the Ukraine, where both died. Celan escaped their immediate fate, only to perform forced labor in Axis Romania. In 1947 he moved to Paris, where he lived until his suicide by drowning in 1970. Although the Holocaust was considered an "unspeakable" act, Celan insisted that language could record devastating loss in representational terms that are language's own—namely, through poetry. A native Romanian speaker, he received an education in classic German literature. With few exceptions, all of his published work was written in German, the language that defined and simultaneously alienated him from culture. Celan's goal was to rend from that same language a verse reflecting a scarred humanity. In so doing it would be a verse that would enrich that very language.

Reachable, near and not lost, there remained in the midst of the losses this one thing: language. It, the language, remained, not lost, yes in spite of everything. But it had to pass through its own answerlessness, pass through frightful muting, pass through the thousand darknesses of deathbringing speech. It passed through and gave back no words for that which happened; yet it passed through this happening. Passed through and could come to light again, "enriched" by all this.⁸

The untitled poem Mirra reprinted on the gallery wall is from *Breathturn*, a 1967 collection that marked the transition to Celan's late work. The work in *Breathturn* is distinguished by a brevity that dispensed with an emotional ebb and flow. The imagery is precarious, built from a language of irregularly shaped fragments—husks of landscape, and shards of myth and symbol. *Breathturn's* is not a language of memory. It is uncertain if the speech belongs to anything resembling a holistic, if human, subject. "There are still songs to sing beyond humankind," is one of *Breathturn's* most memorable lines because it suggests this collection of verse belongs to the future, one in which the mimetic and mnemonic functions of language are broken, severed from a humanism to which we would desperately cling if the world Celan is actively constructing from the rubble of a failed speech is to make any sense. Critics called the book hermetic, a charge Celan rejected. Yet Theodor Adorno eloquently defended the work's perceived hermeticism, interpreting it as silence, which for Adorno was the only means of addressing the Holocaust.

In the work of the most important contemporary representative of German hermetic poetry, Paul Celan, the experiential content of the hermetic was inverted. His poetry is permeated by the shame of art in the face of suffering that escapes both experience and sublimation. Celan's poems want to speak of the most extreme horror through silence. Their truth content becomes negative. They imitate a language beneath the helpless language of human beings, indeed beneath all organic language: It is that of the dead speaking of stones and stars.⁹

Hermeticism is to Celan's poem what autonomy is to Mirra's sculpture. Both question the ability for that which is unfathomable to assume representation. Mirra considers the sculpture a patch of sky in both the sense of repair and as a section of fallen sky, sharing Celan's optimism and pessimism. Its many triangles echo the "songfast pennant" mentioned in the poem's closing. For these reasons *Sky-wreck* is as much a product of the poem for which it is named as the geometry that determined its form.

"Does poetry offer a kind of knowledge different from that offered by history?"¹⁰ J.M. Coetzee raised this question specifically in response to Celan's late work. *Sky-wreck* asks this same question of its various forms of signification (mathematical, visual, poetic) as they relate to one another. All of Mirra's work is a tightrope walk between signifiers, particularly as they try to grapple with unfathomable entities for which we are frequently at a loss for words. Trying to sum up the sky only illustrates the gulf between signifier and signified which the imagination is supposed to fill. The slagheap of signs, symbols, and metaphors will never be enough. All we can do is hope that something meaningful emerges from the wreckage. And sometimes it does, out of the clear blue.

⁸ Paul Celan "Speech on the Occasion of Receiving the Literature Prize of the Free Hanseatic City of Bremen," *Selected Poems and Prose of Paul Celan*, trans. John Felstiner (New York: W.W. Norton, 2001), 395.

⁹ Theodor Adorno, *Aesthetic Theory*, trans., ed. Robert Hullot-Kentor (Minneapolis: University of Minnesota Press, 1997), 322.

¹⁰ J.M. Coetzee, "In the Midst of Losses," *The New York Review* July 5, 2001, 4.

develop in space the PRINCIPLE OF THE SKY.

Who hath placed the sky as a vault, and spread it out as a tent over the earth. Who holdeth the circle of heaven¹

The ancients did not just refer to the appearance of the sky as being solid. They concluded from the appearance that the sky really was solid, and they then employed this conclusion in their thinking about astronomy, geography, and natural science. The raqiaa (FIRMAMENT) was for them a literal physical part of the universe... Solidity is an integral part of its historical meaning.² FRAGMENT

To realize a system - for instance a thought - means tuning into the thought and leaving all the rest of the universe untuned. This is done by subtracting or withdrawing one tetrahedron.³

At the Planck level, the weave of space-time would be as apparent as when the finest Egyptian cotton is viewed under a magnifying glass, exposing the warp and woof. It was Planck himself who first had an inkling of a smallest possible size. He noticed that he could start with three fundamental parameters of the universe -- the gravitational constant (which measures the strength of gravity), the speed of light, and his own Planck's constant (a gauge of quantum graininess) -- and combine them in such a way that the units canceled one another to yield a length. He was not sure about the meaning of this Planck length, as it came to be called, but he felt that it must be something very basic. In the 1950's, the physicist John Wheeler suggested that the Planck length marked the boundary where the random roil of quantum mechanics scrambled space and time so violently that ordinary notions of measurement stopped making sense. He called the result "quantum foam."⁴ So great would be the fluctuations that there would literally be no left and right, no before and no after. Ordinary ideas of length would disappear. Ordinary ideas of time would evaporate.⁵

To translate observed existences into non-observed, inferred sequences: John Dewey, *Experience and Nature* Chryssostom (374-407 AD) ² Paul Seely, *The Firmament and the Water Above: The Meaning of raqiaa in Genesis 1:6-8* Westminster Theological Journal, Fall and Spring of 1991/1992 ³ buckminster Fuller, *Lectures on Demography*, March 18, 1982 ⁴ George Johnson, "How is the Universe Built?" *Grant by Grant*, NYT, 7 Dec 1999 ⁵ John Wheeler, *Geons, Black Holes and Quantum Foam* ⁶ Job 26:7 "Perhaps make a HINGE PICTURE. (folding yardstick, book.) develop in space the PRINCIPLE OF THE HINGE in the displacement 1st in the plane 2nd in space ⁷ William Milton, note for the Green box ⁸ M. Duchamp, abstract for "The Agenda of the Milesian School: the Post-Catastrophic Paradigm Shift in Ancient Greece" Walter Benjamin, *Theses on the Philosophy of History* ⁹ Ben Marcus, *The Age of Wire and Strip* ¹⁰ Pen Skjerveck; Paul Cahn; Atemwende/ breathum; tr. Pierre Joris

Helen Mirra
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Topics held in common by the first three pre-Socratic philosophers from Miletos in the Sixth Century B.C.E., Thales, Anaximander, and Anaximenes, and by Xenophanes from neighbouring Colophon, taken together may be viewed as constituting the agenda of a "Milesian School". The agenda included a survey of the known kosmos (the orderly arrangement of the inhabited world surrounded by regularly moving heavenly bodies); redefinitions of divinity; and theories of the natural processes, constantly in operation, by which both kosmos and divinity are to be understood. It also included explanations of phenomena most men deemed terrifying: thunder, lightning, earthquakes, eclipses, and periodic destruction of the kosmos itself. It set about to explain these phenomena in terms of the same elemental processes (transformations of water, rarefaction and condensation of air, separating out of fire, air, water and earth, periodic reabsorption of these elements into a state of dynamic equilibrium) as it invoked to explain the orderly arrangement of the earth and the heavenly bodies. In so doing, it implied the baselessness of the traditional Olympian religion which attributed lightning and earthquakes to whims of Zeus and Poseidon and world-destructions to battles of the sky-gods. The ultimate Milesian agenda may therefore have been to liberate people from paralysing fear of the immediate recurrence of celestial disturbances in the recent past. By insisting that world-destructions occurred only in vast cycles of time (such as a "great year" whose winter solstice was Deluge and summer solstice Conflagration) the Milesian School was schematically distorting memories of recent disturbances, and its activity may be seen as part of a general pattern of oblivion and psychological distancing common to all cultures after the end of the Bronze Age catastrophes. But by insisting that these world-destructions occurred only as the result of unalterable elemental processes, it was also erecting a proto-scientific bulwark against apocalyptic thinking and behavior.⁸

This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. This storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress.⁹

God stretched out the North over the void.⁶

Perhaps make a SKY WRECK.⁷

sky radius- what appears as the distance to the edge of the sky, or the sight distance to the horizon, on a clear day at sea level, is approximately five kilometers

The sky as an eleven frequency icohedral dome
1210 triangles
chord lengths of 426-600 meters
Wreck/patch is 1/11th of the sky
110 triangles
330 edges, 110 seams
at a scale of 1:333

In 1922 on the roof of Carl Zeiss Optical Works in Jena, Germany, Dr. Walter Bauerfeldt, with Franz Dischinger and Dr. Ulrich Finsterwalder, built the first geodesic dome, as a replica of the sky - the first planetarium projector. It had 3480 struts, and they based their design on the thickness ratio of an egg shell to its diameter.

The Hebrew word for firmament is *raqia*. It comes from the verb *uqr*: stamp, beat out, spread out
SKY FILMS OF OHIO, THE The first recordings and creations of the sky, recorded in the Ohio region. They were generated by a water machine designed by Krup. The earliest films contain accidents and mishapen birds. They are projected occasionally at revival festivals--in which wind of certain popularity is also rebroadcast--but the machine has largely been eclipsed by the current roof lenses affixed to houses; these project and magnify the contents of each shelter onto the sky of every region in the society.¹⁰