





# The biopolitics of humility

*Eva Díaz*

It is sometimes presumed that humans exist apart from nature, and are therefore superior to it. This separation posits not only the detachment of nature from culture, its timelessness as against human-authored histories, but also presupposes the autonomy of humans, as if they might exist independently from the microbes within and on the body, or could regulate the very molecules they inhale. The artificial division of the human and the environment has long been abetted by the visual nature of art, which privileges sight, disconnecting it from the entanglements of other senses.

In his recent work, Argentina-born, Berlin-based artist Tomás Saraceno instead explores non-visual experiences, examining the overvaluation of certain forms of knowledge in Western culture (vision and cognition, distance and analysis) and the devaluation of others (breath and sensuality, proximity and the body). In works like *Leaf, Leaves, Life, Lives*, 2022, and *Particular Matter(s)*, 2021, among others, he investigates how to counter the denigration of the non-visual, foregrounding instead other kinds of sensation: the evanescent qualities of the vibrational and atmospheric; the thermodynamics of heat circulation related to haptic experiences of touch; the encounter with largely invisible electrostatic and gravitational forces; and the empathetic exploration of non-human and essentially imperceptible experiences such as photosynthesis and the pheromonic and chemical communications of other species. In particular, Saraceno considers the often-disruptive social and political power of airborne exchange and molecular dissemination, and how its classed and racialised effects can reproduce social and political inequities, in air pollution for example. Emphasising the biological origins of both visual *and* non-visual senses, his work also speculates how recognition of the power of the airborne can create bridges between species, proposing a holistic, biopolitical notion of a commons he calls an ‘ocean of air’.<sup>1</sup>

Saraceno’s works are necessarily interdisciplinary and collaborative, as understanding the volatile molecules and compounds that allow air to support terrestrial life, and the human-triggered ‘chemical colonisation’ of the Earth that has resulted in toxicity and pollution, frequently demands that he work in concert with chemists and other scientists.<sup>2</sup> He has also routinely partnered with Indigenous communities familiar with the land, its plants, and the animal species inhabiting the terrain. In the connections he makes between scientists and local populations, Saraceno is increasingly concerned with what geographer Marijn Nieuwenhuis terms the ‘ecological embeddedness’ of breath.<sup>3</sup> Breathing is not only a largely involuntary process, but it also involves a transcorporeal mixture of matter as we inhale the various molecules in the air. Saraceno’s work foregrounds sensation in aesthetics, bringing greater meaning

< *Particular Matter(s)*, 2021,  
Tomás Saraceno

to the vulnerability of *inspiring*—literally, taking the outside in.

My task here is not to topple sight, but rather to expand the notion of aesthetics to include *all* senses. This allows for the untangling of a great paradox: that many experimental and creative explorations of breath and the airborne, such as Saraceno's, have found their greatest expression in the (mostly) visual world of art galleries and art institutions such as the Museum of Old and New Art. Yet study of what critic Hsuan Hsu has termed 'airborne, trans-corporeal art' requires overcoming considerable roadblocks about the cultural irrelevance of invisible, involuntary, or contingent experiences such as respiration or proprioception.<sup>4</sup> Scent, taste and touch are often considered lesser senses in a hierarchy crowned by sight and seconded by hearing. The priority given to the visual has nonetheless previously been questioned in cultural and philosophical considerations of aesthetic experience; for Jean-Jacques Rousseau, for example, overturning the Cartesian construction of (distanced) visual confirmation of experience through cognition meant privileging the experience of touch. Rimbaud's notion of 'a riot of perfume', which emphasises the preeminence of smell in disturbing the senses—and part of a chorus of late-nineteenth-century French romantic-symbolist works on touch and odour by writers like Émile Zola, Charles Baudelaire, Joris-Karl Huysmans and Marcel Proust—may seem a place of some remove for this inquiry into matters of contemporary sensory experience.<sup>5</sup> Yet recognition of how the haptic, gustatory and olfactory have been consistently diminished in Western culture opens up opportunities for our contemporary sensual education.

Saraceno's work *Leaf, Leaves, Life, Lives* returns viewers to the fundamentally symbiotic relationships among creatures of the Earth in maintaining a habitable atmosphere, considering the changes leaves undergo that have visual effects though are not visual in origin. Of course leaves are the main consumers of carbon dioxide on Earth, producing the oxygen necessary for most animals' healthy respiration. Composed of collages of leaf specimens collected from the Tasmanian surroundings, the plants displayed in *Leaf, Leaves, Life, Lives* are varied: some are endemic, while others were introduced to the area. Focusing first on specimens found near the grounds of the museum, Saraceno became aware of the culturally and biologically significant act of burning, and began focusing



on bushfires, hazard-reduction burns, and Indigenous land management practices that are part of 'connecting to Country', to use a phrase common within Australia's First Nations communities. Saraceno's selection also refers to the unique Tasmanian ecology: separated for millennia from the Australian continent and containing distinct microclimates, certain regions of western Tasmania receive extraordinary amounts of rain that prevent routine wildfires, stopping certain varieties of eucalyptus, for example, from opening their seed capsules, which results in atypically tall, old-growth forests.

The specimens Saraceno displays are now browned, depigmented in a natural cycle of fading and drying that characterises leaves when they are separated from the main body of the plant. His work points to the geographical specificity of

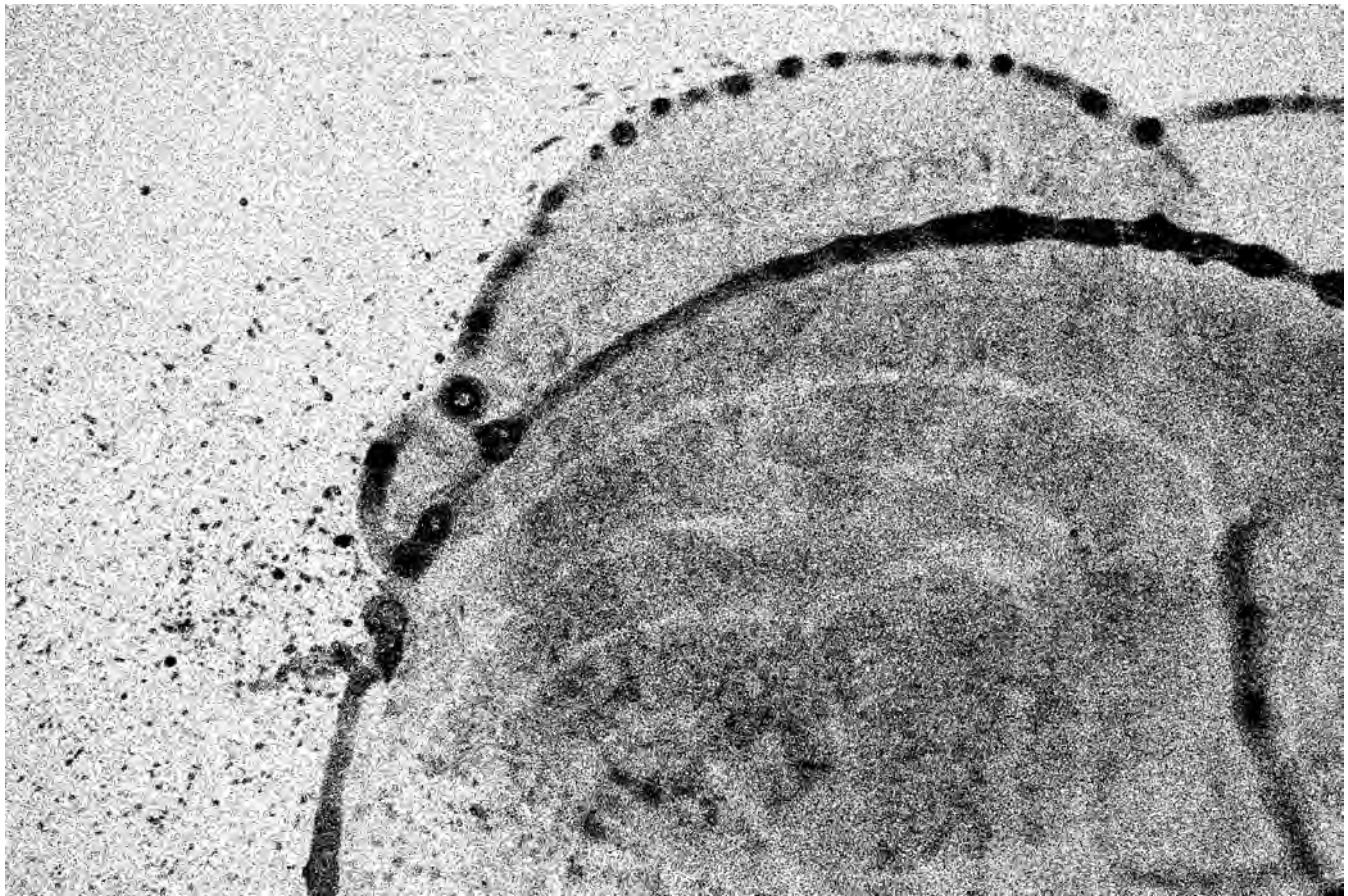
Tasmania, where only one tree, the fagus, or tanglefoot beech, is deciduous, joined by a handful of native plants in all of Australia that lose their leaves seasonally.

The fagus is fire sensitive and cannot regenerate after burning, requiring nearby fagus plants to re-establish itself in areas after a bushfire. Additionally, like many trees, the fagus exists in a symbiotic relationship to a subterranean rhizomorphic fungus that assists the plant in times of drought.

Seasonal colour variations in deciduous plants are signs of cyclical maturation and regeneration, though concern about these changes is often limited to how they serve human aesthetic interest; think of 'leaf peepers' in autumn, hunting picturesque foliage, and this is certainly the case in Tasmania, where the 'turning of the fagus' causes massive touristic influxes to the High Country. In contrast, Saraceno asks, 'What other timelines, modes of register and acts of witnessing might their colour speak of?' and to this one might add: What do other aspects of their lives, such as their smells, and the textures of their leaves and bark, speak of?<sup>6</sup> These are factors Saraceno calls 'bio-indicators interpreted by humans', and he questions



< *Leaf, Leaves, Life, Lives* (detail), 2022, Tomás Saraceno  
< Communities of Salinas Grandes, Jujuy, Argentina, who contributed to *Aerocene Pacha*, 2020—Tomás Saraceno with Aerocene  
> *Ha Chi Ki...*, 2021, Tomás Saraceno







what ‘entanglements of scale’ could be appreciated about the sensitivities of plants to their environments, without reducing them to instruments of human utility.<sup>7</sup>

The collection and classification of flora and fauna has long been a preoccupation of scientific inquiry, yet the taxonomies of biology are only ever partial forms of knowledge of nature. Saraceno’s task in the project *Aerocene Pacha*, 2020, made with the participation of Indigenous groups in Salinas Grandes, Argentina, near the Bolivian Salar de Uyuni salt flats, is in part to tease out new notions of interspecies and possibly inter-object communication, and to take seriously the forms of animism that characterise some non-Western forms of experience.<sup>8</sup> As he explained, ‘According to the people of Uyuni, the rivers have an agency as do animals, and all the plants have a name. Things you might not think are alive—stones, mountains, rivers—they are in a process of becoming alive or experiencing life cycles.’<sup>9</sup>

The word *pacha* in Andean Incan communities indicates a tripartite distinction among terrestrial, celestial and subterranean zones of existence, and is also a hybrid temporal and spatial concept. *Aerocene Pacha* is part of the ongoing Aerocene Foundation endeavour, in which a dedicated and diverse global community of activists and practitioners collaborate to invent open-source DIY tools to actually physically access the stratosphere. In these efforts they construct aerosolar vehicles sustained by solar energy alone, to, as he puts it, access ‘space without rockets ... free from borders, free from fossil fuels’.<sup>10</sup> In *Aerocene Pacha* he again uses solar-powered balloons, this time festooned with slogans about the preservation of the salt-flat ecosystem from corporate-driven lithium extraction.<sup>11</sup> The aerosolar sculptures test the

capacity of individuals to lift off the Earth without the fossil fuels of commercial airplanes, the institutional apparatuses of once-dominant nation-based programs, or the immense private wealth of tech oligarchs’ current space enterprises. Related to the community-based Aerocene is Saraceno’s own *Cloud Cities* project (2009–present), named after R. Buckminster Fuller and his partner-in-firm Shoji Sadao’s 1960 *Cloud Nine* that proposed constructing floating structures above planetary surfaces, based on Fuller’s geodesic dome designs.

Born in Massachusetts in 1895, Fuller was an inventor and designer who worked in the late 1940s at Black Mountain College, alongside émigrés from the Bauhaus, focusing first on easy-to-assemble ‘dymaxion’ housing units.<sup>12</sup> Fuller branched out as a military contractor in the 1950s, when the Pentagon bought into his geodesic domes, later scaled up for world’s fair pavilions and Disney World, and in the late 1960s he was taken up as a guru by the new counter-culture. In *Cloud Nine*, Fuller and Sadao were fascinated with space capsules and space colony architecture, and the geodesic dome became integral to a vision of the Earth as a mobile, media-receptive cabin, what Fuller termed ‘Spaceship Earth’. Like Fuller, Saraceno believes that a synthesis of humble, ad hoc prototypes and grand



< *Aerocene Pacha*, 2020—Tomás Saraceno with Aerocene  
 < *Space Elevator*, 2009–10, Tomás Saraceno  
 > *Cloud Nine*, 1960, Buckminster Fuller and Shoji Sadao

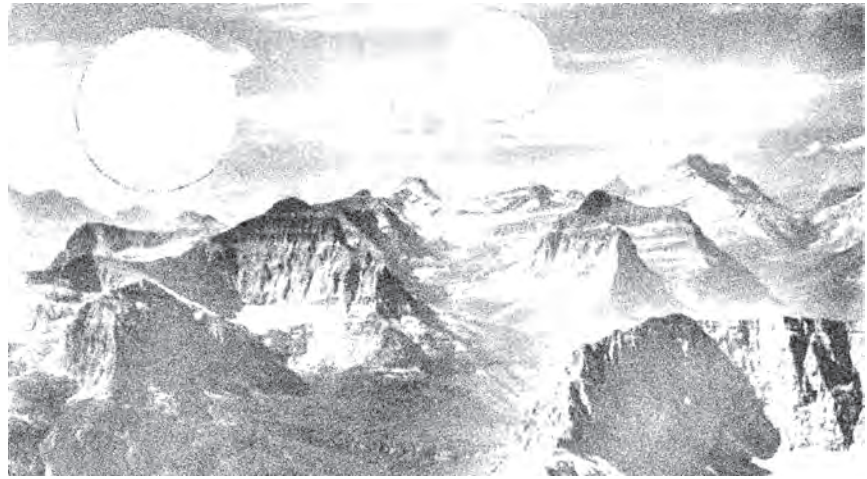


visions can generate concrete data for future experimental models. As a component of *Cloud Cities*, Saraceno conducted trials of his *Space Elevator*, essentially a camping tent tethered to a hot-air balloon.<sup>15</sup> Though it goes beyond Fuller's proposal by actually taking flight, Saraceno's *Space Elevator* is a decidedly low-tech DIY bricolage construction, intentionally conjectural in its hope to keep the imagination of near and outer space open to all.<sup>14</sup>

The film *Fly with Aerocene Pacha* documents one of several initiatives of the Aerocene Foundation, and Saraceno hopes these aerosolar sculptures will eventually float freely with wind currents, to 'contest political, social, cultural, and military restrictions that are accepted today'.<sup>15</sup> For him, the paradigm of the floating city transgresses nation-state borders that, especially in the case of Latin America, reinscribe the power dynamics of colonialism onto undesirable migrants, and reinforce land ownership as a criteria of citizenship. Saraceno's *Space Elevator*, though as implausible as a habitable structure as Fuller's speculative *Cloud Nine* in its current prototype form, echoes the immense heuristic potential of Fuller's project to encourage curiosity about social and political forms beyond the geo-territorial norms of Earth-bound citizenship.

In the context of the Aerocene project, *Aerocene Pacha* incorporates a new emphasis on the safety of the air at a molecular level. Air connects all activities of the planet's soil, surface and atmosphere (including those of humans), which often have invisible but nonetheless real effects. In the case of his attentions to the experience of floating, Saraceno is focused on how the physics of flight, utilising minimal resources and no fossil fuels, is ultimately possible due to air displacement.<sup>16</sup> The work emphasises not only the solar-powered energy source fuelling the balloons, and the supply chain for the production of the hardware employed, but also the changes in the vehicles' buoyancy due to heavy particulates and pollution in the air. Using recycled materials in related community projects such as Museo Aero Solar, Saraceno argues, is one way to redistribute technological resources that favour the consumption economies of wealthy countries that depend upon the waste-absorption economies of poor, often Global South, nations.<sup>17</sup> As Saraceno joked, 'When the Global North sends us all this garbage, we'll float it back as a floating museum of reused plastic.'<sup>18</sup>

In Saraceno's work, considerations of the air—its chemical constitution, containment, and circulation—bring attention to how human needs are entangled



with ecosystems outside of human-created structures. Philosopher Timothy Morton has written that 'attunement' is the recognition of the 'power of an object' over human control. Unlike an experience of the sublime, when human consciousness is nearly overwhelmed by nature's grandeur, Morton argues that attunement is a dynamic process in which recognition of the agency, the independent 'design or function' of non-human entities, is in play.<sup>19</sup> He terms this a form of 'ecological intimacy'. To Morton, 'the experience of art provides a model for the kind of coexistence ecological ethics and politics wants to achieve between humans and nonhumans'.<sup>20</sup>

Historically, finding political balance has stifled scientifically verified facts about ecological change that could provide a model of ecological ethics. Cultural theorist Bruno Latour pinpointed this central paradox characterising discussions about the Anthropocene, or what Saraceno perhaps more rightly terms the Capitalocene. Though human exploitation of the environment has caused rising seas, melting ice caps, increased global temperatures, and a generalised sense of ecological insecurity, there are currently few remedies that can be implemented to decisive effect. The reality of climate change, so overwhelming that it's almost unspeakable and unrepresentable, nonetheless refuses attempts to stifle it.<sup>21</sup> Latour trains our attention on the more-than-human world, arguing that 'everything is looking at us'—and therefore non-human constituents of planet Earth can and should be given political voice.<sup>22</sup> Defamiliarising the notion of transport systems by making a balloon of air, Saraceno's work puts the atmosphere in the role of a delegate at the parliament of global needs.

The consideration of air in art is always a hybridised experience that is also material, sculptural and haptic. The airborne is made visual even if atomised; it must be contained in a technology of diffusion that the user can notice, such as in *Particular Matter(s)*, in which light in a

darkened space makes visible the normally invisible bits of dust in the air of the gallery. The study of non-visual senses is never a dematerialisation of the ‘stuff’ of art’s, it merely reorients us to a new understanding of scale and magnitude. Humans, while dominant on Earth, are nonetheless subordinate to many other creatures and life forms in terms of the sensitivities and complexity of our sensory apparatus. Eagles see better (having up to eight times better vision), rats smell better (with a highly developed secondary olfactory organ, the vomeronasal system), ant colonies communicate better (through pheromones), moths hear better (using high frequency ultrasound) and, one could easily argue, spiders build better (weaving with complex spiral bridges). Our knowledge of human inadequacies may indicate a crisis about how we understand our sensoria, and how we regard our modest capabilities with respect to other inhabitants of the world. One might term this a biopolitics of humility, a word whose etymological root is *humus*, that is, earth or soil.

Our lack of erudition about non-visual experiences is representative of the current state of art’s, art history’s, and broader culture’s (over) emphasis on spectacle and

appearance. An interest in the airborne is a concern, above all, with *difference*: with what enters one’s own body, with the pleasure taken in the bodies and smells of others, and with the enjoyment of spaces occupied and places visited.

One can therefore consider Saraceno’s work a project of re-embodiment. Moving between the techno-futurist and extra-planetary, the airborne and molecular, Saraceno’s work asks what developing an awareness of the overlooked can do for us, in our visually inclined culture, and invites us to lead a richer, more sensuous life. The pandemic years have encouraged a flowering of interest in breath, not only thanks to efforts to retrain those who have become anosmic—have lost their sense of smell—due to coronavirus. Coming out of Covid lockdowns and years of mask-wearing has undoubtedly made people more aware of their sensate body and their respiratory capabilities, and Saraceno’s work stands in a self-reflexive relationship to the complex biopolitical moment we find ourselves in. Breath literally *inspires*; to inhale is to experience a profound, stimulating union of outside and inside.

**1** Saraceno takes this phrase, which is also the title of his show at the Museum of Old and New Art, from Evangelista Torricelli, a student of Galileo and inventor of the mercury barometer, who in 1644 wrote, ‘We live submerged at the bottom of an ocean of the element air, which by unquestioned experiments is known to have weight.’ Torricelli quoted in John B. West, ‘Torricelli and the Ocean of Air: The First Measurement of Barometric Pressure’, *Physiology*, 28(2), March 2013, pp. 66–73; Saraceno quoted in Ocean of Air exhibition brief, as of 12 October 2022.

**2** Saraceno, description of *Silent Autumn*, 2021, and *Silent Spring*, 2020–21, circulated by Museum of Old and New Art, Hobart, October 2022.

**3** Marijn Nieuwenhuis, ‘Breathing Materiality: Aerial Violence at a Time of Atmospheric Politics’, *Critical Studies on Terrorism*, vol. 9, issue 3, December 2016, pp. 499–521.

**4** Hsuan L. Hsu, *The Smell of Risk: Environmental Disparities and Olfactory Aesthetics*, New York University Press, New York, NY, 2020, p. 85.

**5** Arthur Rimbaud, ‘Morning of drunkenness’, *Illuminations*, 1886, New Directions, New York, NY, 1957. The diminished place of non-visual senses in modernity’s trajectory of deodorisation and spectacularisation, and denaturing is a much larger topic than can be covered here. A fascinating take on this with respect to 18th and 19th-century France is Alain Corbin’s seminal work on the classification and segregation of ‘undesirable’ bodies, *The Foul and the Fragrant: Odor and the French Social Imagination* (Harvard University Press, 1986).

**6** Saraceno, Ocean of Air exhibition brief, as of October 12 2022.

**7** Conversation with the artist, 19 October 2022.

**8** Saraceno describes the goals of the project thusly: ‘Named after Pacha Mama, the Andean concept that connects what lies below and above the Earth’s surface with the furthest reaches of the cosmos, uniting space and time, *Aerocene Pacha* proposes a new way of fossil-free flying and aims to support and raise awareness of multispecies communities at threat in our age of planetary climate crisis. *Aerocene Pacha* stands in solidarity with the thirty-three indigenous communities in the Salinas Grandes region, represented by the communities of Tres Pozos, Pozo Colorado, San Miguel del Colorado, and Inti Killa de Tres Morros, as they raise their voices in unison against harmful lithium extraction practices in northern Argentina.’ Text provided to the author by Studio Tomás Saraceno on 9 November 2022.

**9** Conversation with the artist, 19 October 2022.

**10** From aerocene.org, accessed 10 September 2017.

**11** One of the airborne sculptures included the following phrase: ‘El agua y la vida valen más que el litio’ (Water and Life are Worth More than Lithium).

**12** See Eva Díaz, *The Experimenters: Chance and Design at Black Mountain College*, University of Chicago Press, Chicago, 2015. ‘Dymaxion’—a neologism of ‘dynamic’, ‘maximum’ and ‘tension’—was coined in 1929 by a Chicago department-store ad exec.

**13** Saraceno initially chose Salar de Uyuni as the site for the project in part because of the reflective qualities of the lakebed, which after rainfall becomes covered with a thin layer of water that creates the illusion of a limitless landscape of clouds.

**14** The concept of a space elevator is credited to Russian rocket scientist Konstantin Tsiolkovsky, who in 1895 published a design for a compression-based tower that would reach a height of geostationary orbit. Fuller, in a conversation with sci-fi writer Arthur C. Clarke, claimed that in 1951 he came up with an idea for a tensile structure that would act as a ‘ring-bridge’ to be accessed by a future space elevator. See Fuller’s sleeve notes for Clarke’s audio book *The Fountains of Paradise* (1979) recording (Caedmon TC 1606).

**15** Sueli Ferreira Lima Fortin in conversation with Saraceno, published 6 August 2012 in CO2\* Art and Sustainability, www.co2-art-sustainability.blogspot.com/2012/08/conversation-with-tomas-saraceno.html, accessed 16 October 2017.

**16** The involvement of the community is given equal footing with technological innovation, however. According to Saraceno, ‘Aerocene sculptures endow a site-specific moment with radical social, environmental and mental ecologies of practice. An Aerocene artwork begins with a flight, however it grows within a community; communities that become beacons for social impact and environmental engagement within this web of life.’ Text provided to the author by Studio Tomás Saraceno on 9 November 2022.

**17** ‘Museo Aero Solar (2007–present) is an airborne, lighter-than-air form made solely from reused plastic bags,’ according to the project description available at [https://aerocene.org/wp-content/uploads/2019/07/170404\\_MAS-INFO-SHEET-How-to-Build.pdf](https://aerocene.org/wp-content/uploads/2019/07/170404_MAS-INFO-SHEET-How-to-Build.pdf), accessed 9 November 2022.

**18** Conversation with the artist, 19 October 2022.

**19** Timothy Morton, *Being Ecological*, MIT Press, Cambridge, MA, 2019, pp. 89, 83.

**20** Op. cit., pp. 95, 93.

**21** Morton groups the overwhelming scale and complexity of issues such as climate change in a category he terms ‘hyperobjects’. Morton, *Hyperobjects: Philosophy and Ecology after the End of the World*, University of Minnesota Press, Minneapolis, 2013.

**22** To Latour this is a kind of Lacanian ‘real,’ and his reference to objects ‘looking at us’ parallels Lacan’s now-famous discussion of the gaze as a sardine can looking back at him in the *Four Fundamental Concepts of Psychoanalysis*. Bruno Latour’s *Facing Gaia: Eight Lectures on the New Climatic Regime*, Polity Press, Cambridge, 2017, p. 254.

> Leaf, Leaves, Life, Lives (detail), 2022, Tomás Saraceno



