EXHIBITION WALKTHROUGH

COURTYARD
THERMODYNAMIC CONSTELLATION

Lifted by the air and carried by the wind
over borders, fluid in language
in stateless movement.
If you follow their trajectories,
synchronicities emerge, contours of possible
coeexistences, in airmomadic choreographies.
ANARCHINIST- Arachnomancy Card 29 of 33

While fossil fuel based industries enterprise to colonize other planets, the air, this interface between us and the Sun, is controlled by the few and continues to be compromised: carbon emissions fill the air, particulate matter floats inside our lungs while electromagnetic radiation envelops the earth, dictating the tempo of digital capitalism, in the era of global warming.

Imagine a different era, defined instead by interplanetary sensitivity, shared through a new ecology of practices. Towards this, collective ideas must form, by asking: how would it feel to breathe in a post fossil fuel era? And, what are our response-abilities to be on air?
Thermodynamic Constellation provides a launchpad for a new era of mobility that we call Aerocene. The spheres that comprise the installation, are prototypes for aerosolar sculptures that are able to float around the world, free from borders, free from fossil fuels. Floating airborne without carbon emissions, these aerosolar journeys speculate about what kinds of nomadic socio-political structures might emerge if we could navigate the rivers of the atmosphere, reconsidering the ways in which borders are set up by humans, the power of national institutions to decide who can transit, policies that dramatically affect vulnerable subjects, humans and nonhuman life forms. To board this constellation is to become airmomads, moving from Homo economicus to Homo Flotantis, who is attuned to planetary rhythms, conscious of living with other humans and non-humans and who learned to float in the air, adrift with the wind, within its elemental being.

Tomás Saraceno (Argentina, 1973)

Thermodynamic Constellation
2020
Mylar - transparent and metalized, mirrored acrylic plate, membrane pump with pressure control, overpressure release valve, PE tube, PES rope
Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin
The installation is promoted and realized thanks to Fondazione CR Firenze

ups And c/M+M, 2019
Metal, monofilament, metal wire, polyester rope, mirror panels
Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

ROOM 1
CONNECTOME

Liquified animals are burned to propel
us toward unforeseen futures. They take
over the sky after being cast out from
the depths of the earth. Tension between air,
water, and land, beware of geological
revenge when taking without asking.
LOST SECRET - Arachnomancy Card 15 of 33

Enter an atmosphere filled with complex geometrical systems assembled to form alighted clouds. Irregular structures reminiscent of a Weaire-Phelan structure of foam and soap bubbles whose remarkable shapes act as an invitation to engage from diverse bearings, as mirrored planes trace the sun’s rays in a play of light and shadow, where there is neither up nor down anymore, no inside or outside.
Composed of habitat-like geometries reminiscent of Saraceno’s utopistic Cloud Cities, the installation reveals the elemental properties that, though the very essence of our lives, seem to perpetually recede from view. Sunlight, air, ash, black carbon, organochlorine pesticides, sulfur dioxide - particles that populate what once was simply wind and rain, that throw into question the very fibre of our world. Held together in mutual tension, the installation bridges the air between spider/web and cosmic web, its structural allusions spanning scales from the micro to the macro. A web of reciprocal alliances, where if one thread were to move, the vibration would spread, reverberating across the whole structure, producing a greater frequency than could be produced by one thread alone. Immersed in an upturned environment, the senses are challenged to reconsider and reflect on what has precedence in the contemporary world and why.

**Connectome**
2020
Metal, polyester rope, nylon rope, mirror panels, monofilament

**Stillness in Motion - 35.02, 2017**
Metal, polyester rope, black nylon rope, mirror panels

**2I/Borisov/M+M, 2019**
**beta Pic c/M+M, 2019**
Metal, monofilament, metal wire, polyester rope, mirror panels

Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

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**ROOM 2**

**SOUNDING THE AIR**

*Fluttering leaves, branches flexing east if Levant is blowing. If it is a light breeze, enjoy the swing, if it is Near Gale, be centered and still, but if the storm is coming, be ready to leave.*

*Release a thread to ask the wind.*

**ON AIR - Arachnomancy Card 9 of 33**

*Sounding the Air* is an aeolian instrument, a musical instrument that is “played” with the wind. Its sound is produced by five threads of spider silk that drift and resonate with the air. Real-time video captures the gestures of these “strings”, translating them into sonic frequencies and patterns.

The work thus constitutes a collective creation improvised by an ensemble of forces and bodies: the radiant heat of human bodies, or the flurries and tremors created by the flux and breath of participants, but also the endless intraactions of different aerial elements, dust, silk, heat, wind, spiders and electrostatic forces. Together they create a cascade of influences that transform the rhythms of the fluctuating silk threads.

*Sounding the Air* draws inspiration from the phenomenon of spider “ballooning”, a behaviour in which some spiders use airborne dispersal to move between locations.

**Sounding the Air**
2020
Spider silk, carbon fibre, microphone, transducer, speakers, lights, computer, camera

Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

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**ROOM 3**

**WEBS OF AT‐TENT(S)ION**

*What you see is my mind, my body. I cannot eat until I weave the mouth that feeds me. These threads belie the geometries of extinction, telling stories against extraction, mind the stories you are spelling out in your trajectories.*

**SPIDER/WEB INTELLIGENCE - Arachnomancy Card 2 of 33**

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*Webs of At-tent(s)ion* is made up of a myriad of hybrid spider/webs* – sculptures interwoven by different spider species, in which individual threads and sensory worlds combine to form a floating landscape. These spider/webs are an extension of the spiders’ senses – they become their ears, eyes and mouths – while at the same time providing homes for their bodies. Through the filaments of the spider/webs, spiders send and receive vibrations, and perhaps even thoughts: they offer a way for these creatures to connect to the world. The multiple entanglements and connections between spiders also create sensorial and living connections with non-human animals and ecosystems, inviting us to reflect on our coexistence with this ever-present species.

*We do not isolate the spider from the web as the latter can be considered an extension of the spider’s senses and even of its cognitive apparatus: the external world is perceived by the spider through the tensions and vibrations of its web.*

**Webs of At-tent(s)ion**
2020
Spider silk, glass, carbon fibre, metal, lights, silicone
Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

**Hybrid solitary solitary solitary Instrument 8 Scorpii built by: a solo Nephila inaurata - one week, a solo Nephila edulis - two weeks, and a triplet of Ageleina labrynthica - three weeks, rotated 90°, 2019**

**Hybrid solitary semi-social solitary Instrument HD 178524 built by: a solo Nephila senegalensis - four weeks, a quartet of Cyrtophora citricola - eight weeks, a solo Holocnemus pluchei - one week, 2019**

**Hybrid semi-social solitary solitary Instrument SAO 66943 built by: a quintet of Cyrtophora citricola - three weeks, a solo Nephila senegalensis - eight weeks, a sextet of Holocnemus pluchei - three weeks, rotated 90°, 2020**

**Hybrid semi-social solitary solitary Instrument Azmidi built by: an ensemble of Cyrtophora citricola - eight weeks, a solo Nephila inaurata - eight weeks, a solo Holocnemus pluchei - four weeks, 2019**

**Hybrid solitary solitary semi-social Instrument HD 206936 built by: a solo Nephila inaurata - two weeks, a solo Larinioides sclopetarius - two weeks, a sextet of Cyrtophora citricola - two weeks, 2019**

Spider silk, carbon fibre, glass, metal, silicone
Courtesy the artist; Andersen’s, Copenhagen; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; ; Esther Schipper, Berlin

**ROOM 4**

**HOW TO ENTANGLE THE UNIVERSE IN A SPIDER/WEB?**

*Traces of living bodies woven in a suspended membrane, biotic multitudes and carbon residues trapped by its sticky threads. To know your future assemblage, choose one web to ask, but remember that not only the living have stories to tell.*

*HIDDEN PATHS - Arachnomancy Card 20 of 33*
FROM LEFT TO RIGHT
Gravitational solitary semi-social Choreography HR 1577 built by: a solo Nephila inaurata - one week, a septet of Cyrtophora citricola - two weeks, rotated 180°, 2018
Gravitational solitary semi-social Choreography built by: a solo Nephila senegalensis - two weeks, a septet of Cyrtophora citricola - one week, rotated 180°, 2018
Gravitational solitary semi-social semi-social Choreography Kabdhilinan built by: a triplet of Nephila senegalensis - three weeks, nineteen Cyrtophora citricola - four weeks, twenty Holocnemus pulchei - two weeks, 2018

Spider silk, carbon fibre, glass, metal, silicone
Courtesy the artist

ROOM 5
PASSAGES OF TIME

Tectonic plates, a tiger mosquito, a mating ritual, the waters beneath shaking when a cruise ship approaches the canal. The web is an instrument that contains its score, the players are multiple. At which frequency are you vibrating?
TREMOR - Arachnomancy Card 14 of 33

The projection Passages of Time is an overlapping of the dust live-streamed from Particular Matter(s) Jam Session, 2018 and a film that lasts 163,000 years. It is the length of time needed for the light emitted by the Large Magellanic Cloud to reach us. Located in the Mensa and Dorado constellations, this dwarf spiral galaxy can be seen at night in the southern celestial hemisphere. However, we see it with a delay of 163,000 years. The agents of the work are drawn into visibility across epochs, where dust, PM2.5, PM10, Nox, and cosmic dust, resonate across the Large Magellanic Cloud, spanning 163,000 years. As different temporalities appear, dimensions are projected and epochs redefined, questioning our linear conception of time. First, because gravitational waves are disturbances in the curvature of space-time. Then, because the perception of time also depends on each species. Flies perceive 250 frames per second, turtles only 15. The first will see this video in slow motion and the second accelerated. The more perceptual frames that each second holds for an organism, the shorter its life. The question remains which species will be able to attend the end of the video in 163,000 years. The agents of the work are drawn into visibility across epochs, where dust, PM2.5, PM10, Nox, and cosmic dust, resonate across the Large Magellanic Cloud, spanning 163,000 years.

Passages of Time
Double projection of
163.000 Light Years
2016
Single channel video, sound, duration: 163,000 years, frame rate: 1 frame x year
Commissioned by MARCO, Museum of Contemporary Art of Monterrey

Particular Matter(s) Jam Session, 2020
Livestream of dust circulating in Particular Matter(s) Jam Session: light beam, cosmic dust, terrestrial dust, pollen, soot, smoke, PM2.5, stellar wind, sonic waves, video camera, loud speakers, video projector, processor, dust tracking software frame rate: 70 frames x second

Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genoa; Esther Schipper

Gravitational solitary semi-social Choreography 34 Aurigae built by: a duet of Nephila senegalensis – eight weeks, a quintet of Cyrtophora citricola – three weeks, rotated 180°, 2017
Spider silk, carbon fiber, glass, metal, silicone
Courtesy the artist
ROOM 6

A THERMODYNAMIC IMAGINARY

Gravitational waves resounding the cosmic web, yet to be felt. Infinite sensing of the world, life-forms weave constellations. Close your eyes, cover your ears, I will still sense your felt vibrations.

MULTIVERSE - Arachnomancy Card 1 of 33

This installation suggests a model for a landscape that balances our relationship with, and harnesses the unlimited potential of the Sun. This realization requires a thermodynamic leap of imagination, just like during an eclipse, when only in the absence of light do we become aware of our scale in the shadow of the cosmos. In that moment of alignment between Sun, Moon and Earth, we understand that we rely on a reciprocal alliance between the elements and effects, the shifting winds, the exchange of heat and momentum, and the diffusing reflection of solar radiation towards the cosmic extent. Making tangible this invisible web of relations, participants are invited to engage collectively in this exercise for planetary attunement: in the future promised by the parallel ensemble cast about the room, so extends an aerial invitation to play in the thermodynamic imaginary. Different objects and agents cast their shadows in an ever-changing lightscape, where all is floating, revealing, enlarging and fading away, suspended in elemental motion. Bodies and sculptures become diffuse, no longer limited to their physical boundaries or scale, equally composed of matter and emptiness, light and shadow, as they merge with the other entities in the room, be they human or non-human, organic or constructed.

A Thermodynamic Imaginary

2020

 Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

Aeroke, 2019
Mylar transparent and metalized, tape, pump with overpressure release valve, polyester rope

Aquarius Dwarf/M+N, 2019
Metal, polyester rope, monofilament

Aerosolar Constellation 22.5/55/19.5/36/15.5, 2018

Aerosolar Pisces, 2019
Hand blown glass, polyester rope, velvet rope

RAY 19.819, 2018
RAY 30.058, 2018
Hand blown glass, metal, polyester rope, velvet rope, monofilament

Aeroscale 170, 2018
Hand blown glass, glass disks, polyester rope, velvet rope, monofilament

Solar eclipse 1.100, 2018
Hand blown glass sphere, glass disks, metal, polyester rope, velvet rope, monofilament

ROOM 7

FLYING GARDENS

Lamps and lightbulbs as allies in daily hunting, bridging lifeways in entangled dependency. Nature seems to elect relationships rather than individuals, nothing makes itself alone. Ask yourself how many multitudes you contain.

SYM(BIO)POETICS - Arachnomancy Card 3 of 33
“The physiology of plants is based on different principles from that of animals. While animals have evolved to concentrate almost all their most important vital functions in a few organs such as the brain, lungs, stomach, and so on, plants have taken into account the reality of being easy prey, and avoided concentrating their faculties in a few neurological areas. [...] A plant’s functions are not related to organs – which means plants breathe without having lungs, nourish themselves without having a mouth or stomach, stand erect without having a skeleton, and make decisions without having a brain. It’s because of this very special physiology that large portions of a plant can be removed without putting its survival at risk: some plants can have up to 90 or 95 percent of themselves eaten, but then grow back normally from the small surviving nub. [...] It’s no accident that we continually refer to ourselves as individuals: the term comes from the Latin in (which here means “not”) and dividuus (“divisible”). Our body really is indivisible: if we’re cut in half, the two halves can’t live separately; they die. But if we cut a plant in half, the two parts can still live independently, for the simple reason that a plant isn’t an individual. In fact, the right way to think about a tree, a cactus, or a shrub is not to compare it to a human being or any other animal, but to picture it as a colony. A tree is much more like a colony of bees or ants than an individual animal.”
Stefano Mancuso, Brilliant Green, 2013

“Agriculture is always and only celestial: working the land and the earth always means manipulating portions of the heavens, tilling the stars. On the other hand, Gaia is not a limited organism that continues to retreat into itself: it is the extension of a sky that never ceases to expand and that contracts only in order to be able to increase its spheres, to extend and amplify the circles of rotation and revolution. Plants have literally created the world in which we live. If they are everywhere and constitute the essential anatomy of our planet, it is because they are its embryonic tissues. Through their conquest of the earth’s surface and their extension throughout the whole world, plants have produced (and continue to produce) the oxygen-rich atmosphere that has made it possible for all the “higher” animals to live: the so-called “higher” animals are only able to live because they breathe the by-products and waste of plant metabolism, oxygen. If the plants created the world we live in, then Gaia is a vegetable being: it is much more a garden than a zoo, and it is only because Gaia is a garden that we can live here. Every cosmological speculation must take the form of a botanical reflection. But in this garden, the plants are not (or are not only) the content or the inhabitants: they are the gardeners themselves. Like all living species, we too are the subject of gardening. We are one of their agricultural and cultural products. In other words: plants are not the landscape, they are the first landscape architects. What we call garden is simply an army of gardeners. But their gardening is an astral or solar gardening: the plants are the great farmers of the heavens and of the prince of stars, the sun.”
Emanuele Coccia, “Tomás Saraceno’s Astral Ark”, 2020

Flying Gardens
2020
Tillandsia plants, hand blown glass, monofilament, polyester rope, velvet rope, carbon fibre
Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

Pneuma 20.95, 2020
Pneuma 15.999 HM, 2019
Pneuma 78.09, 2020
Hand blown glass, polyester rope, velvet rope, monofilament

Pneuma 420, 2020
Hand blown glass, polyester rope, velvet rope

Callisto 13, 2019
Glass disk, carbon fibre, polyester rope, velvet rope, monofilament

Aeolus 15,759, 2019
Aeolus 36,184, 2019
Aeolus 8.79, 2019
Aeolus 4.67, 2019
Aeolus 7.5, 2019
Hand blown glass, nylon

Aeolus 8.80, 2019
Hand blown glass, monofilament, Tillandsia plants

Aeolus 9.7, 2019
Hand blown glass

Calendrier Lun-AIR de Paris, 2018
Black carbon, soot, PM2.5, PM10, filter paper. From the series Printed Matters, printed with ink made of black carbon PM2.5 pollution, sequestered from the air of Mumbai. Image from a special issue of NASA Cosmic Dust Catalogue, April 1982, printed on 8 gram handmade paper, photo glicée.
ARACNOMANCY CARDS

This deck of 33 cards is an instrument of mediation, one of the many ways to consult spider/web oracles. Spider/web are the mouths through which the spider eats and the oracle speaks. The oracle is a messenger between perceptual worlds, transcending the reciprocal blindness between life forms. Spider/webs weave worlds of vibration in tune to the astral scores. Sense new threads of connectivity, or else face the eternal silence of extinction. As life draws lines on your hands, so the spider draws lines on your future. The Arachnomancy reading is written through the silken threads of the spider/web.

Inspired in part by the practice of ngám, or spider divination, in the Mambila tribe of Cameroon and Nigeria, during which questions are asked of a grounddwelling spider who submits an answer by rearranging an arachnomancer’s ‘divination cards,’ our Arachnomancy cards thinks through the oracular capabilities of the spider/web, whose vibrational world may open it to knowledge we don’t have access to.

Part of the exhibition are scheduled Arachnomancy Reading sessions to ‘read’ the structure, vibrations and score of a spider/web oracle through the use of Tomás Saraceno’s Arachnomancy Cards, and divine from this encounter something of our multispecies future. Let your future be read by a spider/web and download the Arachnomancy app, joining an exercise in mapping against extinction. For more information visit Arachnophilia.net

Arachnomancy Cards
Deck of 33 cards printed on carbon footprint neutral paper
Courtesy the artist with thanks to the Arachnophilia archives; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genoa; Esther Schipper, Berlin

ROOM 8
AEROGRAFIES

 Amid the hills and galaxies, starlight exposure, she sews together earth and sky to illuminate the night and help wandering beings find their paths. Please remember that baser passions could interrupt her balance of ecosystemic forces when asking your question.

THE COSMIC WEB - Arachnomancy Card 21 of 33

This room puts into perspective the different ways in which the movements of people, heat, animals and spider/webs affect and are affected by the air. Every gesture leaves a trace: the movements of persons, sounds, and spider/webs translate as the potential language of earthly phenomena, an emergent cartography of the air. Spider/webs laid out on paper produce strange new spider maps of invisible cities; alongside, the trajectories of aerosolar sculptures that float freely in the air without the help of fossil fuels trace out Aeroglyphs, plotting a path forward out of the extractive ideology of the Antropocene. Pens suspended to balloons act as utensils for the wind to draw its trajectories; filled with ink made from black carbon pollution from Mumbai’s air, these pens answer the question of what the air would write with – the material with which we have poisoned the air becomes a tool of its communication, reminding us of its ever-present agency even in the face of our destruction. Together these Aerographies are letters, characters and signatures of a new language for the Aerocene era. A three-dimensional web connects floor and the air above, challenging the idea of a hierarchical tree of life and its linear convictions, instead proposing a rhizomatic web of life, highlighting the hybridities between and among species and worlds.

Aerographies
2020
Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin
Solitary semi-social mapping of Erakis by a solo *Nephila senegalensis* - one week, a duet of *Cyrtophora citricola* - one week, rotated 90°, 2019

Solitary semi-social solitary mapping of HD 28305 by a solo *Nephila inaurata* - four weeks, a quintet of *Cyrtophora citricola* - three weeks, a solo *Linyphiidae sp.* - one week, 2019

Semi-social solitary mapping of Ursae Majoris by a solo *Cyrtophora citricola* - six weeks, and a quintet of *Nephila edulis juvenile* - two weeks, rotated 180°, 2019

Solitary semi-social mapping of FK5 337 by a solo *Nephila inaurata* - six weeks, a duet of *Cyrtophora citricola* - five weeks, 2019

Solitary semi-social mapping of CCDM J08585+1151A by a solo *Nephila inaurata* - three weeks, a quartet of *Cyrtophora citricola* - five weeks, 2019

Solitary semi-social mapping of Alioth by a solo *Nephila edulis juvenile* - one week, a triplet of *Cyrtophora citricola juvenile* - one week, 2019.

*Expanse NGC 1579 by a Tegenaria domestica*, 2017

Spider silk, archival paper, ink, fixative

Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

Solitary semi-social mapping of GJ 4095 by a triplet of *Nephila inaurata* - five weeks, an ensemble of *Cyrtophora citricola* - seven weeks, 2019

Spider silk, archival paper, ink, fixative

Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

**CENTER OF THE ROOM**

Thermodynamic Suite 2020

Paper, ink, balloon

Courtesy the artist; Andersen’s, Copenhagen; Ruth Benzacar, Buenos Aires; Tanya Bonakdar Gallery, New York/Los Angeles; Pinksummer Contemporary Art, Genova; Esther Schipper, Berlin

Resine Tree Connectome 2020

Wood, polyester rope, monofilament

Courtesy the artist

**12SE/Flying Garden/Air-Port-City** 2007-2020

gonfiabile

Courtesy the artist