NO EFFECT

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RANDOM BASELINE SHIFT

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RANDOM FONT

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RANDOM SIZE

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RANDOM SKEW

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SKEW -10:10

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SKEW -20:20

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SKEW -30:30

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SKEW -40:40

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SKEW -50:50

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SKEW 0:50

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BASELINE 0:3

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BASELINE 0:5

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BASELINE 0:7

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BASELINE -5:5

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BASELINE 0:10

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BASELINE 0,3 SKEW -20,20

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BASELINE 0,5 SKEW -30,30

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BASELINE 0,5 SKEW -30,30 SIZE 10,14

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BASELINE 0,4 SKEW -25,25 SIZE 10,12

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RANDOM FONT BASELINE 0,4 SKEW -25,25 SIZE 10,12

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RANDOM FONT BASELINE 0,4 SKEW -25,25 SIZE 10,12 TRACKING

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RANDOM ROTATED FRAMES

9 frames size 10-100

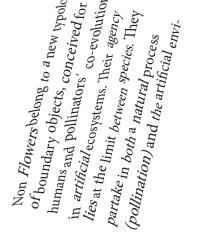
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RANDOM ROTATED FRAMES

BASELINE 0,4 SKEW -25,25 SIZE 10,12

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The forms of Non Flowers were produced by a methodological decomposition of the morphology of 'natural' flowers that are attractive for Hoverflies: their shapes, geometries, color, scents and movement were exaggerated and abstracted. The resulting prototypes resemble fractal planets, or blown up pollen molecules algorithmically repeating. This research on pollinators perception was called of Cout with chemical ecologists control at the lab of Dr. Shannon Oll-son. Rechoes with theories to the kildung of the state of t linators perception was caried Gestalt Bildung theory, the Form Backeround discus Sions in the Phenon

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> ments of greenhouses is equally essential to our future. Non Flowers uses new technologies such as softwares producing fractal geometries and additive manufacturing to create a new chapter in inter-

deem interesting to pollinate. In this sense Non Flowers are 'lures' and 'simulacra'.

Can we use design and technology to 'seduce' other species? This ethical question is crucial. This publication debates it in the details of the apparatus used for the experiment. But this question also carries an implied anthropocentric prejudice. It ignores the fact that humans do not have the monopoly of interspe-

> our new un-

topic for human survival.

derstanding of the Beekeeping is one of the oldes

by the Non Flowers team. Collaborating with pollinators is an essential

species dialogues. The aim is not to replace living organisms with synthetic ones, but to invent new forms of symbiosis, which includes machines and softwares as well as pollinators and flowers.

Ethics of collaboration (SO) The inspiration behind this, is that the work that we are all doing with different methods is really object identification. This is such a fundamental concept. It is fundamental to not just science, but to

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1. ODOUR OBJECTS / LESSTHAN FLOWERS

(SO)

Aflower is the reproductive organ of a flowering plant, and contains its male and/or female gametes (refer Fig. 1). The male gametes are the pollen grains. Pollen is found on the anther of the flower. These grains need to be transferred to the stigma, the female organ, for fertilization to take place. After fertilization, the plant produces seeds that can germinate into new plants. The process by which pollen is transferred from the male to female organs is called pollination. The transfer of pollen within the same flower is called self-pollination, and between different flowers is crosspollination. Pollination can occur abiotically by wind, water, or even gravitational force; and, biotically through insects, bats, birds and many other animals. Around 90% of flowering plants are pollinated by animals.

The colorful butterflies, buzzing bees, hovering flies, moths, bats, and hummingbirds that you see in your garden are performing this vital job of transferring pollen, day and night. Thus, pollination is what we call an essential 'ecosystem service' or, in other words, a natural process within ecosystems that benefits humankind. Without pollination, there would be no flowering plants. No more fruits and vegetables. Life, as we know it, would not exist. But, have you ever considered how plants attract these animals for pollination in the first place? While walking through a beautiful garden, you are met with alovely bouquet of fragrances from its many flowers. These smells are so pleasing that we use them in our homes, food, and even on our bodies. Have you ever considered what makes these flowers smell sweet, and how plants might benefit from these scents?

Flower scent Plants attract pollinators using the fragrance and visual characteristics of their flowers, such ascolor and shape. Odorscan travel in the air overseveral meters. As such, scent is a particularly important cue to attract pollinators to flowers from a distance. All chemical compounds produced by plants can be divided into two categories — primary and secondary metabolites. Glucose, proteins, and lipids that are necessary for the growth and development of the plant are classified as primary metabolites. Compounds produced as byproducts of these metabolites, including terpenoids, flavonoids, steroids, alkaloids, and the many other chemicals not related to growth and development, are known as secondary

metabolites. Secondary metabolites can also benefit the plant by protecting them from disease, drought, sun damage, and plant-eating animals (herbivores) through pigments, noxious taste, and water-retaining waxes, among other mechanisms. Floral scents are produced by plants as byproducts of glucose synthesis and are, therefore, considered to be secondary metabolites. The variation of floral scents in plants is produced mainly from three groups of chemical compounds — terpenoids, phenylpropanoids, and fatty acid derivatives. Lavender and rosemary release odours from mostly the terpenoid group, whereas rose, jasmine, and lily have scents produced by all three floral scent groups. Phenylpropanoids are also involved in the production of pigmentation(color) in flowers, whereas terpenoids act as a deterrent against herbivores in other plant parts, such as the leaves and stem3. Floral scents also serve other functions that include warding off non-pollinating flower visitors such as nectar robbers, and inviting natural enemies of the herbivores that feed on the plant. For example, leaves, stems, and flowers of plants release several several meters. As such, scentis a particularly important cueto attract pollinators to flowers from a distance. All chemical compounds produced by plants can be divided into two categories — primary and secondary metabolites. Glucose, proteins, and lipids that are necessary for the growth and development of the plant are classified as primary metabolites. Compounds produced as byproducts of these metabolites, including terpenoids, flavonoids, steroids, alkaloids, and the many other chemicals not related to growth and development, are known as secondary metabolites. You will be familiar with this if you enjoy the smell of freshcut leaves and grasses. Crab spiders use chemicals like β -ocimene, released by *flowers* when *they* are *chewed* on by insects, *to locate* and *feed* on these insects.

2. PSEUDO FLOWERS / VIRTUAL FLOWERS

All species wear masks. Notes by TP based on a discussion between Emanuele Coccia and Vinciane Despret. In the work of French Contemporary Artist Pierre Huygues Untitled (Human Mask) we see a monkey wearing a human mask. This blurring of the boundaries between species creates first a malaise, quickly followed by a relief and joy: the monkey is not aware of the situation, we realise. Monkeys do not act or lie. This defensive posture, which reaffirms human exceptionalism is precisely what the artist is bringing to light.

However, recent studies question this privilege of the human to deceive and to act 'consciously'. For example in the article Affective Ecologies:

Visuals of pseudo flowers and Images of Flowers in VR mixed together Quote form Coccia: 'Every speies wear masks ' (big)
Texts Species and masks Thomas

4. NON FLOWERS FOR A HOVERFLY (Shannon **01sson** with Thomas Pausz & Vikram Pradhan)

SO

Hoverflies are one of the most prominent pollinators on the planet, but unlike bees they are solitary. One **they** hatch, they are on their own with no one to teach them what food source to PREFER. Whether its an individual fly choosing from an array of flowers or a worldwide preference by the flies for specific cues, Ollson and Nordström hypothesized that these insect must have \checkmark innate template that helps them find these flowers wherever they MI They set out to identify what exactly draws these must to their food: is it the color, is the smell, is it a special chemical, is it a combination? The idea, she says, is to parse the cues TO determine THE minimum amount of information that a flower must contain for a hoverflytt recognise it as food. She compares \square to the way a smiley face drawing ii the simplest possible representation of a face: 'two dots and a semicircle, thats a face to everybody', OLSSON says. What's the smiley DDDD for a fly?'

TP

The Modern and Anthropogenic periods have seen an INCRASE of human interferences was ecosystems: from observing and collecting data on life forms and the environment, to actively transforming ecosystems for production, and ultimately designing artificial and controlled environments and CLIMATES. Where does the Non Flowers project operates in this context? As a human intervention in the according pollination it is anthropogenic gesture. However, the specific and of creating a mutually beneficial environment for humans and nonhumans, based on understanding the needs and Umwelt of non-human species casts this project in a POST-HUMANIST paradigm.

7. GREENHOUSES AND POOR ECOSYSTEMS

Ségolene Guinard, philosopher and associate researcher on the Non Flowers project.

SG

My research investigates the necessity of reintroducing care and redistributing agency within our techno-scientific regimes of existence – for which I coined the term "capsular existence". As this contemporary condition spreads, impoverishing non-human diversity and presence almost everywhere on Earth, and saturating our environment with artifacts, media, and infrastructures, disciplines, such as crafts, arts and design, which explore human technological entanglements with non-human life in terms that resist the engineers' need for control and management, may play a crucial role. Could we conceive of technologies and practices that would maximize the possibilities of encounters between humans and non-humans, and make space for untamed, unexpected, and unforeseen interactions - which actually constitute the texture of life? Selection and domestication, for the sake of food production, have shaped living beings, and their species in most sedentary human cultures, culminating in the production and trading of lifeforms as artifacts, and increasing the global power Capital exerts over human and non-human forms of life. To resist the impoverishment of life (a notion I conceive as encompassing both organisms and the multitude of relationships within which they thrive: their milieus), design could work with concepts such as symbiosis (which itself ramifies into notions of partnership, engulfment, parasitism, chimera, dependency, attachment, alliances, queer ecologies, disharmony, etc.), de-domestication and taming. Could design practices be oriented towards the enrichment and multiplication of relationships between living beings rather than shaping and controlling them through the hyper-production of bio-technologies, and the commodification of life? Advocating for the germination of invasive anarchist ecological practices, I wish to investigate within the Non-flowers research project the possibility of a design that would enhance 'inoperativity'(Agamben), thus liberating non-human lives from their absorption in the economy and spheres of human profitability, allowing them to thrive through unexpected paths and ways of living, outside the circuits of control, value and capital, in order to enrich human collective and singular existences."