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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RANDOM TRACKING

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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

Non Flowers *belong* to a new typology of boundary *objects,* conceived for humans and *pollinators´* co-evolution in artificial ecosystems. Their agency *lies* at *the* limit between species. They partake *in* both a natural process (pollination) *and* the artificial *environment* of *biospheres.* Placed *amongst other species, Non* Flowers *attract* pollinators towards neighbouring flowers *and* vegetable crops, which *they would otherwise* not *deem interesting* to pollinate. *In this* sense Non Flowers are *´lures´* and ´simulacra´.

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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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 ex-

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*

RANDOM ROTATED FRAMES

4 frames
size 100-200 x 300-400

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RANDOM ROTATED FRAMES

4 frames
size 100-200 x 300-400
BASELINE 0,4
SKEW -25,25
SIZE 10,12

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RANDOM ROTATED FRAMES

5 frames
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Can we use design and technology to ´seduce´ other species?

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porary thinking defining

ments
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tial to our future. Non
Flowers uses new tech-
nologies such as softwares
producing fractal geome-
tries and additive man-
ufacturing to create a
new chapter in
inter-

our
new un-
derstanding of the
emergence of forms and
patterns in data dynamics
are currently being research
by the Non Flowers team.
Collaborating with
pollinators is an
essential

topic
for human survival.
Beekeeping is one of the oldest
story of interspecies collaboratio
Collaborating with machines i
the artificial environ-

spe-
cies 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 meth-
ods is really object identification. This
is such a fundamental concept. It is
fundamental to not
just science, but to

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frame 1this is *frame* 3

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fractal planets, *or* blown up *pollen* molecules algorithmically repeating. *This* research
on pollinators perception was *caried* out *with chemical* ecologists at *the* lab
of *Dr.* Shannon *Ollson.* It *echoes with theories* and counter theories *of*
forms: Goethe´s Gestalt / *Bildung* theory, the *Form* / Background
discussions in the *Phenomenology* of Perception *of* Mer-
leau-Ponty. this *is* frame 5this is frame 1this is
frame 3

Non *Flowers* belong to a new *typology* of boundary objects, conceived for humans *and* pollinators´ co-evolution in *artificial* ecosystems. Their agency lies *at the* limit between species. *They* partake in both *a natural process* (pollination) *and the* artificial environment of biospheres. Placed *amongst other* species, Non *Flowers* attract pollinators towards neighbouring flowers and vegetable *crops*, which *they* would *otherwise not* deem interesting *to* pollinate. *In this sense* Non *Flowers* are *´lures´* and *´simulacra´*.

Goethe´s Gestalt / *Bildung* theory, the Form / Background discussions in the *Phenomenology* of Perception of Merleau-Ponty. this *is* frame 5this is frame 1this is *frame* 3

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 interspecies *seduction.* Darwin´s studies of the *orchid and* bees complex *relationship shows* that *both* flowers *and their* pollinators have been engaged in *an* age old history *of mimicry* and play. Elsewhere, *fungi* are able *to produce pseudo-flowers* and artificial flower scents to *utilize* pollinators *to* propagate. *Nature* has much more advanced *technologies of seduction* than ours. *Non* Flowers are therefore *a new* chapter in *the* story of interspecies entanglements and *symbiosis. They include* human technology in the dance.

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1. *ODOUR* OBJECTS / *LESS* THAN FLOWERS

(SO)
A flower 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 a* lovely 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 *as* color and *shape. Odors* can travel in the air *over* several 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, *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.* 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 Olsson 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 ✔● innate template *that* helps them find these flowers wherever they ARE They set out to identify what exactly draws these *insects* 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 hoverfly t t recognise it as food. She compares □□ 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 □□□□ for a fly?´

TP

The Modern and Anthropogenic periods have seen an INCREASE of human interferences www 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 ccccof pollination it is □□ anthropogenic gesture. However, the specific aa 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.´´