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Toward an Eco-Social perspective: How to design in time of trouble

Vacca, Margherita, Cantini, Francesco, Tanzini, Alessio and Ballerini, Fabio

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Toward an Eco-Social perspective

How to design in times of trouble

Relating Systems Thinking and Design
2022 Symposium
University of Brighton, Brighton, UK,
October 13-16, 2022

Margherita Vacca
Francesco Cantini
Alessio Tanzini
Fabio Ballerini

Laboratory of Design for Sustainability |
DIDA-UNIFI

UNIVERSITÀ DEGLI STUDI FIRENZE
DIDA
DIPARTIMENTO DI ARCHITETTURA

Laboratory of Design for Sustainability
Design Campus UNIFI, Calenzano (Florence)

λ43.8597021
φ11.1644971

Design in a New context

Anthropocene

Capitalocene

Anthropocene

Chthulucene

Capitalocene

Anthropocene

Chthulucene

Capitalocene

Novacene

Anthropocene

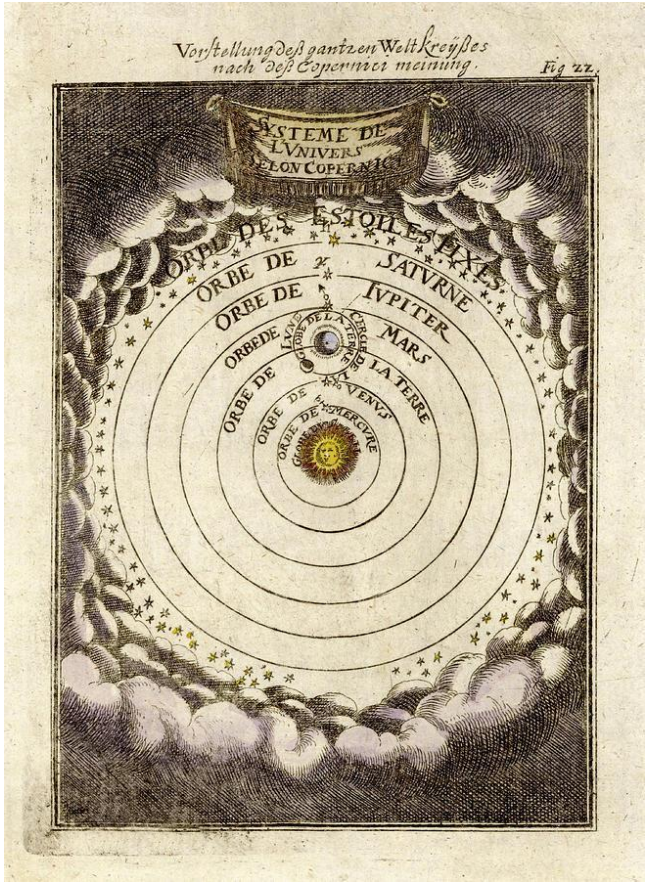
Chthulucene
Capitalocene
Plantationcene
Novacene
Anthropocene

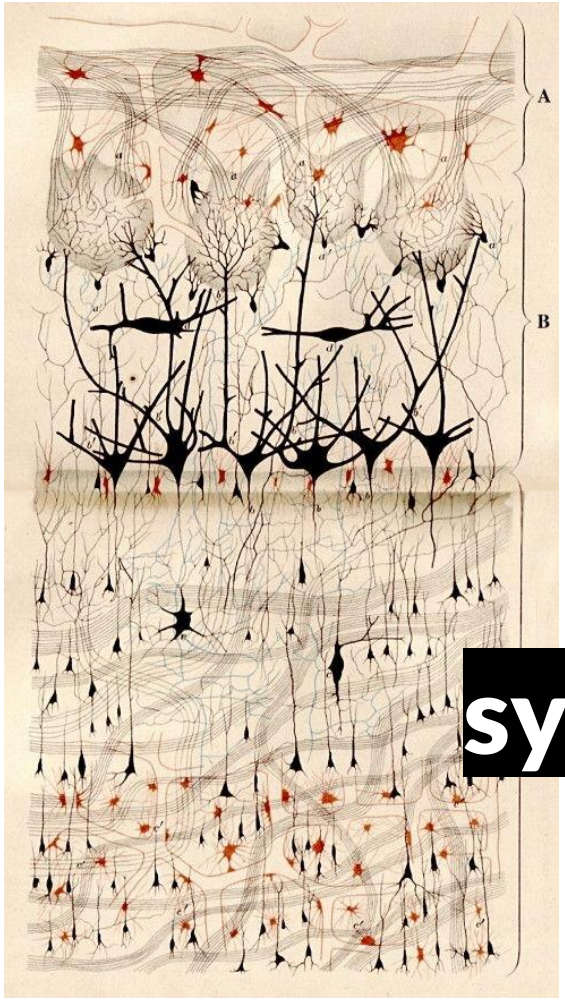
Wastocene
Chthulucene
Capitalocene
Plantationcene
Novacene
Anthropocene

How can we **design** in this **time of trouble**?

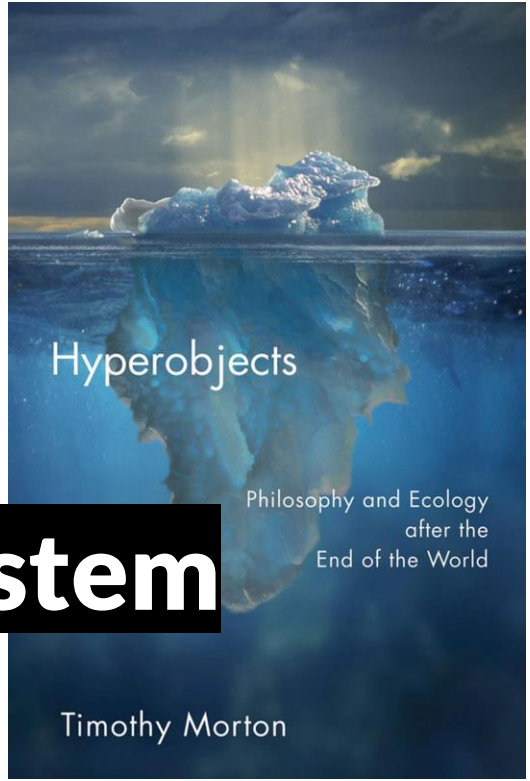
How can we **design** in this **time of trouble**?

We started using *language* **as a design tool**


Vorstellung deß gantzen Welt kreyßes
nach deß Copernici meinung.
Fig 22.
SYSTEME DE
L'UNIVERS
SELON COPERNIC
ORBE DES ESTOILES FIXES
ORBE DE SATVRNE
ORBE DE IVPITER
ORBE DE MARS
ORBE DE LA TERRE
ORBE DE VENVS
ORBE DE MERCVRE


A
B

system


Hyperobjects
Philosophy and Ecology
after the
End of the World
Timothy Morton

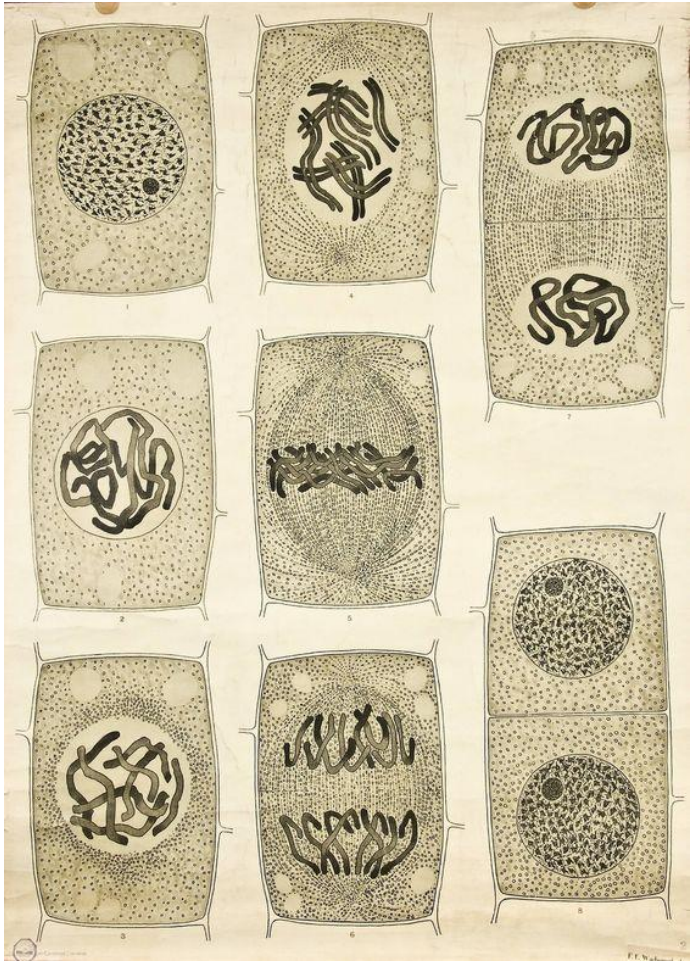
multiplicity

scalability

ecology

Art forms of nature

Ernst Haeckel, *Kunstformen der Natur*, 1904



AUTOPOIESIS

The Organization of the Living

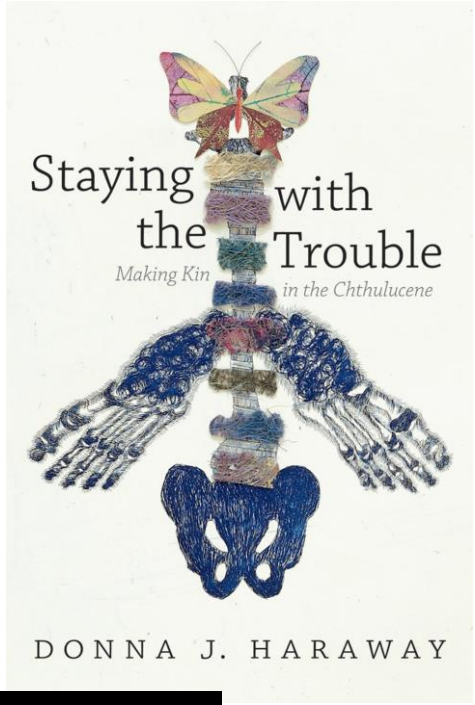
1973

by

HUMBERTO R. MATURANA

and

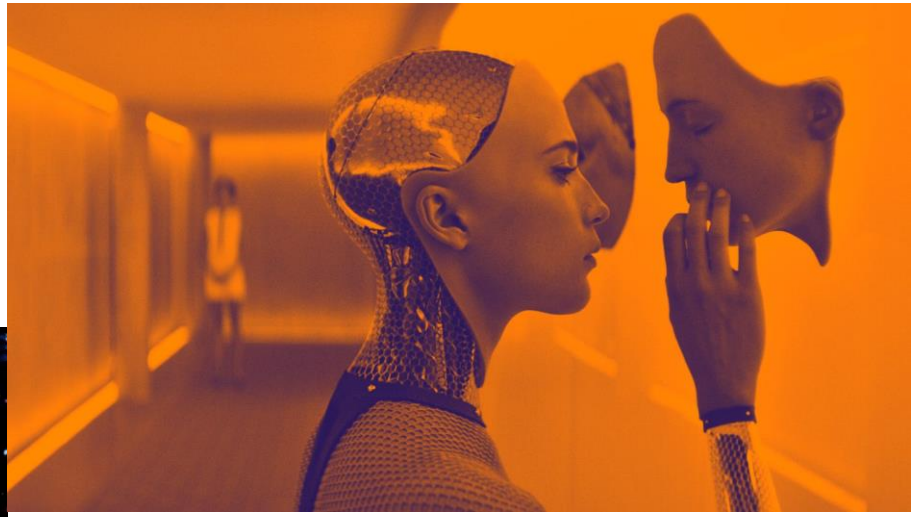
FRANCISCO J. VARELA



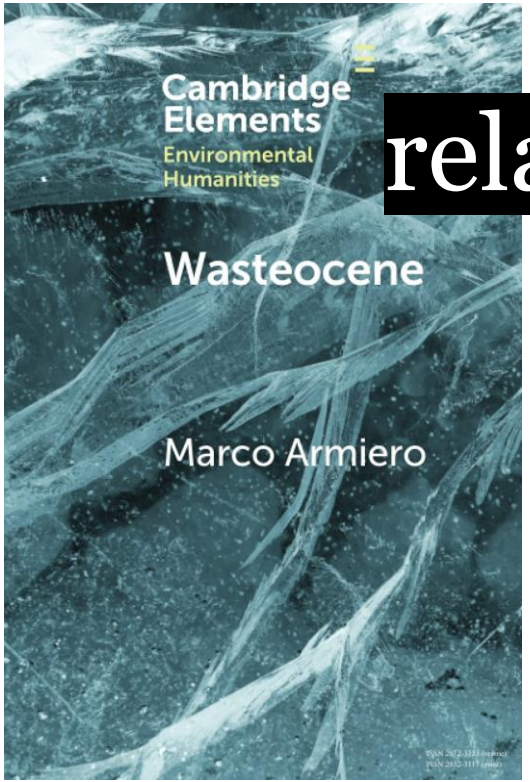
autopoiesis

sympoiesis

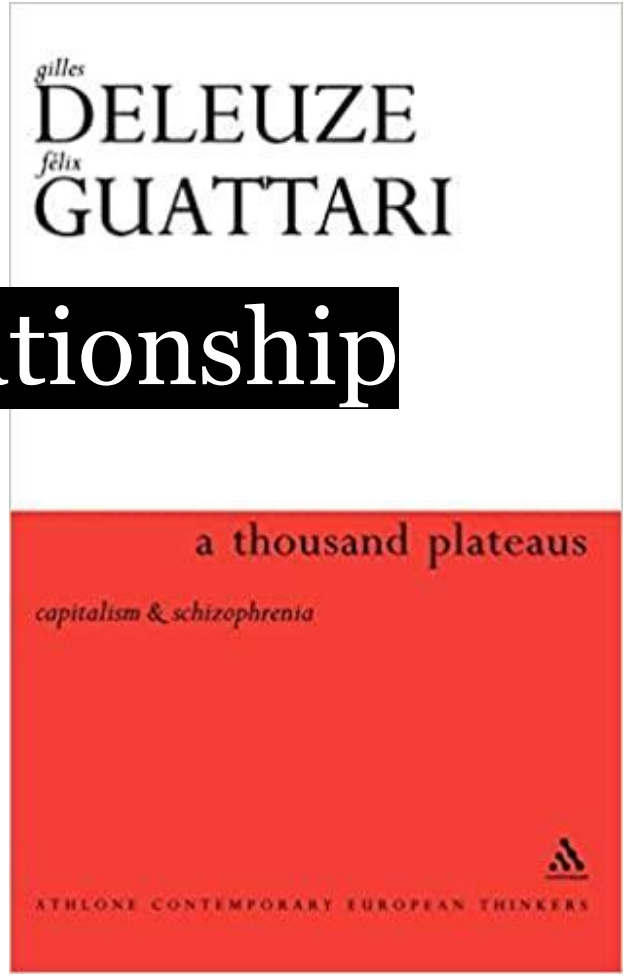
innovation

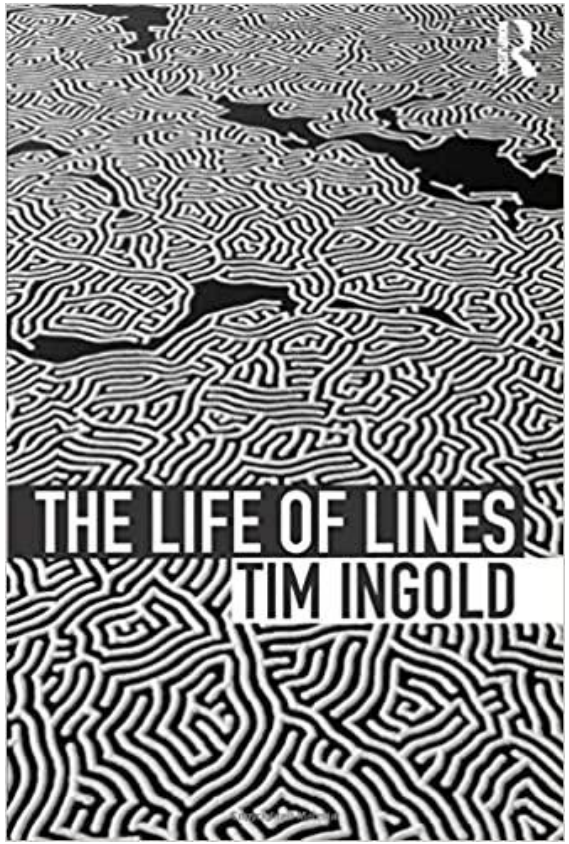


5.0 scenario



relationship



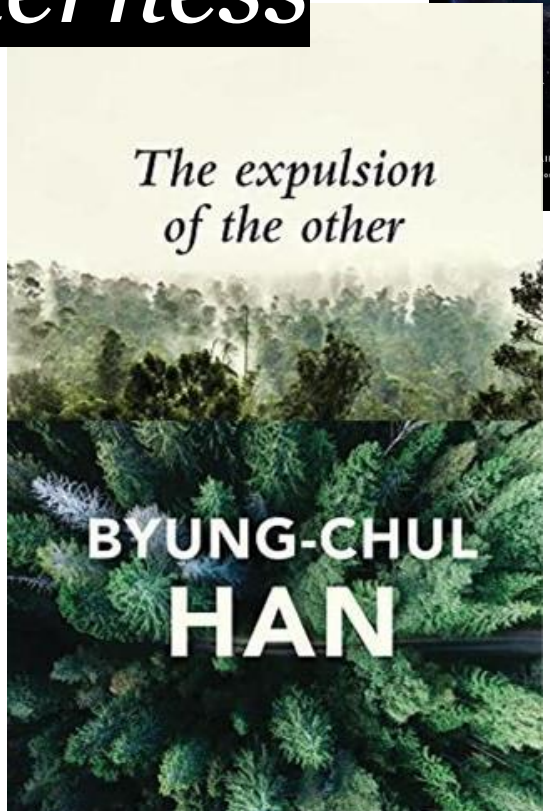


togetherness

HOW FORESTS THINK

Toward an Anthropology beyond the Human

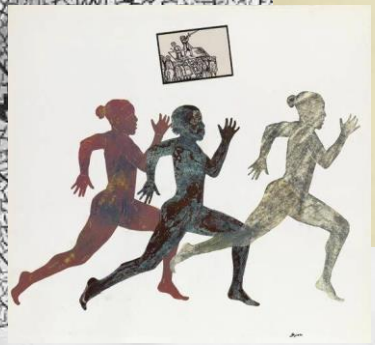
Eduardo Kohn

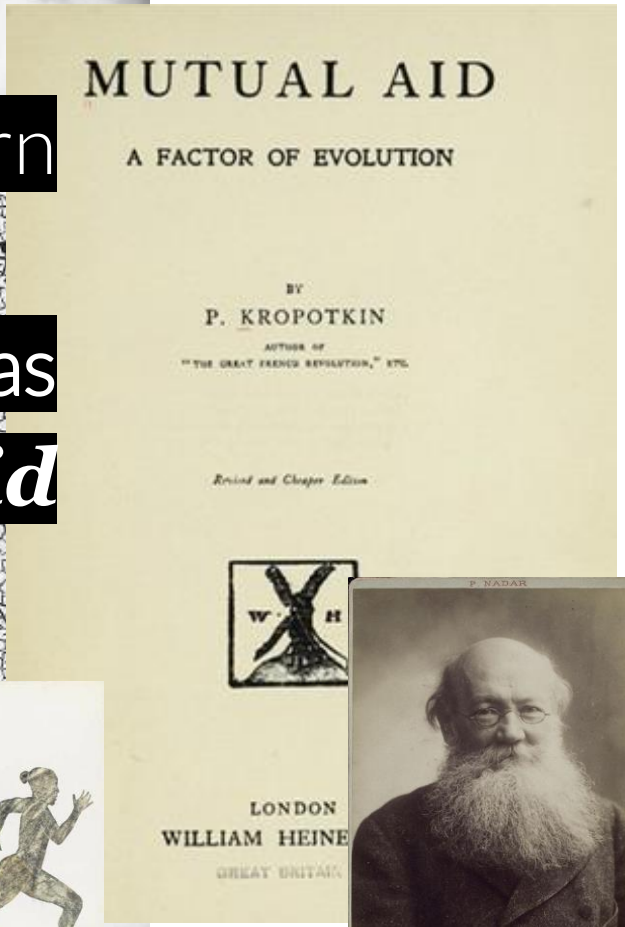


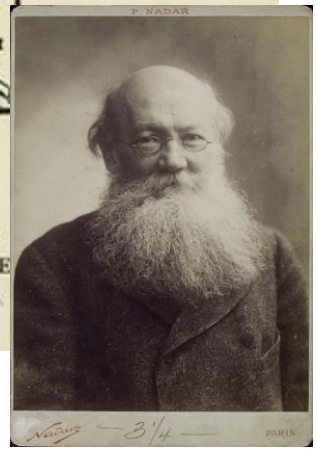
a common pattern

cooperation as

mutual aid







The Formulas

$$\frac{H+H}{Ma}$$

$$\frac{(H+H)^{n}<}{Ma}$$

$$\frac{H+Nh}{Ma}$$

Legend

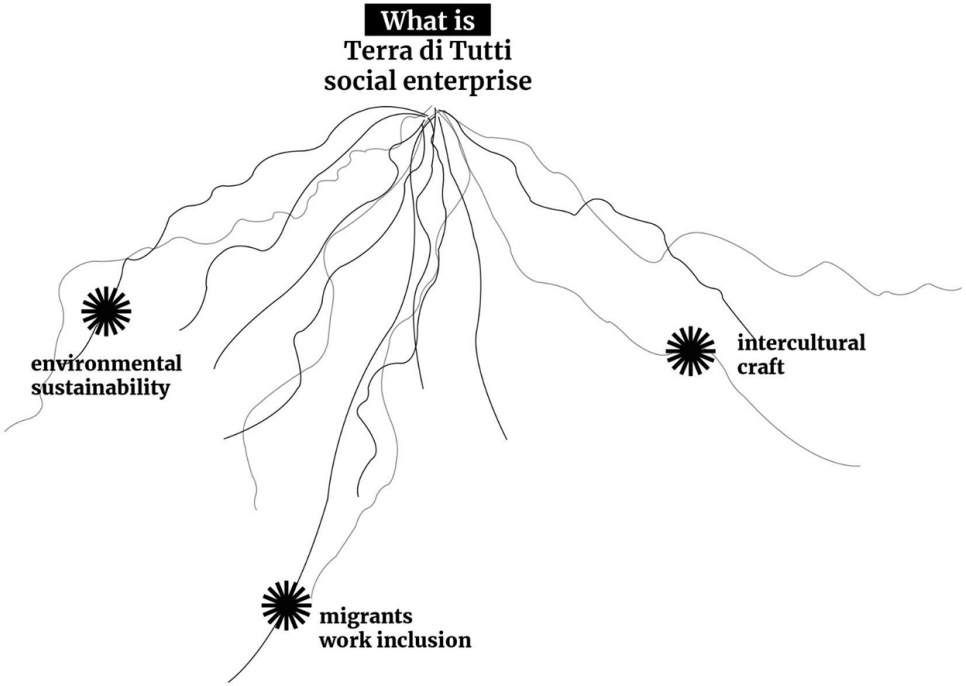
H= Human
Ma= mutual aid
Nh= non-human
<= Augmented

The Formula

Legend

H= Human
Ma= mutual aid

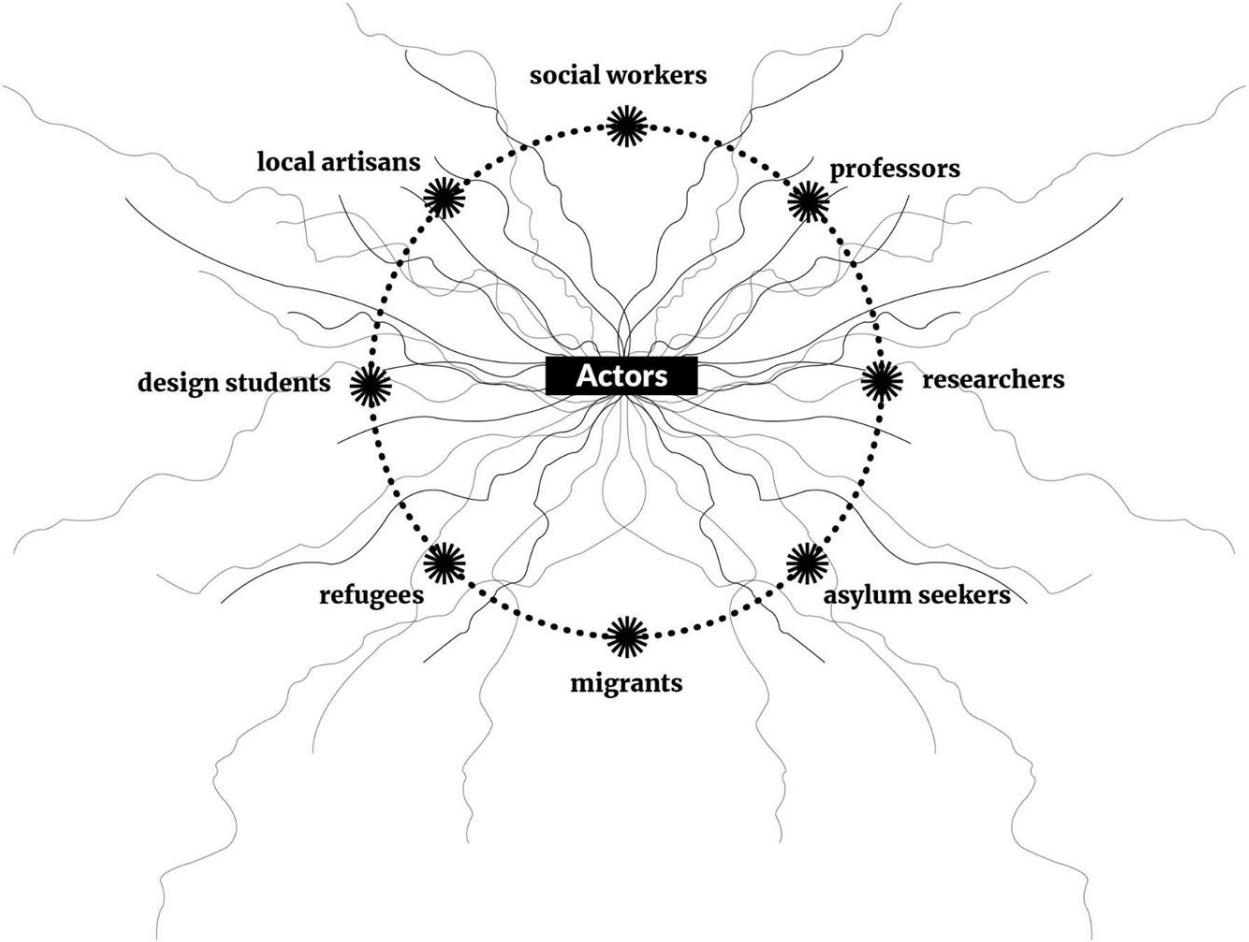
TERRA DI TUTTI



Master Degree in Design
Lab Design for Sustainability
A.A. 2019-20

#Design for social innovation and inclusion

Design with, not design for


social workers
local artisans
professors
Actors
design students
researchers
refugees
asylum seekers
migrants

participation

cooperation

relationship

doing together

friendship

knowing myself through you

collect and write down first impressions and emotions …

bring together keywords and pictures

…

collect and write down first impressions and emotions ...

bring together keywords and pictures ...

to develop the first design ideas

What emerges from dealing with **Human + Human** design issues?

problem framing → **MIGRANTS EMPOWERMENT**

MIGRANTS EMPOWERMENT

job issues *identity process*

MIGRANTS EMPOWERMENT

job issues *identity process*

enhancing skills

developing new ones

MIGRANTS EMPOWERMENT

job issues *identity process*

enhancing skills

developing new ones

problem solving

INTERCULTURAL CRAFT

MIGRANTS EMPOWERMENT

job issues *identity process*

enhancing skills

developing new ones

INTERCULTURAL CRAFT

social sustainability

active participation design activism

MIGRANTS EMPOWERMENT

job issues *identity process*

enhancing skills

developing new ones

INTERCULTURAL CRAFT

social sustainability

active participation design activism

to do with, not to do for

The Formula

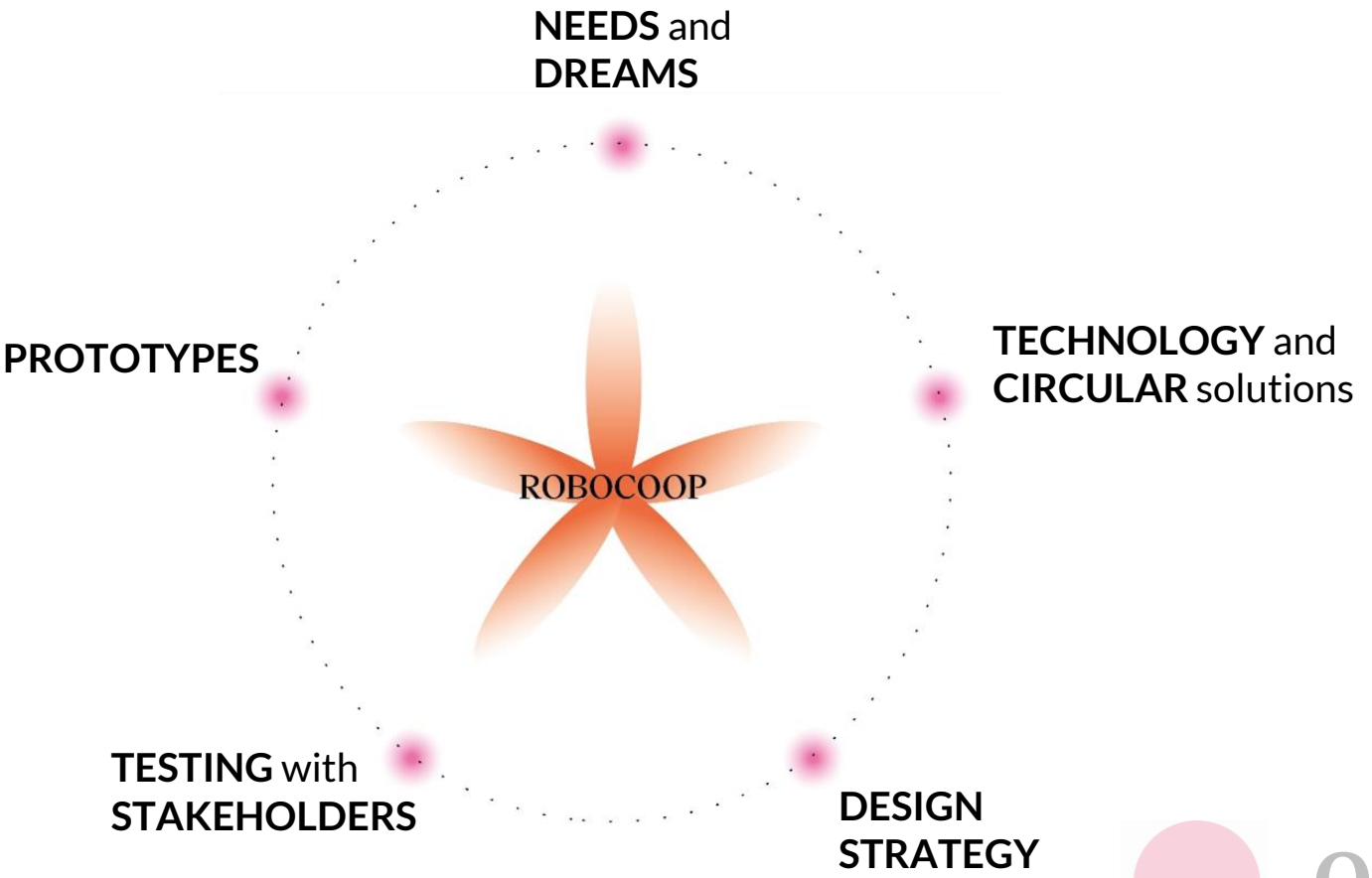
$$\frac{(H+H)^{n}<}{Ma}$$

Legend

H= Human
Ma= mutual aid
<= Augmented

ROBOCOOP

Augmented Reality, **Advanced Storytelling**, **Blockchain** in the Circular and Technological Innovation process of **Social Cooperatives**


NEEDS and
DREAMS
TECHNOLOGY and
CIRCULAR solutions
DESIGN
STRATEGY
TESTING with
STAKEHOLDERS
PROTOTYPES
ROBOCOOP

OBJECTIVES

SOCIAL COOPERATIVES EMPOWERMENT

solidarity *territories and community*

expanding opportunities

autopoietic social innovation

AUGMENTED REALITY

empathic communication

ADVANCED STORYTELLING

digital narratives

BLOCKCHAIN *transparency*

circularity

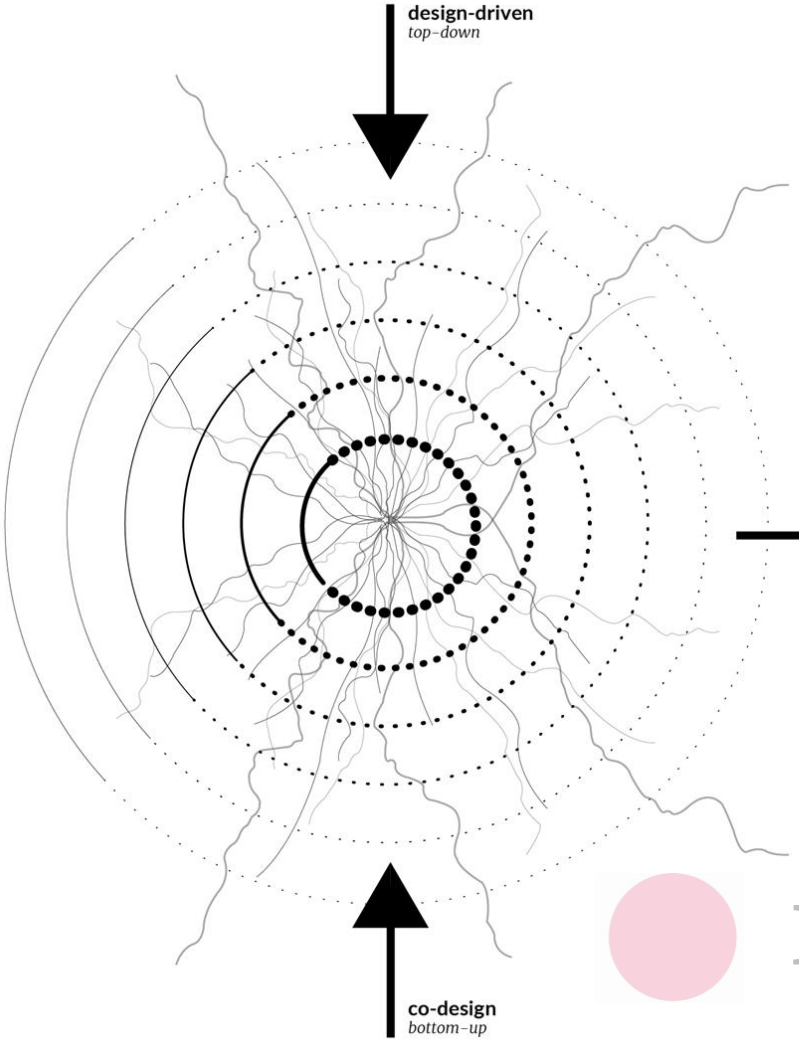
sustainable production

SHIFTING THE PARADIGM

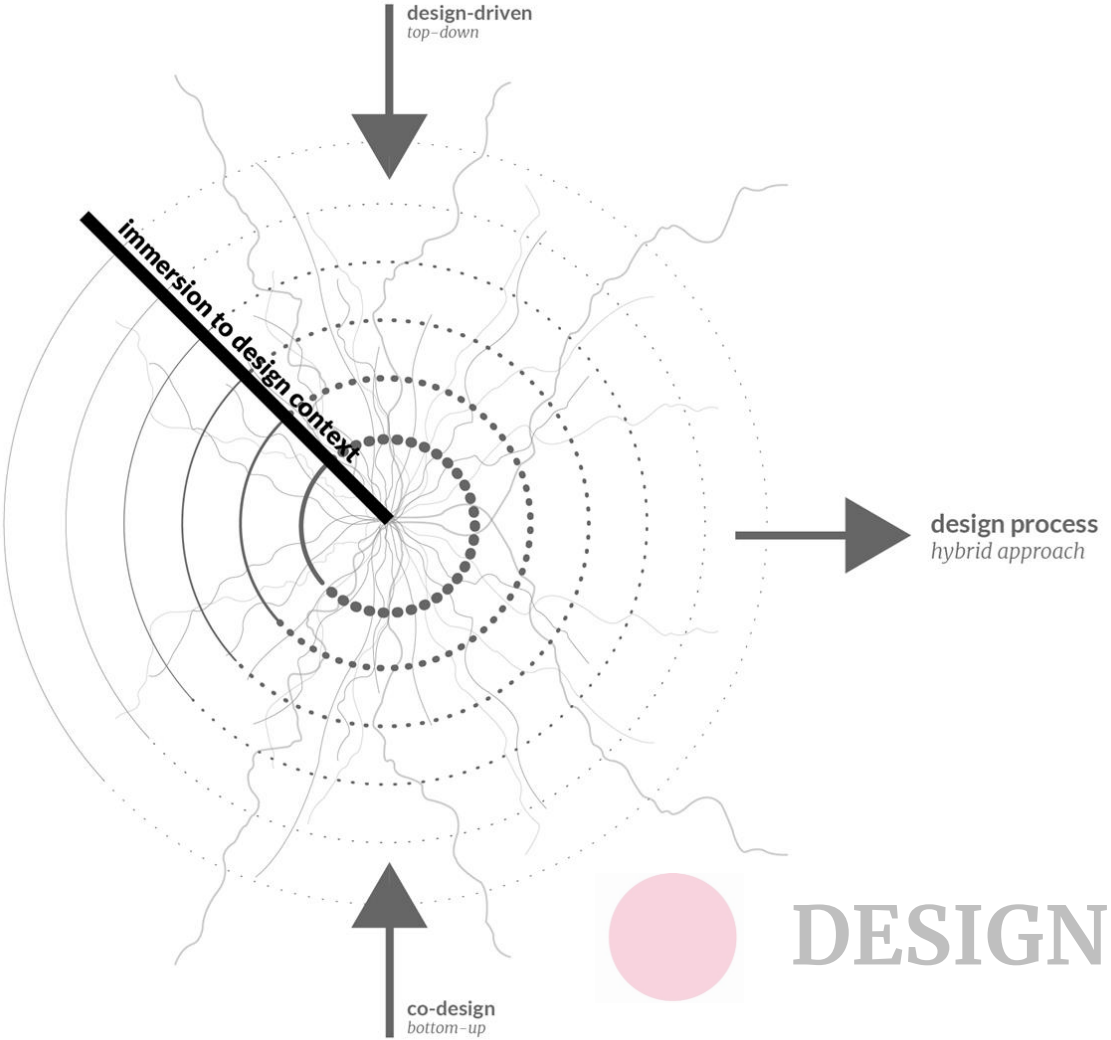
KEYWORDS

DESIGN APPROACH

methodology



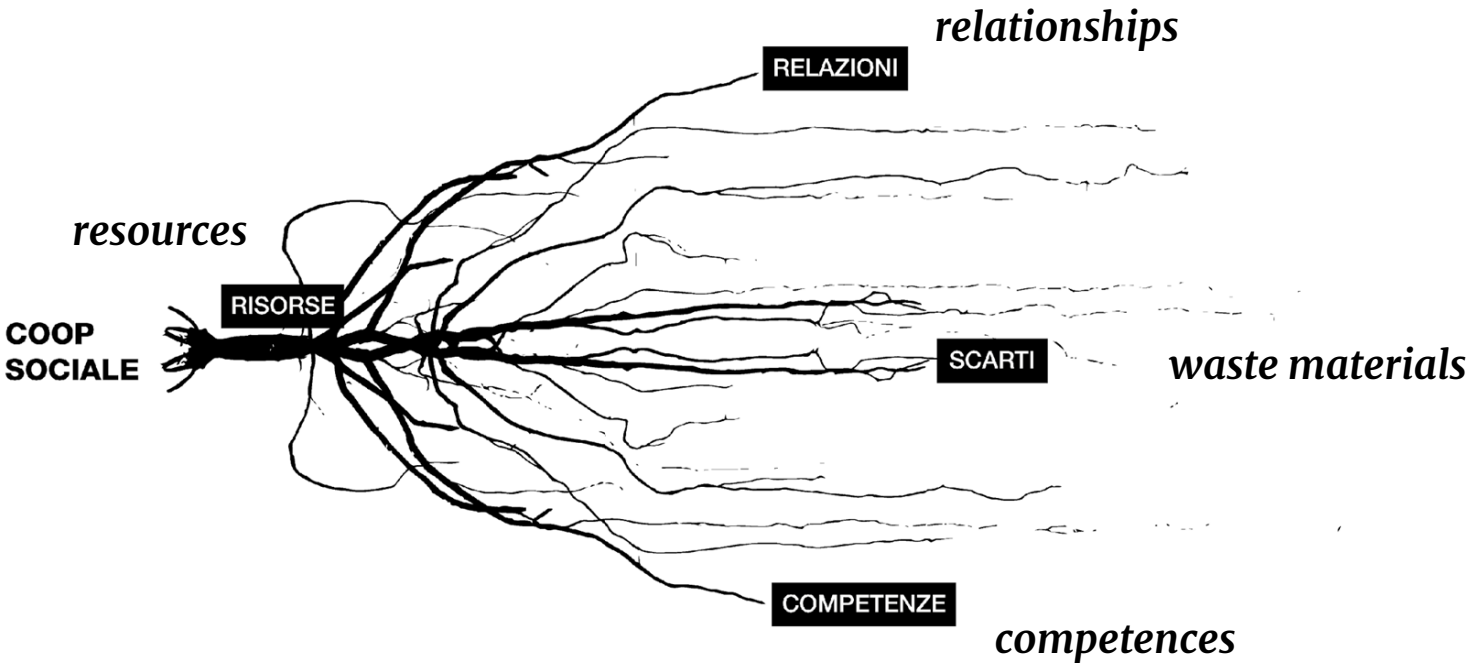
DESIGN APPROACH



DESIGN APPROACH

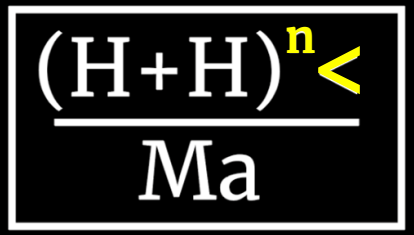
Territorial analysis

[material + immaterial flows]



Then…Why *augmented*?

Then…Why *augmented*?



Social Change

Green transition

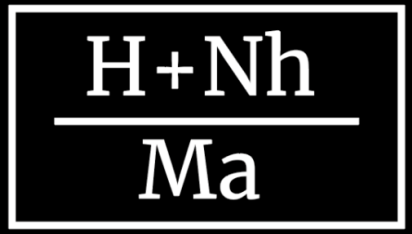
Digital transformation

systemic approach

Legend

H= Human
Ma= mutual aid
<= Augmented

The Formula



Legend

H= Human
Ma= mutual aid
Nh= non-human

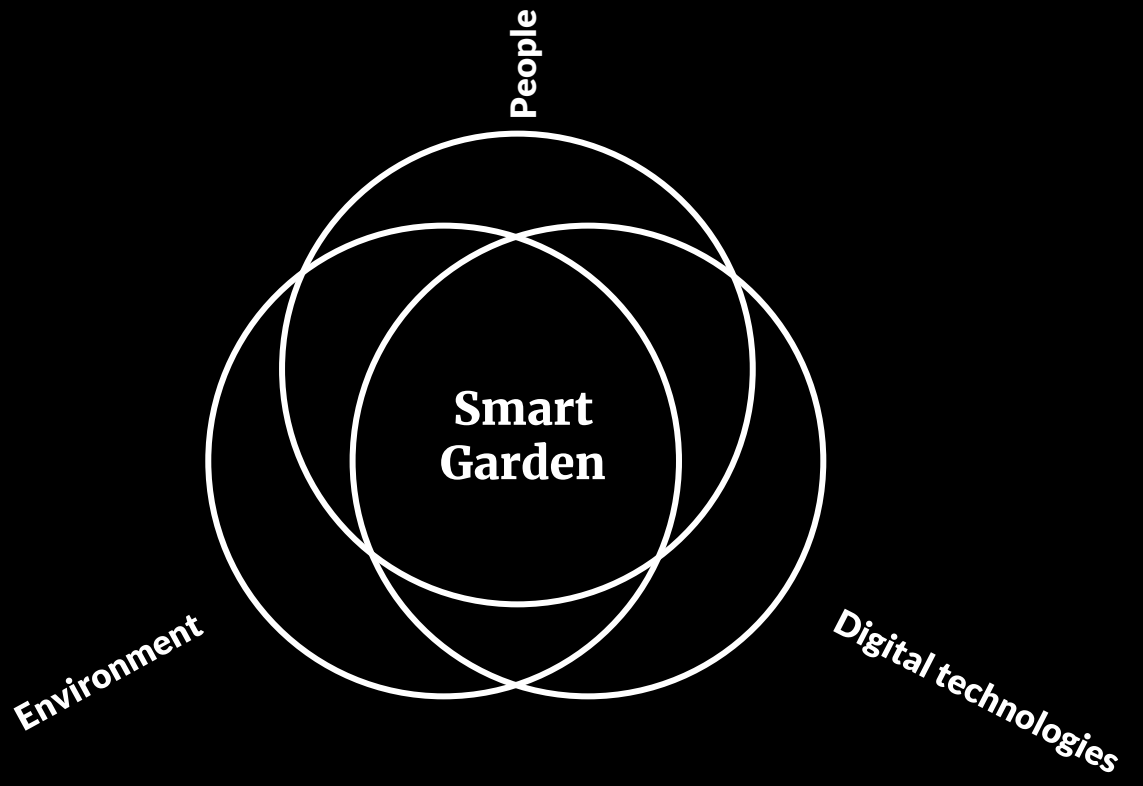
SMAG
SMArt Garden

Hybrid systems of human | technological | biological products.

Prototypes developed based on the concept of

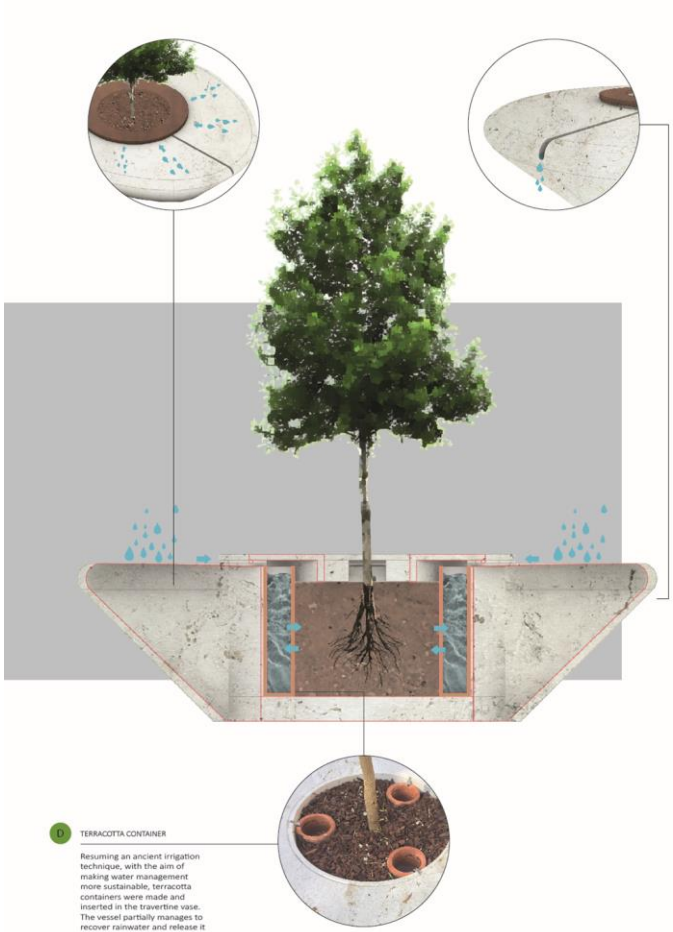
Alessandra Galli (Water Value)
Jonathan Lagrimino e Mirko Romanelli (Litus)
Giacomo Da Re (I sette Nani)
Ideati nell'ambito del corso di
Design for Sustainability (LM12)
Prof. Giuseppe Lotti, Prof. Marco Fioravanti.

Single hybrid system



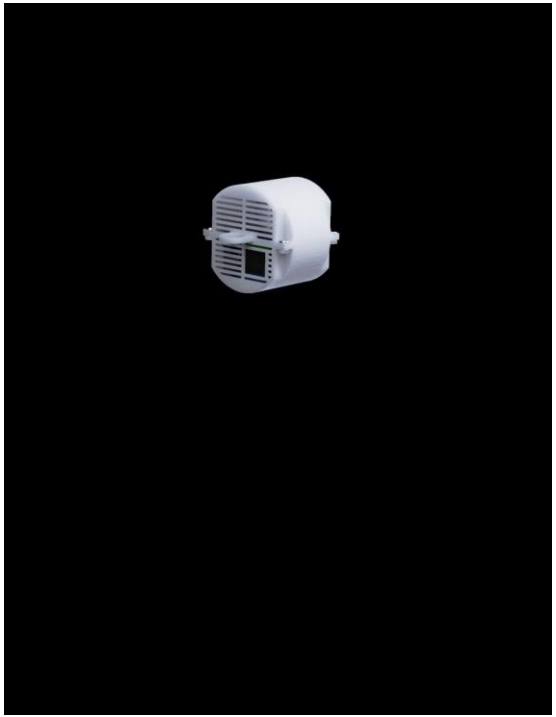
Interdependence between man and plant:
a **mutual relationship** to be (re)built

WATER VALUE


D
TERRACOTTA CONTAINER
Resuming an ancient irrigation technique, with the aim of making water management more sustainable, terracotta containers were made and inserted in the travertine vase. The vessel partially manages to recover rainwater and release it slowly thanks to the porosity of the material. With this system the plants regulate themselves according to their needs.

SETTE NANI
(SEVEN DWARFS)

WATER VALUE - STRADESIGN 2019, FIRENZE MURATE



UNIT CONTROL ELEMENTS

SMAG perspective

Build a bridge between H + nH.

Restructuring the bond.

More awarness about the inter-relations between H + nH and Mutual Aid.

Hybrid systemic

Legend

H= Human
Ma= mutual aid
<= Augmented

The Formulas

An ***Osmotic process***

$$\frac{H+H}{Ma}$$

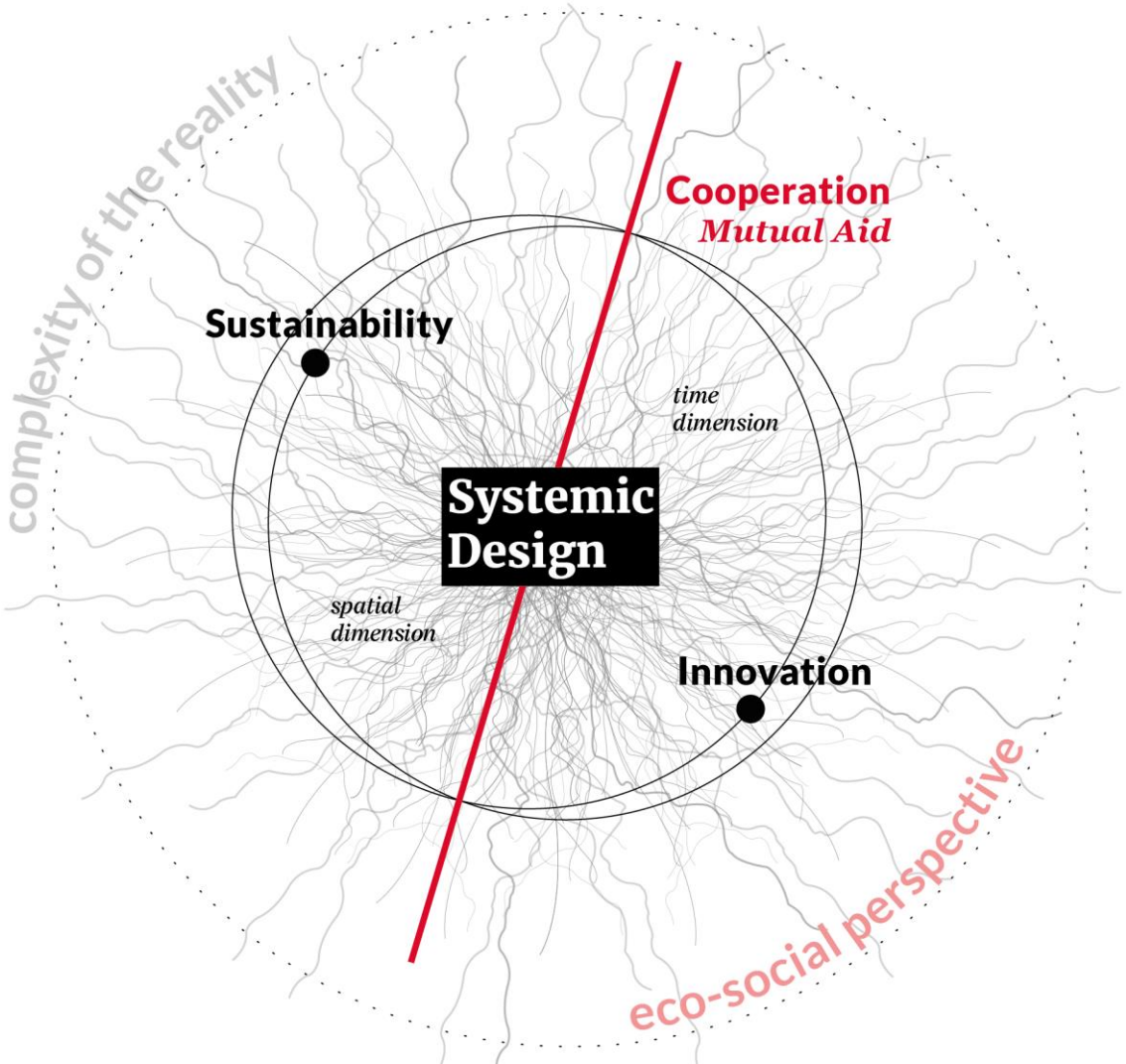
$$\frac{(H+H)^{n}<}{Ma}$$

$$\frac{H+Nh}{Ma}$$

Legend

H= Human
Ma= mutual aid
Nh= non-human
<= Augmented

from Micro to Macro contexts
and interacting with heterogeneous disciplines



Cooperation
as a pattern and approach that Design must adopt for its more strategic, systemic and sustainable action over time.

The Formulas

An ***Eco-Social Design Framework***

$$\frac{H+H}{Ma}$$

$$\frac{(H+H)^{n}<}{Ma}$$

$$\frac{H+Nh}{Ma}$$

A possible direction for design research and practice which deal with complex issues and transdisciplinary connections

Legend

H= Human
Ma= mutual aid
Nh= non-human
<= Augmented

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Thanks for your attention! ☺