

Time Based Design – Theory

6. self and other

Hille Engelsma

Bart Barnard

Introduction





nature

THE INTERNATIONAL WEEKLY JOURNAL OF SCIENCE

THE HUMAN EPOCH

Defining the Anthropocene PAGES 144 & 171

CONFLICT RESOLUTION

BUILDING BRIDGES

Long-standing disputes can be fixed — in theory
PAGE 148

LINGUISTICS

SCIENTIFICALLY SPEAKING

How English became the academic lingua franca
PAGE 154

RISK MANAGEMENT

TAKING IT PERSONALLY

Model the growing interconnectivity of risk
PAGE 151

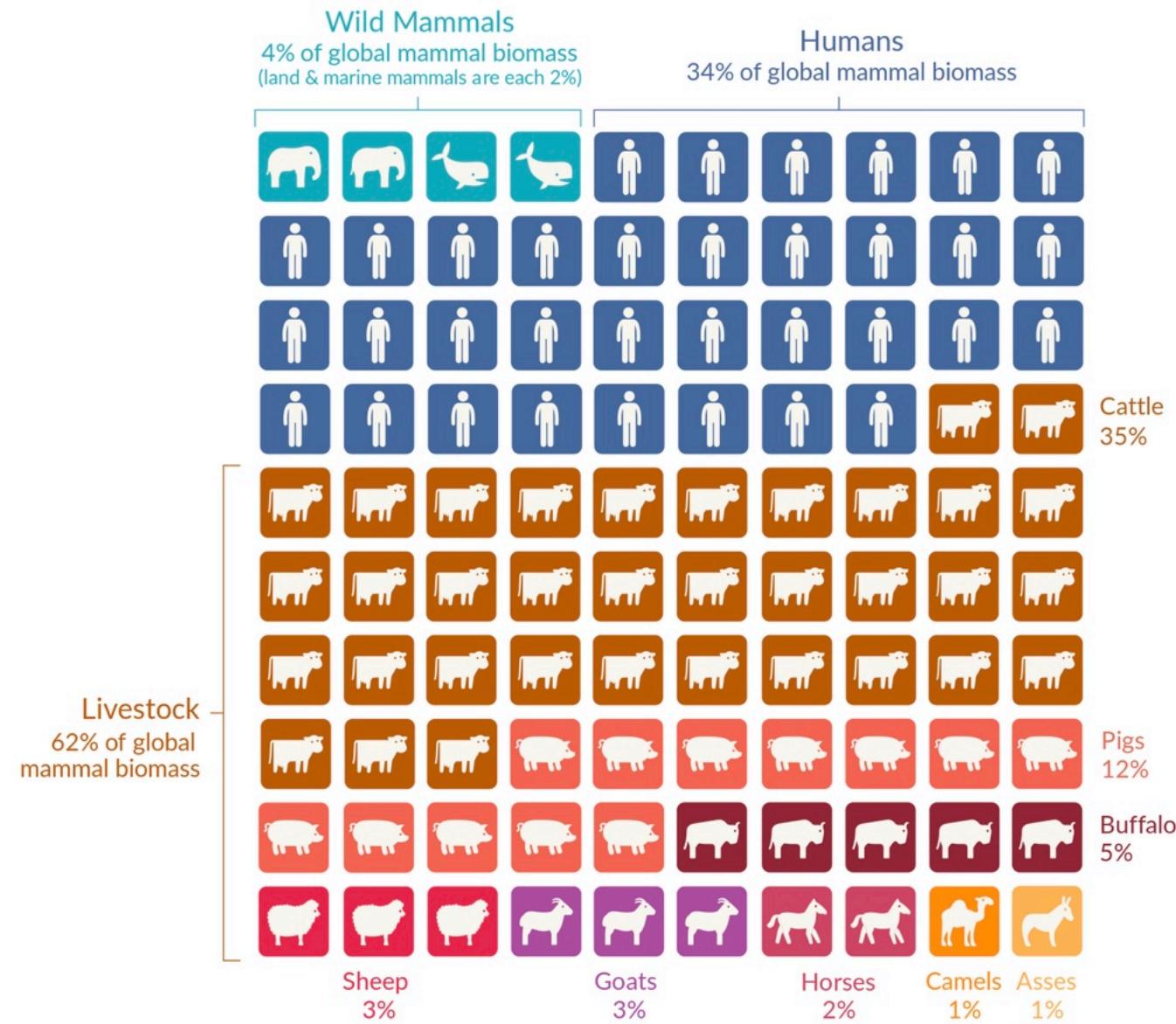
NATURE.COM/NATURE

12 March 2015
Vol 518 No. 7542



Nature 12 March 2015

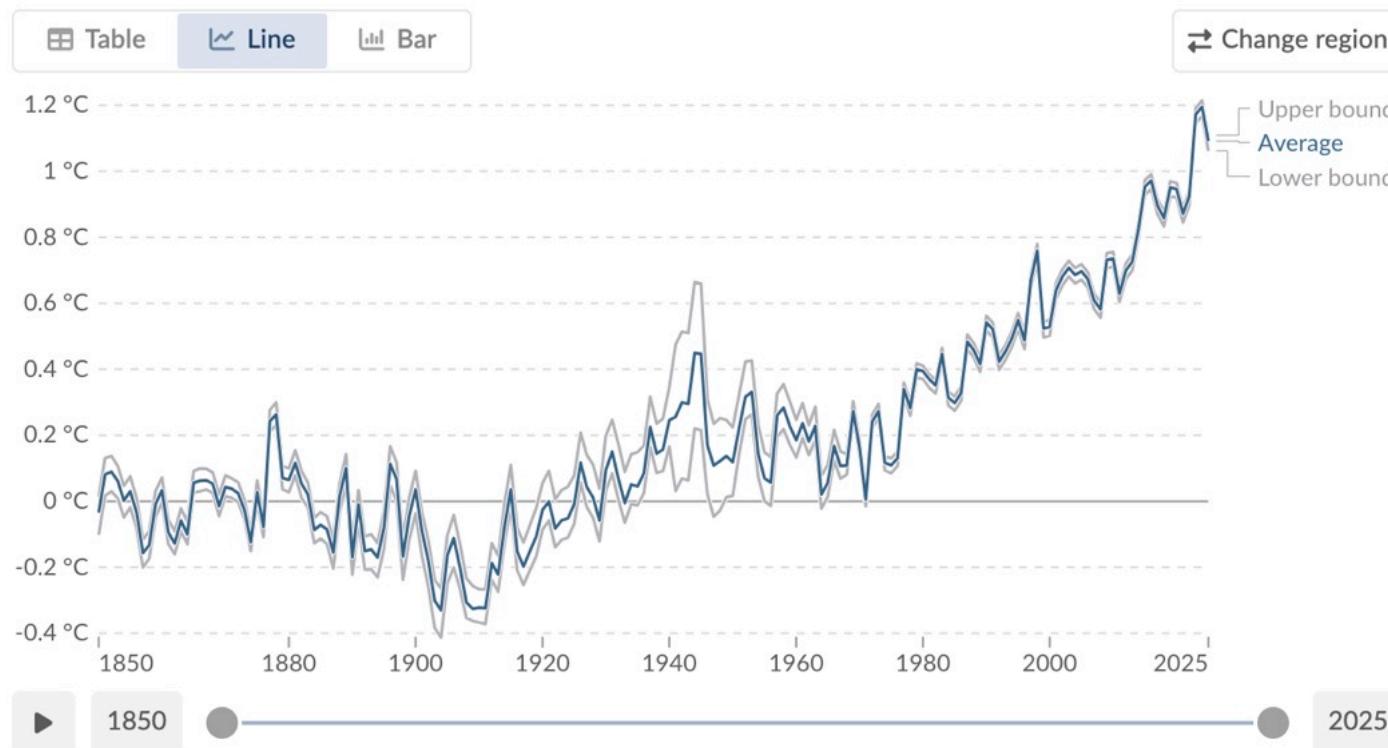
Cover illustration by Alberto Seveso



Annual sea surface temperature anomalies relative to the pre-industrial period, World

Our World
in Data

The difference of average sea surface temperatures compared to the mean from 1861-1890, in degrees Celcius. This is measured at a depth of 20 centimeters.



Data source: Met Office Hadley Centre - Hadley Centre's Sea Surface Temperature (HadSST) (2025) – [Learn more about this data](#)

Note: The period 1861–1890 is used as the baseline to measure temperature changes relative to pre-industrial times, [as recommended by climate research institutions](#).

OurWorldinData.org/co2-and-greenhouse-gas-emissions | CC BY



<https://ourworldindata.org/climate-change>

We are experiencing a profound mutation of our relationship with the world.

Climate quietists: people that submerge themselves into a world into which there is no problem

('climate change is not real', 'the world has always changed')

Geo-engineers: use technology to battle the changes

('enhance our technological hold on the world')

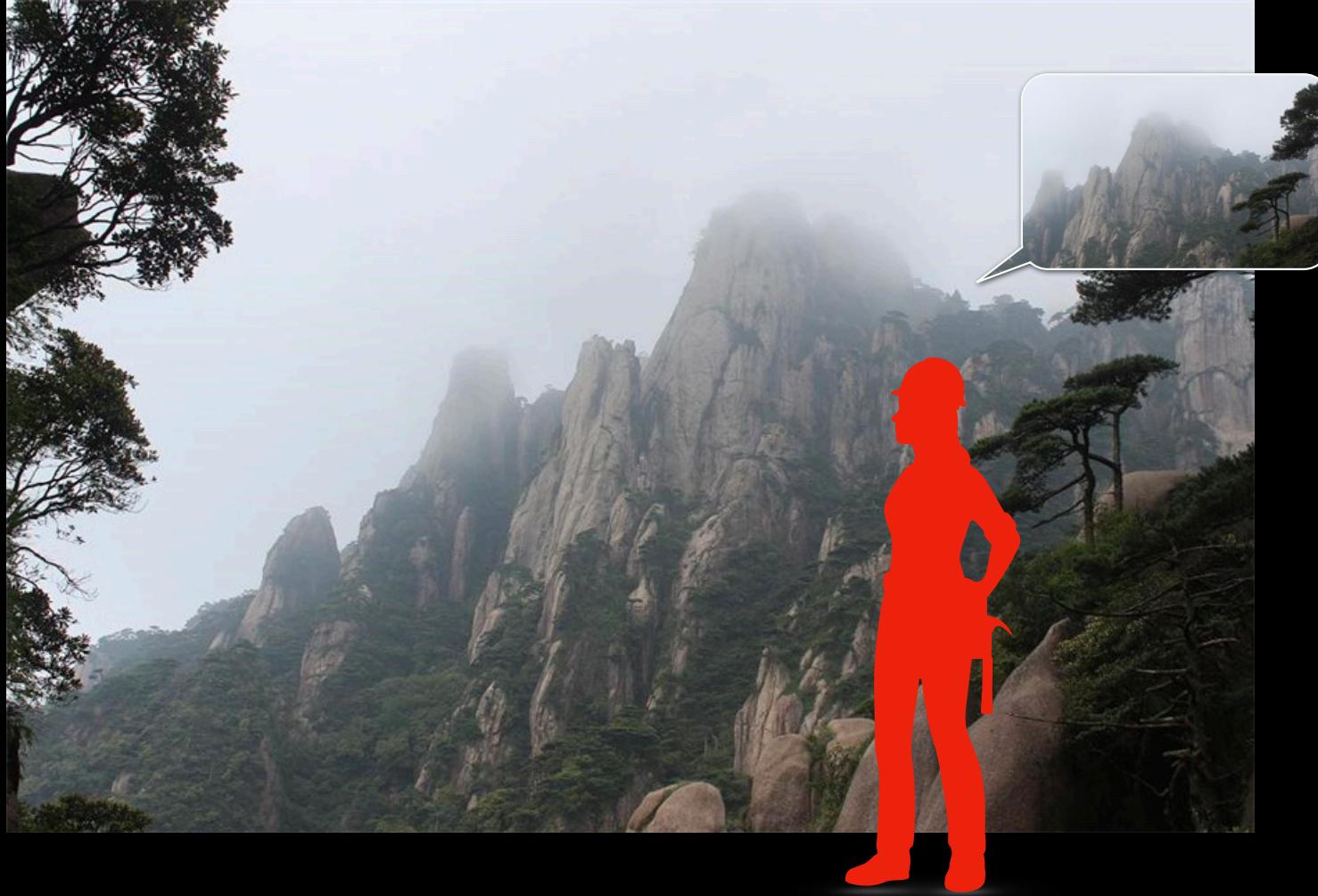
Lethargy: we cannot ignore the changes, but we cannot do anything about it

('sadness, melancholy, neurasthenia')

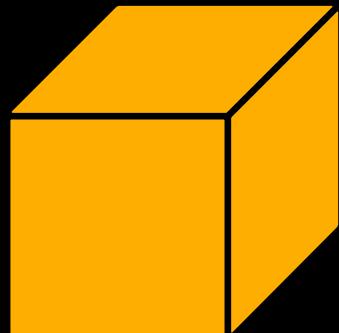
Bipolar: a lot of energy but also depressed

('we still can do something about it, it is not too late')

§1. Our relationship with the world.



the standard model



Object

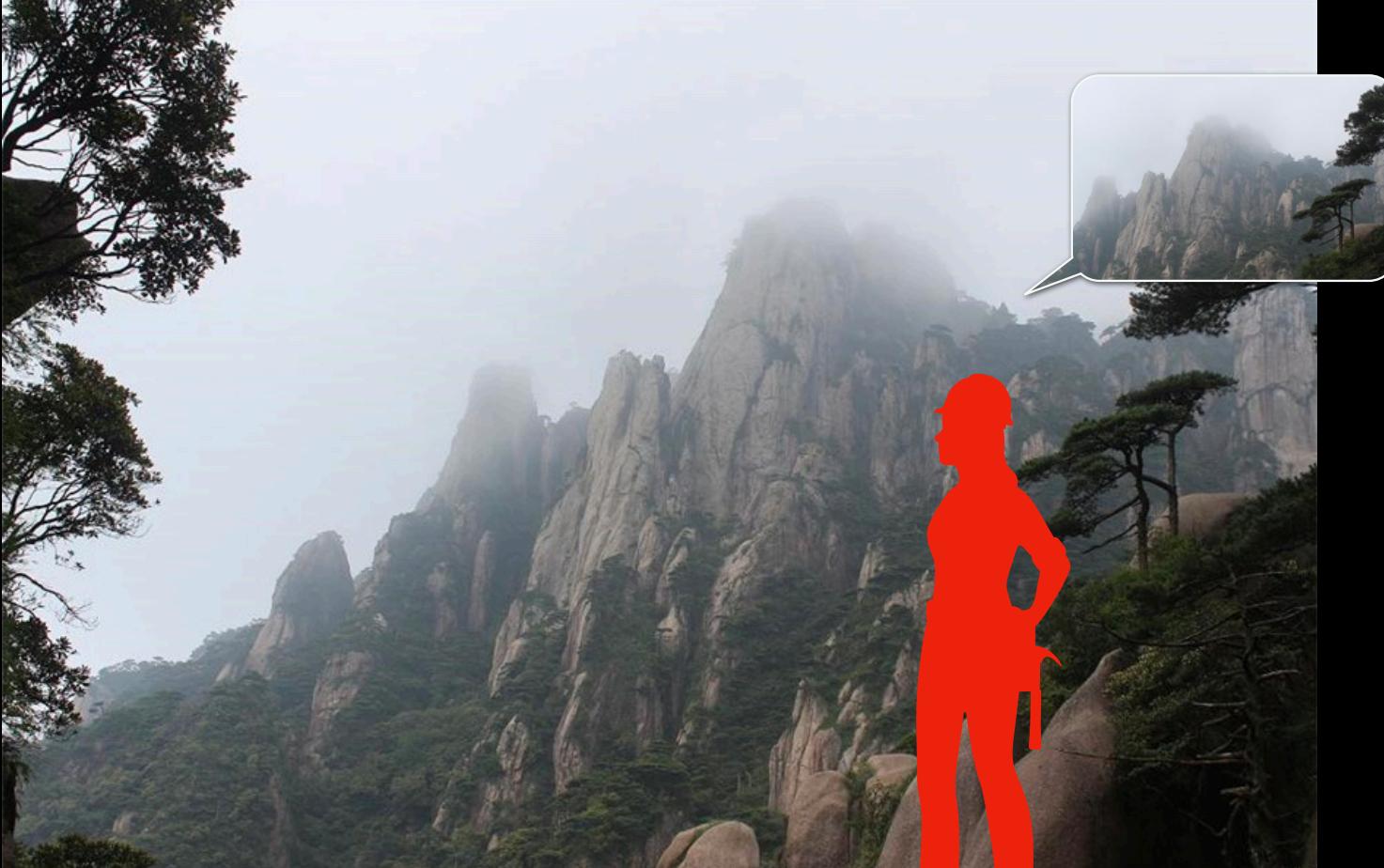


Subject



The picture which holds traditional philosophy captive is that of the mind as a great mirror, containing various representations – some accurate, some not – and capable of being studied by pure, nonempirical methods.

– Rorty, 1979, p.12





"What a beautiful bird!"



"A nice little snack!"

What is it like to be a bat...?

Nagel, 1974

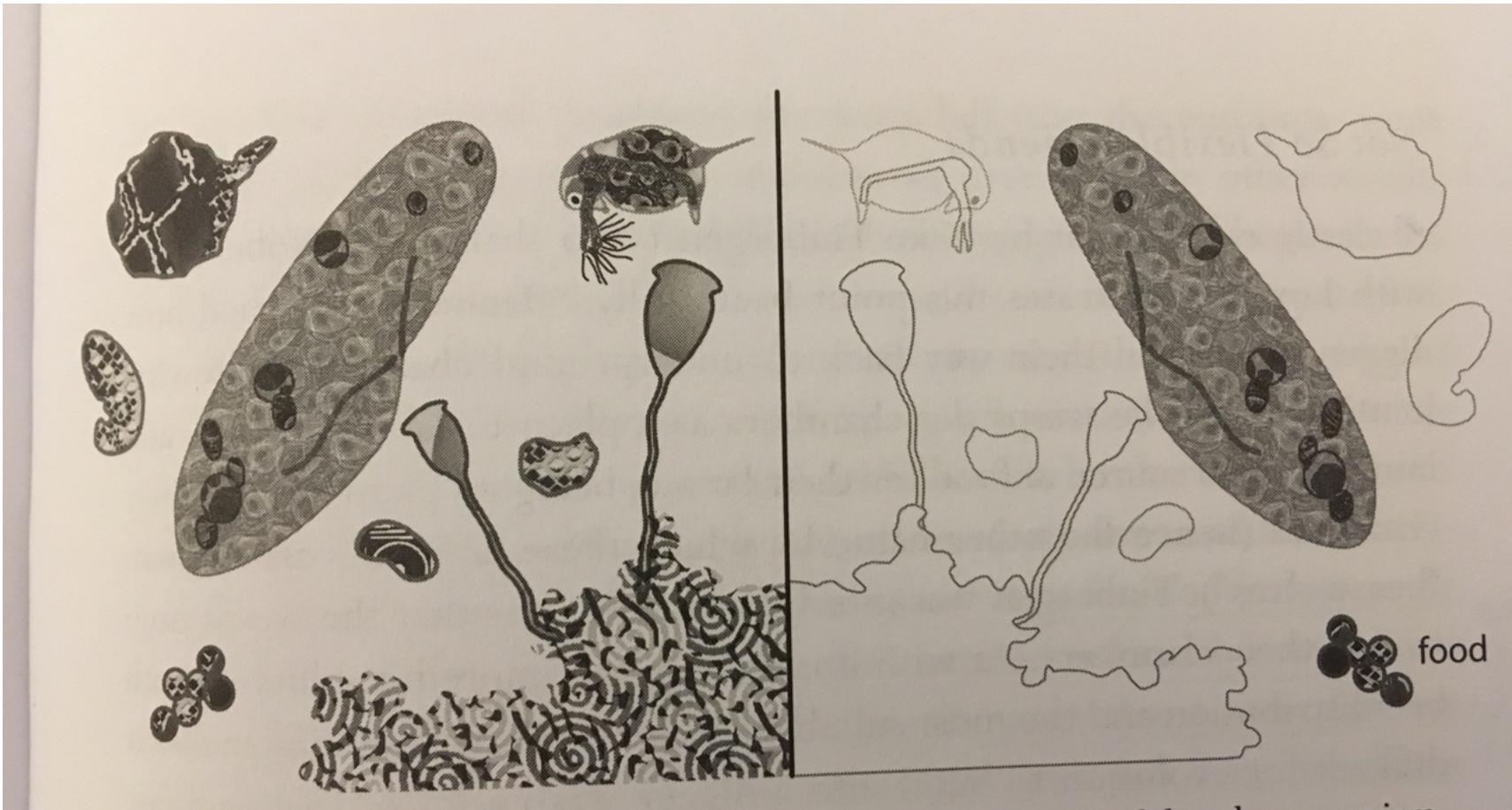




What is it like to be a slug...?

Barnard, 2025

Umwelt

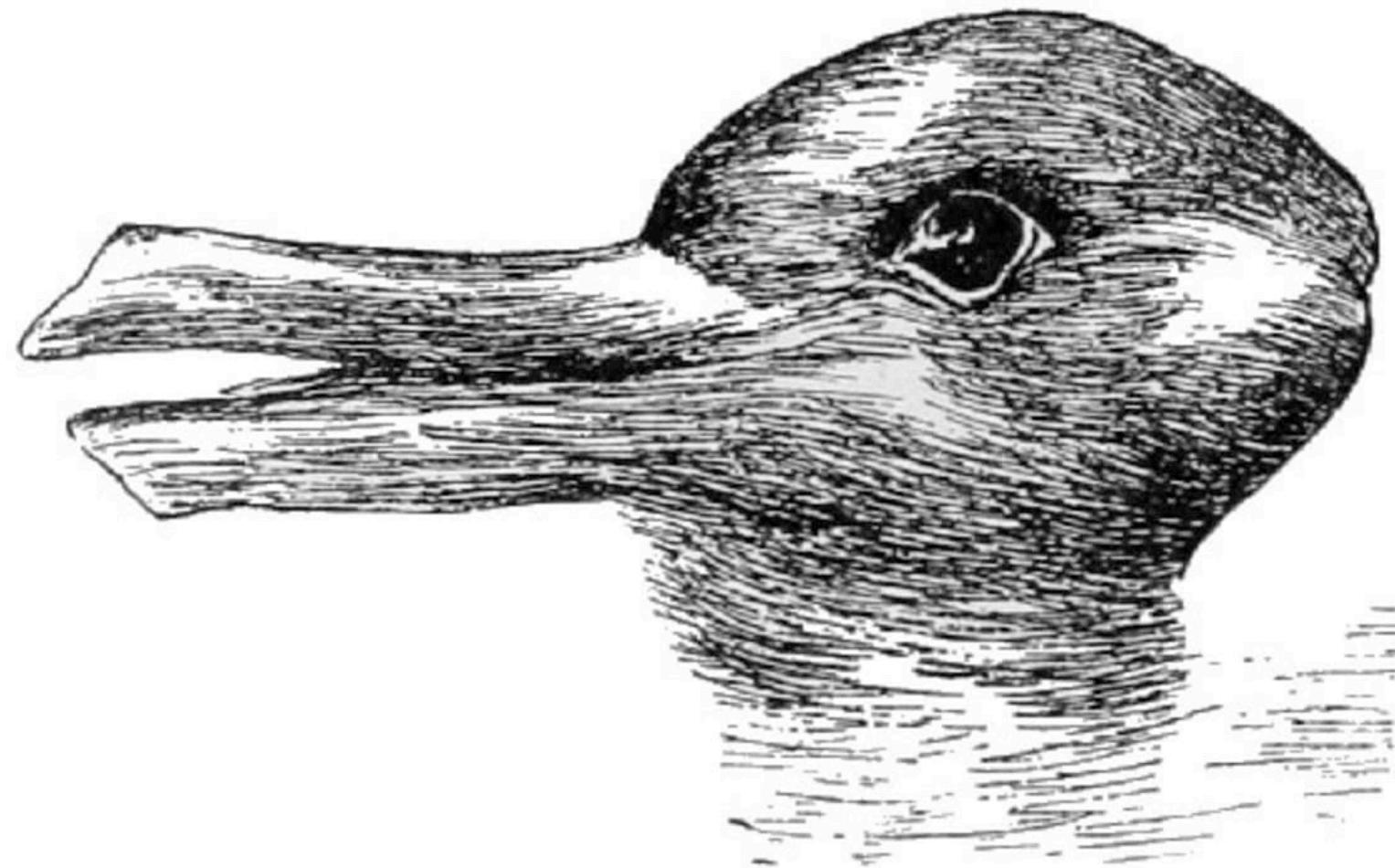


While the environment is full of all kinds of objects and various kinds of stimulus energy, an organism is sensitive only to those that are relevant to its needs. (Barrett 2011, p.81)

The observers perception constructs reality rather than passively perceiving it

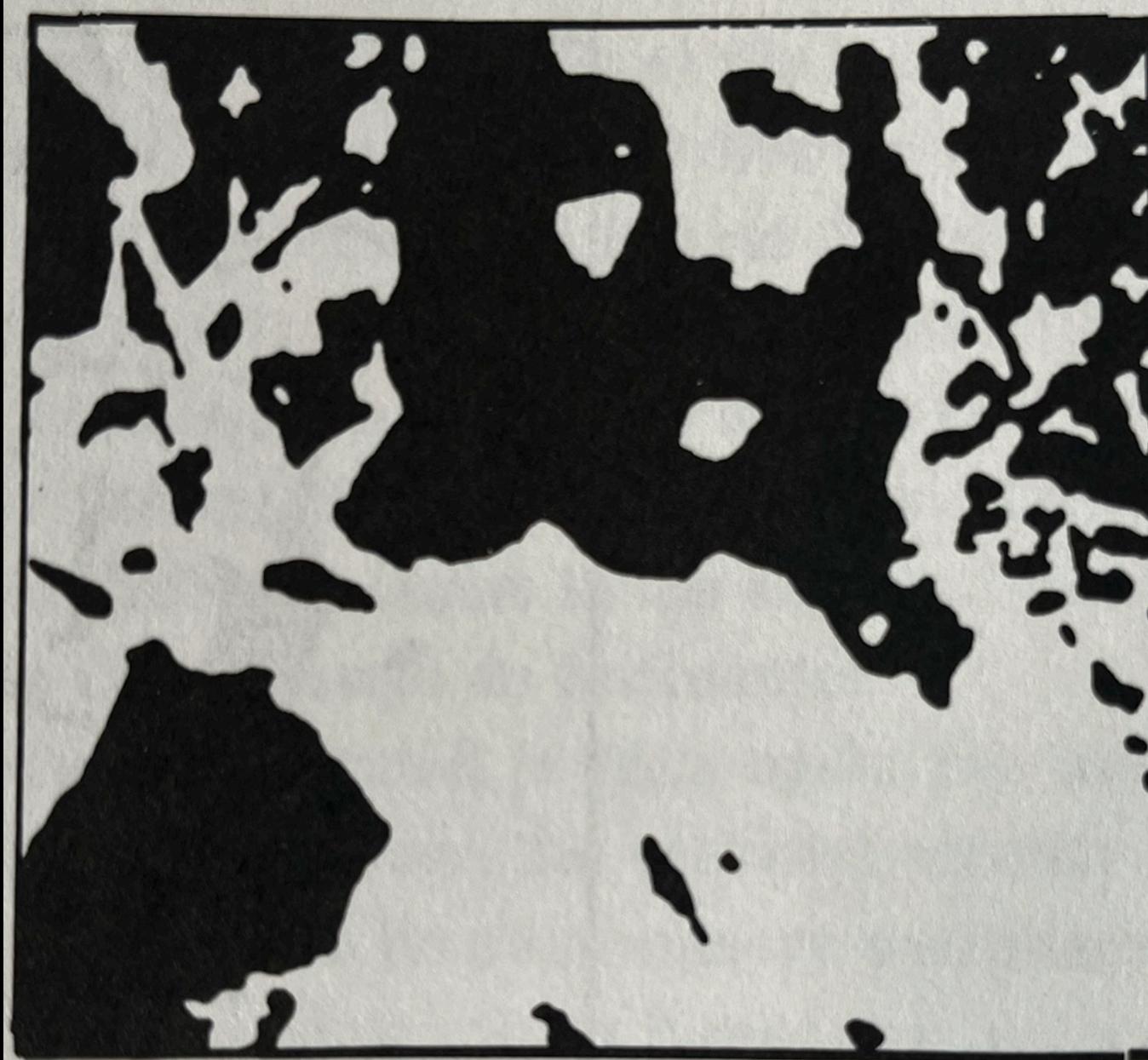
The resulting adaptive fit between organism and environment can be considered as a form of 'knowledge' – knowledge that does not sit solely in the animal's head but is instead distributed across the whole complex of reliably recurring developmental resources, which together give rise to the behavior.

– Barrett, 2011, p. 84

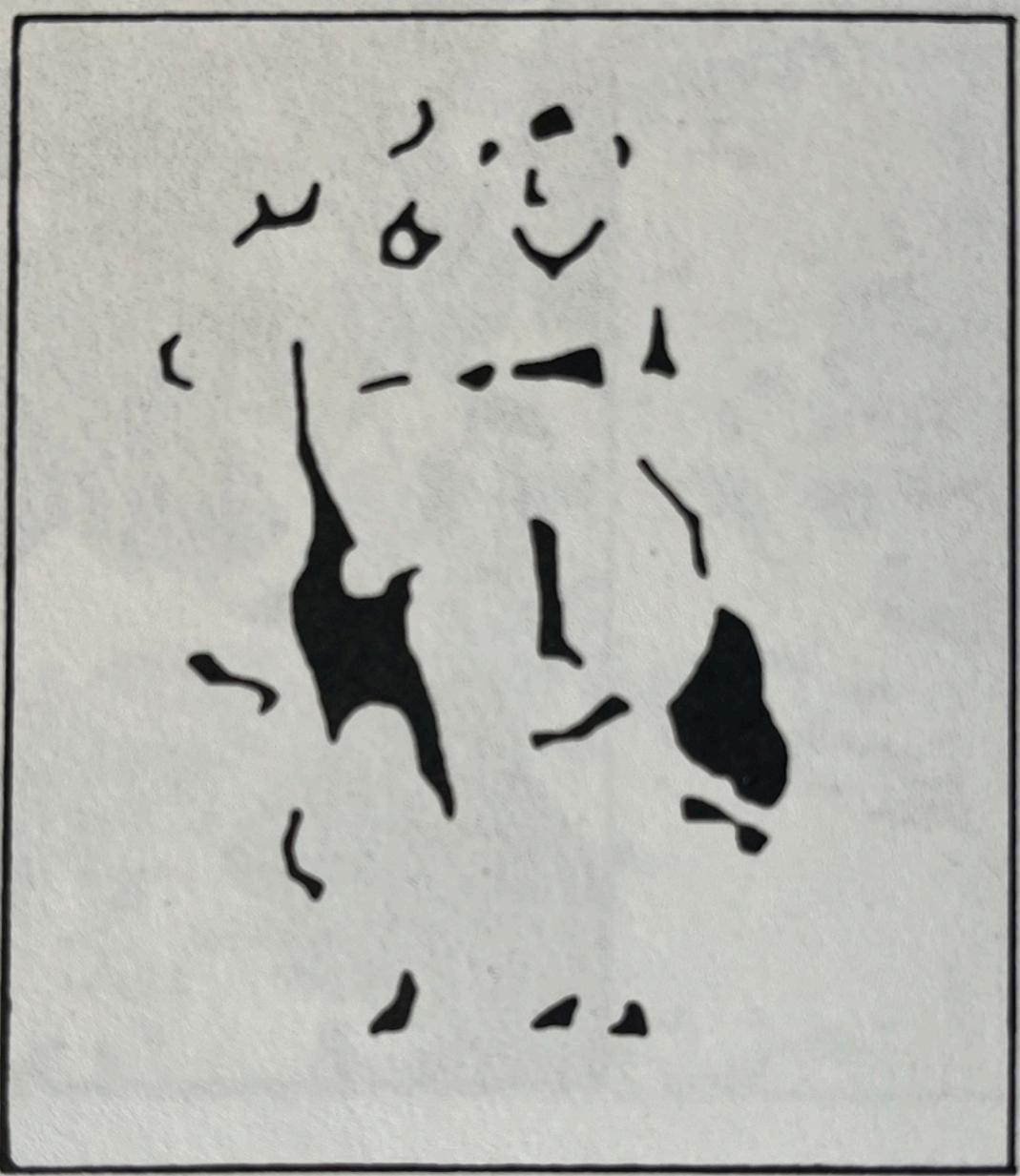




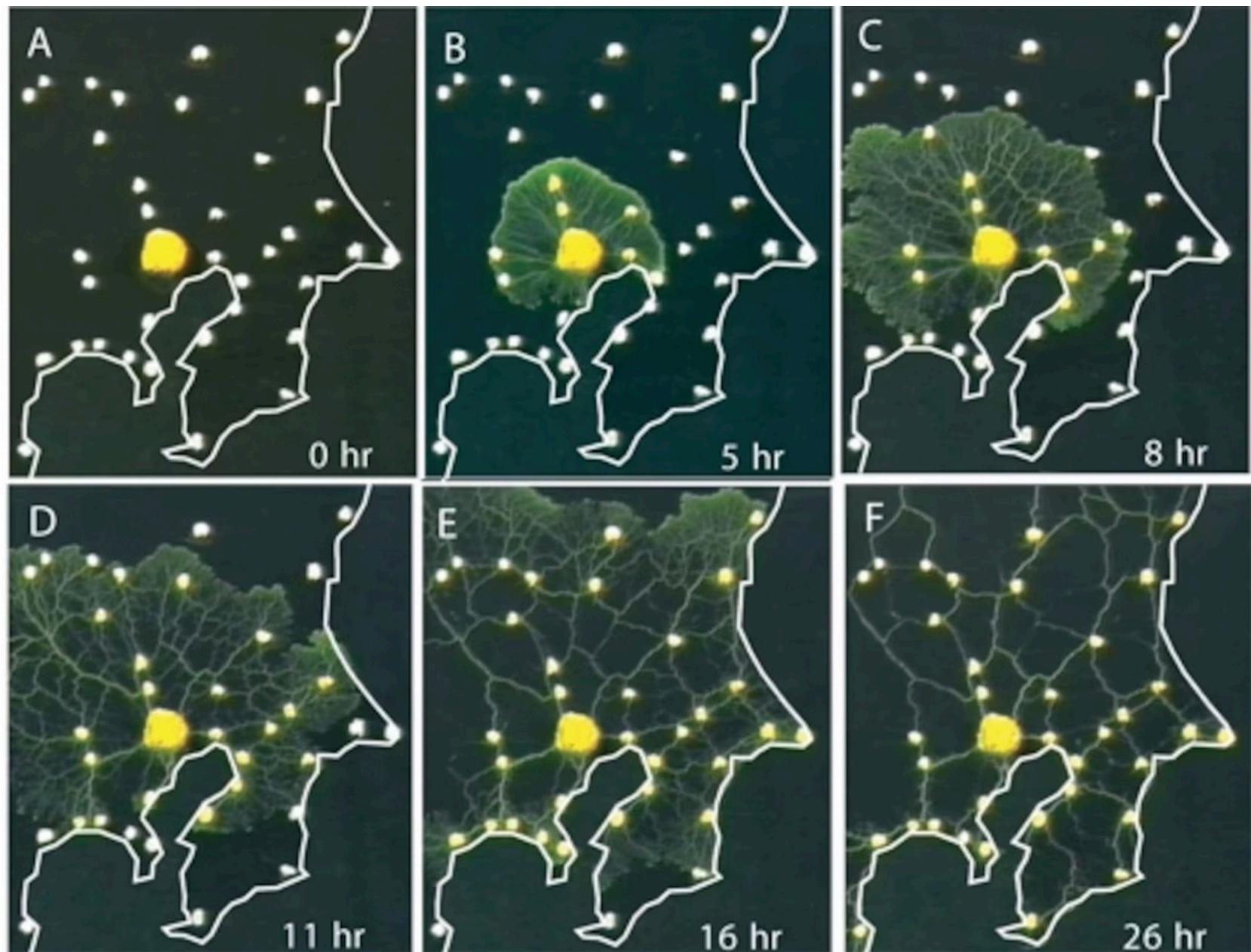
Churchland 1995, p.110



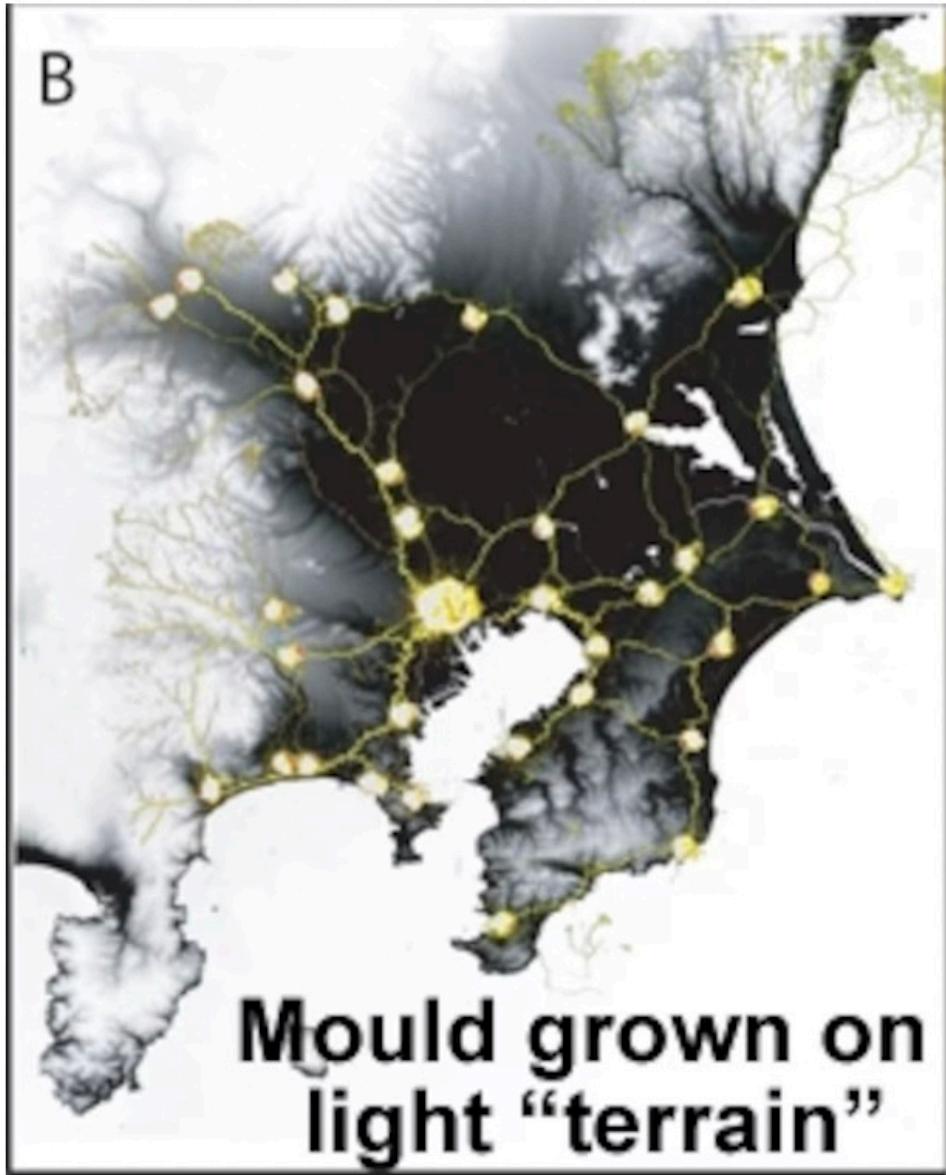
Churchland 1995, p.111



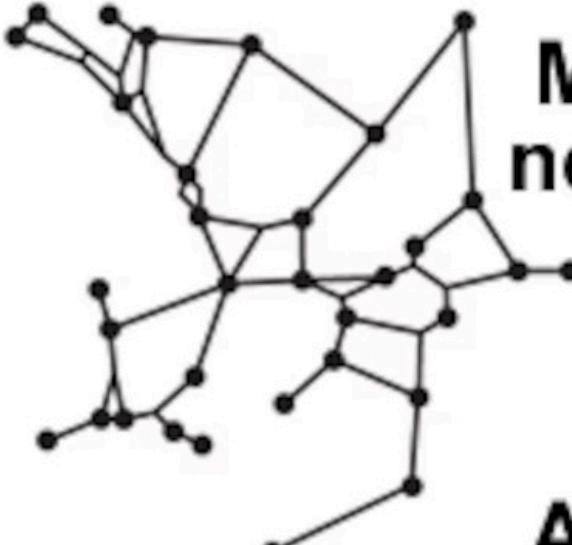
§2. Actor Network Theory



B

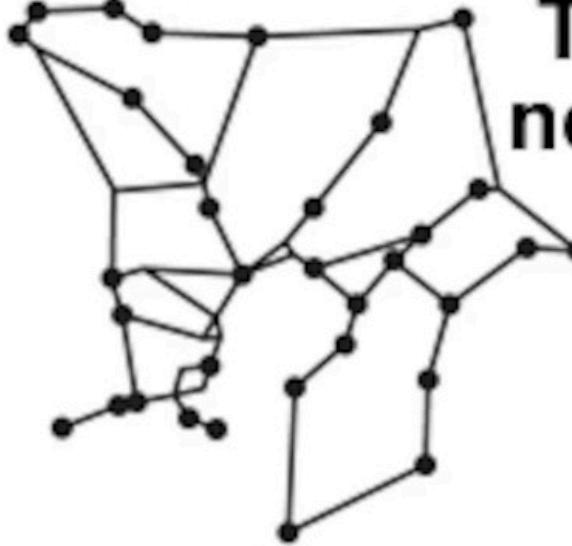


C



**Mould
network**

D



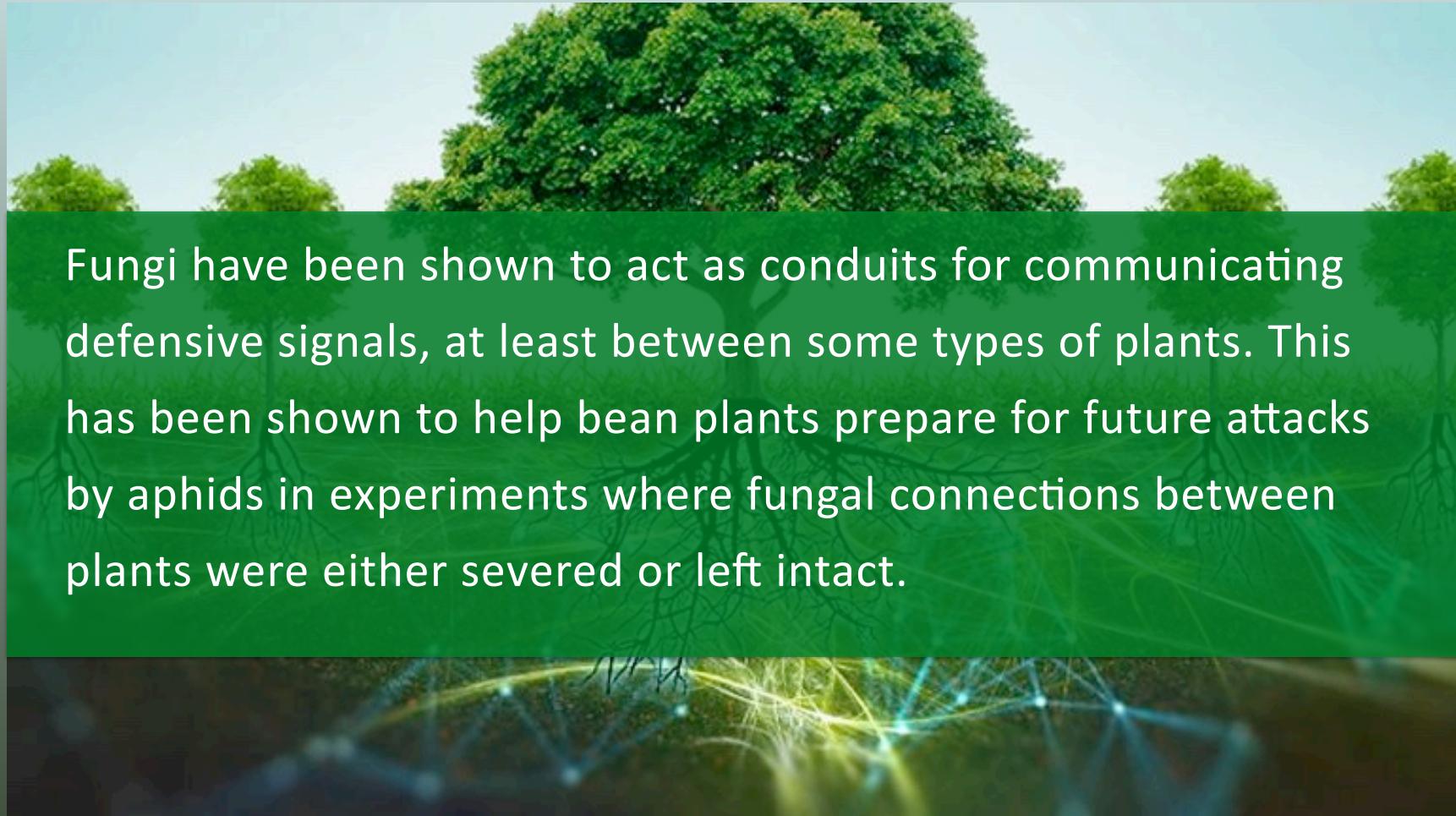
**Actual
Tokyo
network**



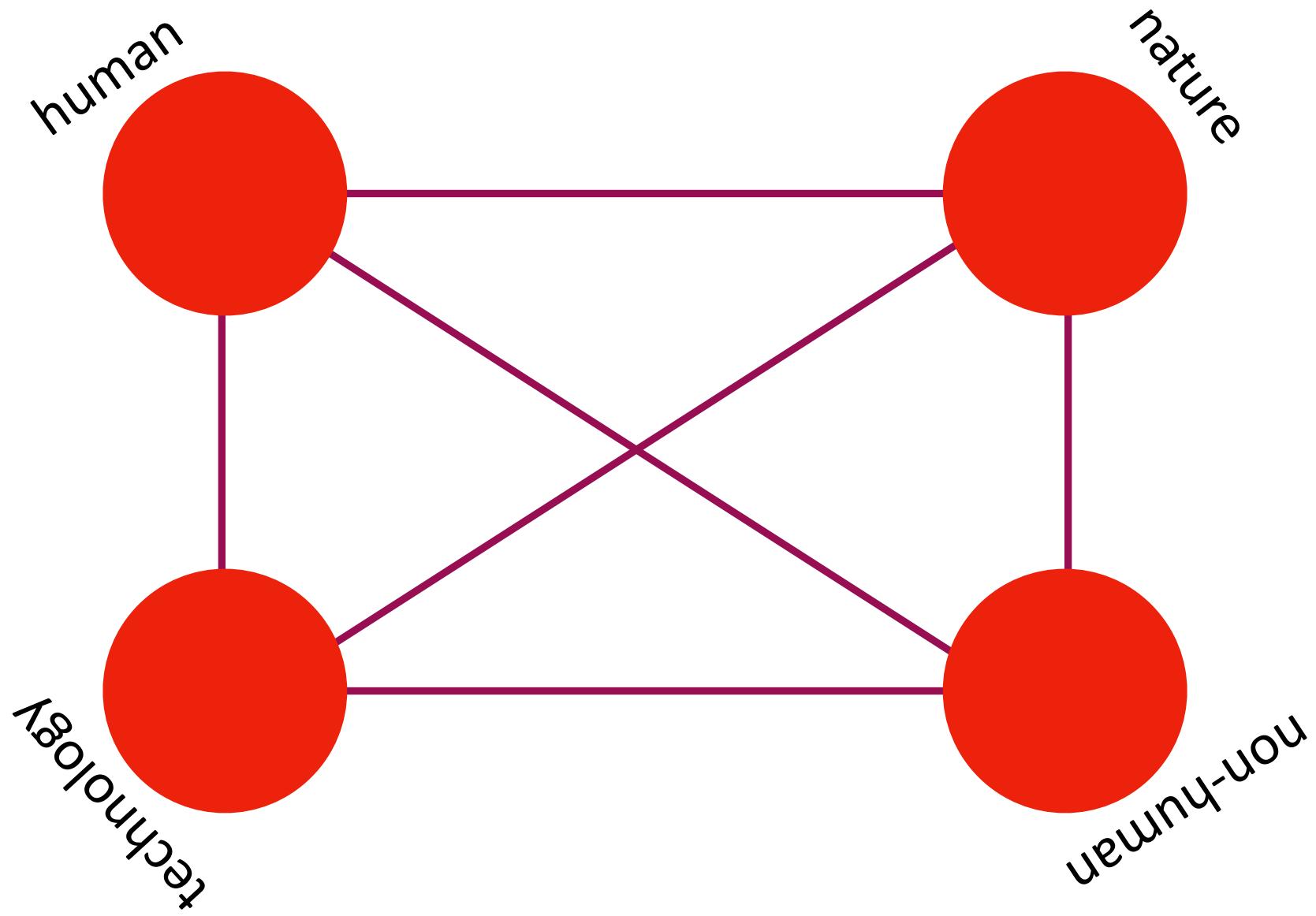
Biologists now believe that the sperm whale's massive head functions like a powerful telegraph machine, emitting pulses of sound in distinct patterns. [...] [This] is now understood to play an important role in communication.

Wagner 2011

The Wood Wide Web



Fungi have been shown to act as conduits for communicating defensive signals, at least between some types of plants. This has been shown to help bean plants prepare for future attacks by aphids in experiments where fungal connections between plants were either severed or left intact.



A wide, brownish-grey river flows through a deep valley, framed by steep, densely forested mountains. The sky is filled with heavy, grey clouds, and the overall atmosphere is misty and serene.

<https://www.bbc.com/travel/article/20200319-the-new-zealand-river-that-became-a-legal-person>

https://en.wikipedia.org/wiki/Cadaver_Synod



