

A close-up, slightly blurred photograph of a person's hand reaching out over a field of golden wheat. The hand is dark-skinned and positioned as if touching or feeling the wheat stalks. The background is a vast, rolling landscape of wheat under a clear blue sky.

A biosemiotic perspective on the human condition & the environmental crisis

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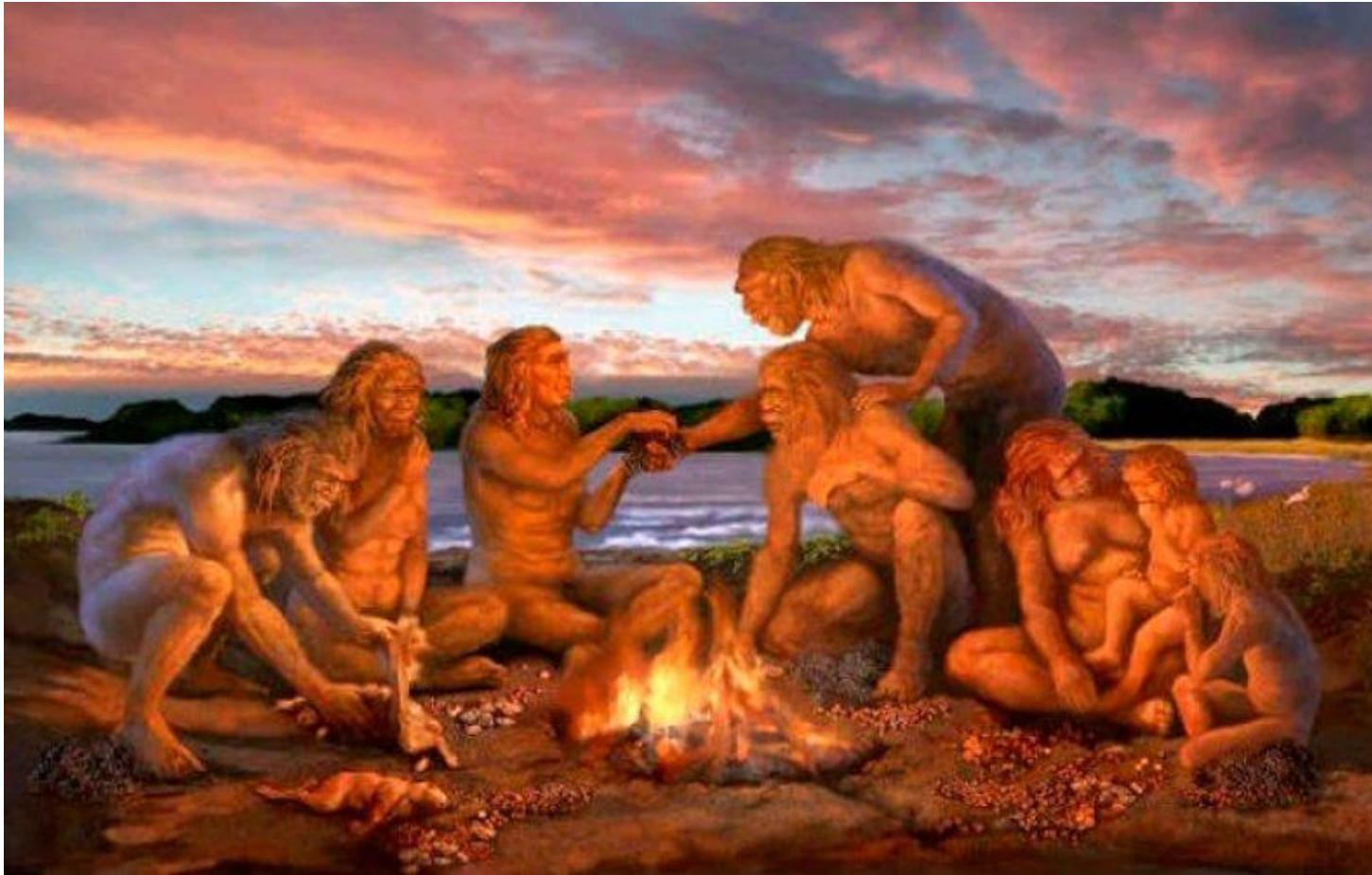


Environmental crisis

What is a human being?

How have humans impacted life on Earth?

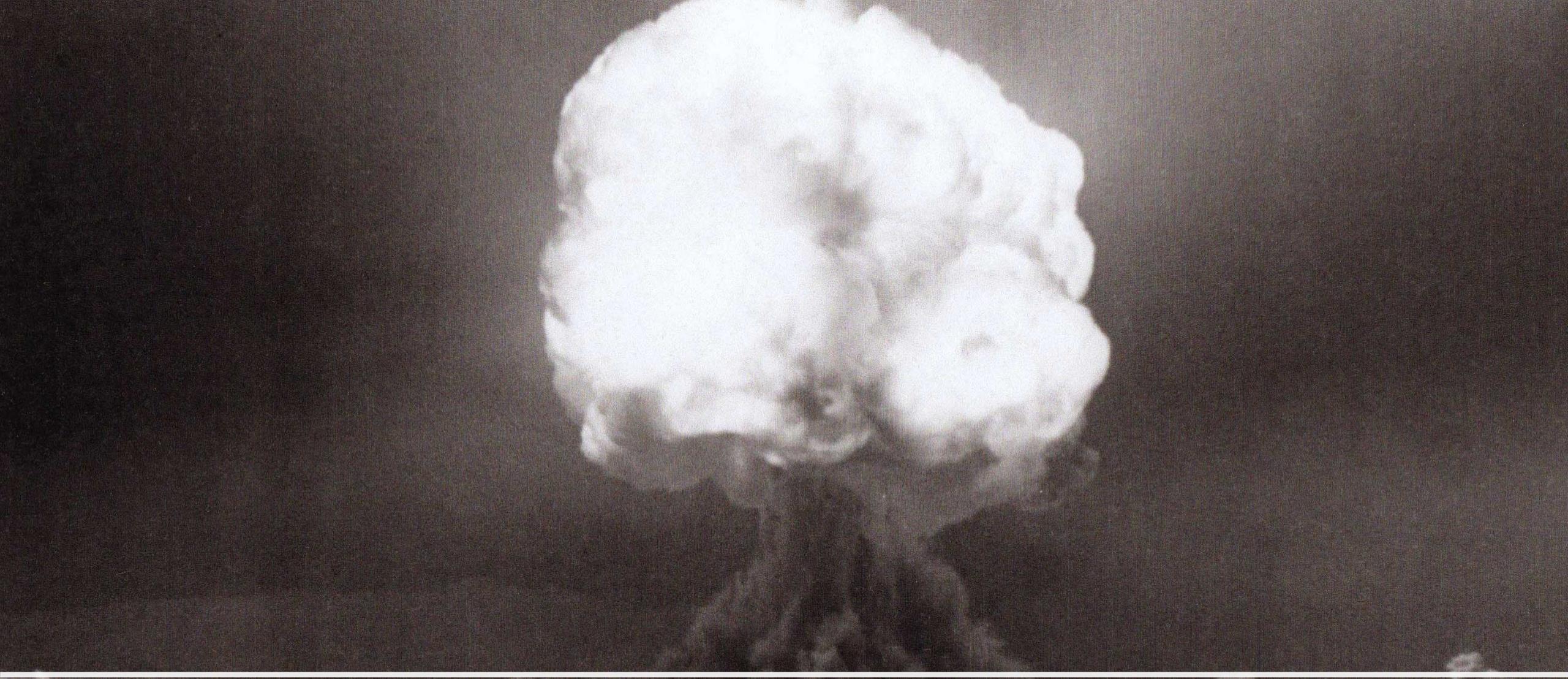
How are humans conditioned by the Earth?



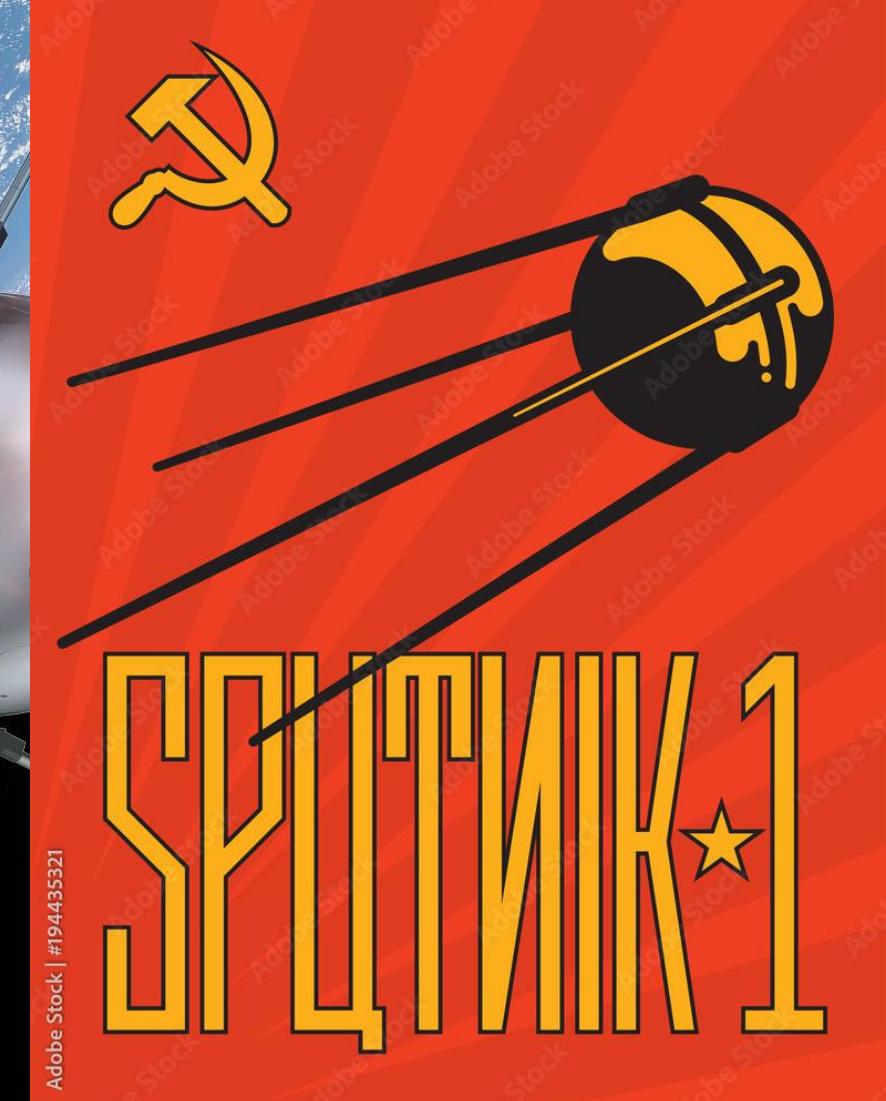
Credit: Ancient Origins



Credit: Classic Trains Magazine



Human agency in modern times



Adobe Stock | #194435321

Human agency in modern times

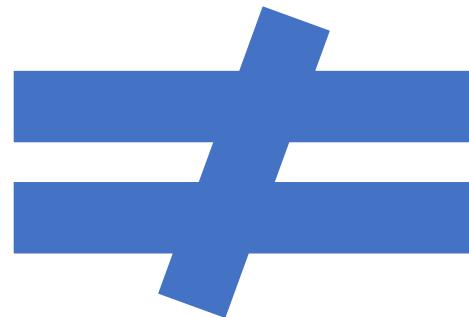
THE HUMAN CONDITION

- In recent decades, the expression 'The Human Condition' has been strongly associated with the political philosopher **Hannah Arendt (1906–1975)**. In her book with the same name (Arendt 1958), she stresses that “[t]he earth is the very quintessence of the human condition”, and yet argues that “the “human artifice of the world separates human existence from all mere animal environment”.
- In this sense, in her view, human reality is distinguished from the reality of any other living being on Earth, despite our shared ecological circumstances.



WHAT IS THE HUMAN CONDITION?

Human
condition



Human
nature

WHAT IS THE HUMAN CONDITION?

Natality

Mortality

Earth

The human
artifice

Labor

Work

Action



The human species' Sputnik moment

- Are we no longer Earth-bound creatures?
- Can we escape the Earth as «the very quintessence of the human condition»?

Reformulating the human condition in light of the environmental crisis

- As **Masatake Shinohara** (2020) has proposed, “what conditions human beings in the most fundamental sense includes not only the world of the human artifact but also the world of earthly things”, and in light of this, “the consideration of the human condition should be fundamentally reformulated” by making the human world “open to the earthly things that vastly expand outside of the human artifice”.



From «Current Human Ecology in the Amazon and beyond: A Multi-Scale Ecosemiotic Approach»

Table 1 Adjacent levels of study in general semiotics and ecosemiotics

Level	General semiotics	Ecosemiotics
Higher adjacent level	Context	Environment
Focal level	Text	Experiential subject
Lower adjacent level	Subtext	Physiological subject

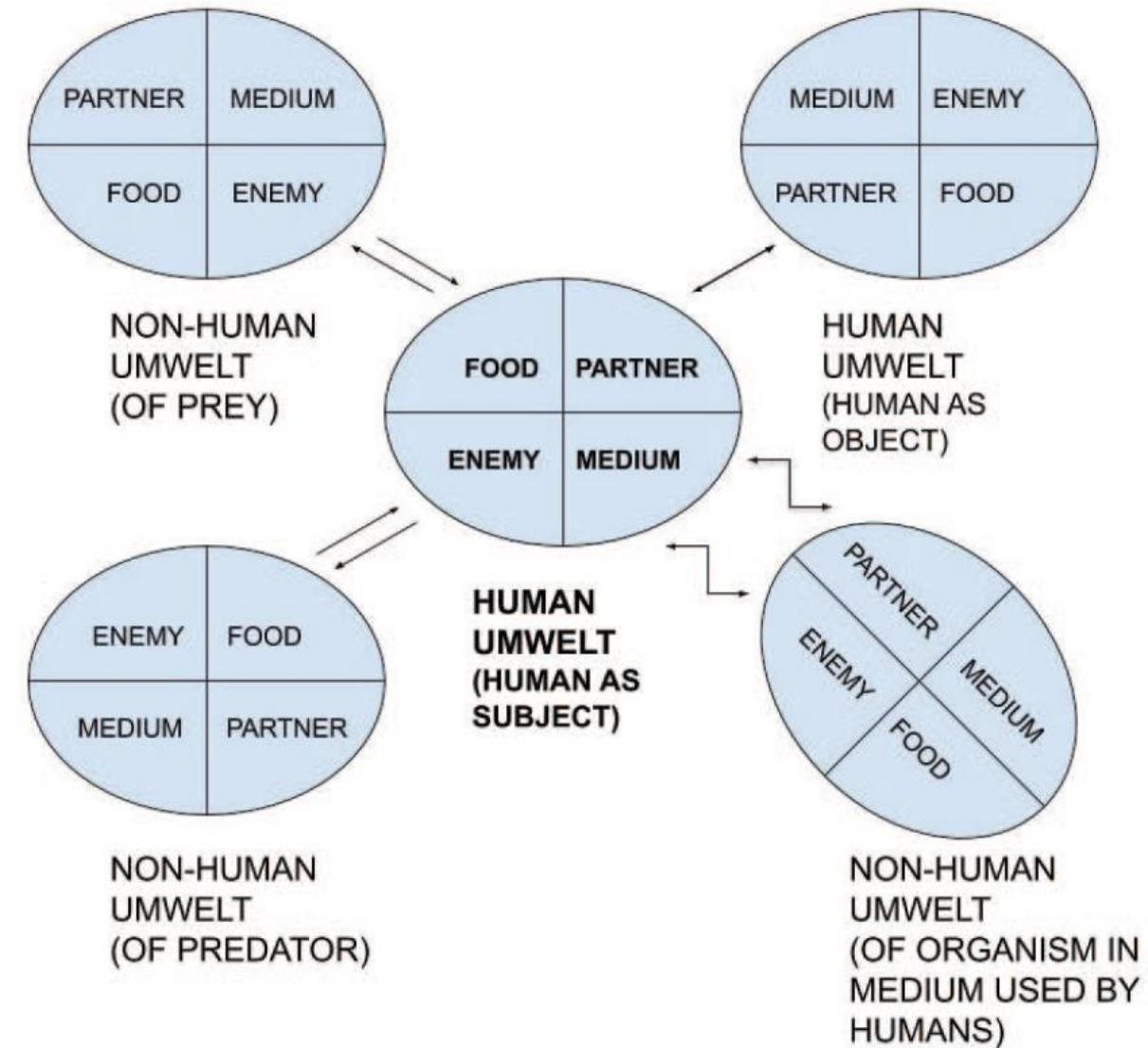
From «Current Human Ecology in the Amazon and beyond: A Multi-Scale Ecosemiotic Approach»

Table 2 Adjacent levels of study in ecosemiotics with regard to related aspect of Umwelt.

Level	Ecosemiotics	Related aspect of Umwelt
Higher adjacent level	Environment	 Umwelt
Focal level	Experiential subject	 Innenwelt
Lower adjacent level	Physiological subject	

Fundamental Umwelt relations in human ecology

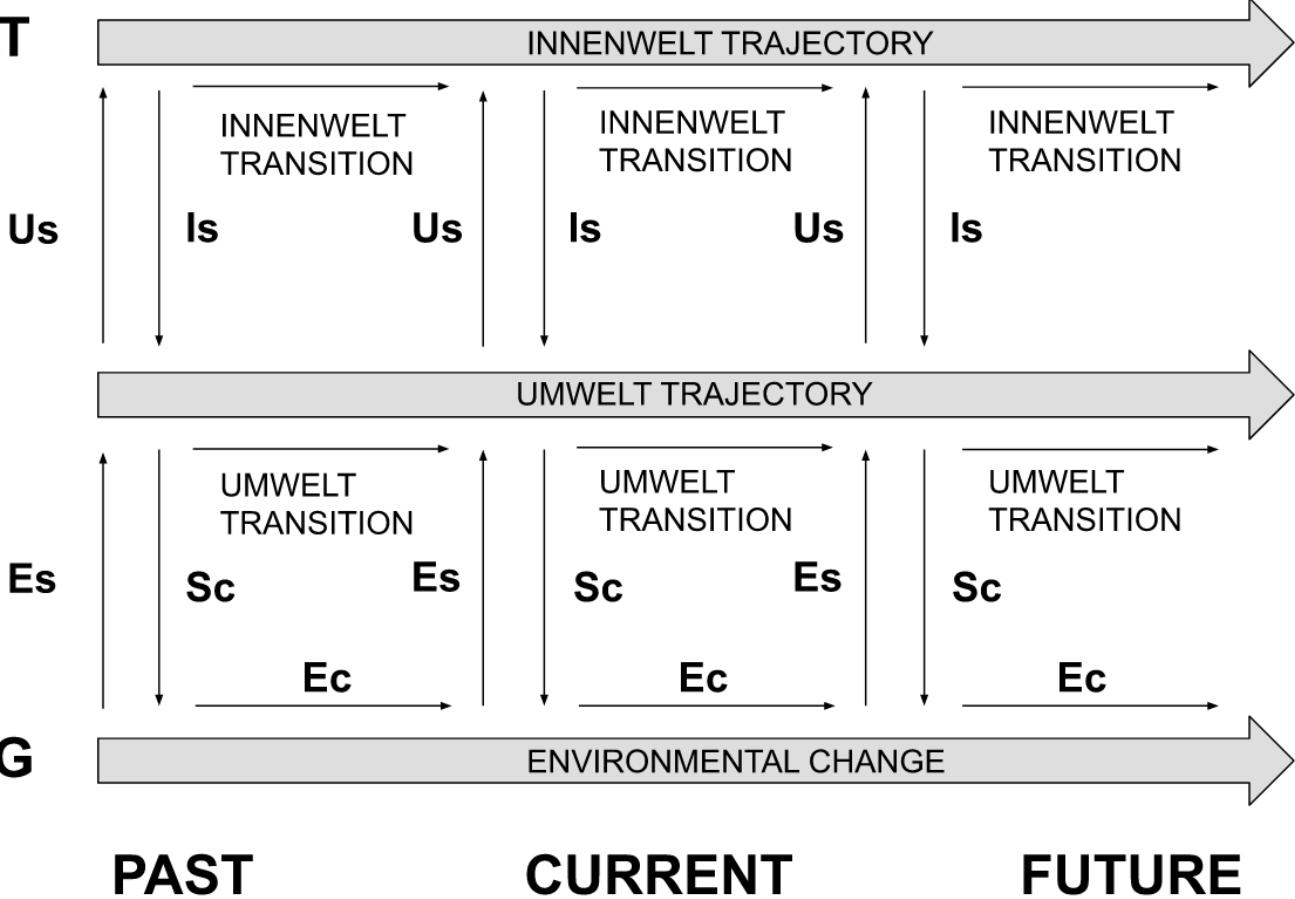
From «Anticipating the societal transformation required to solve the environmental crisis in the 21st century»



- **Semiotic causation**
“cannot be reduced to efficient causality, but is dependent on efficient causality since interpretative activity, even in its most primitive modes, is connected to possible anticipatory action, and action unquestionably depends on efficient causality.” (Hoffmeyer 2015: 10)



INNENWELT



What are we made of?

The chemical elements required for life

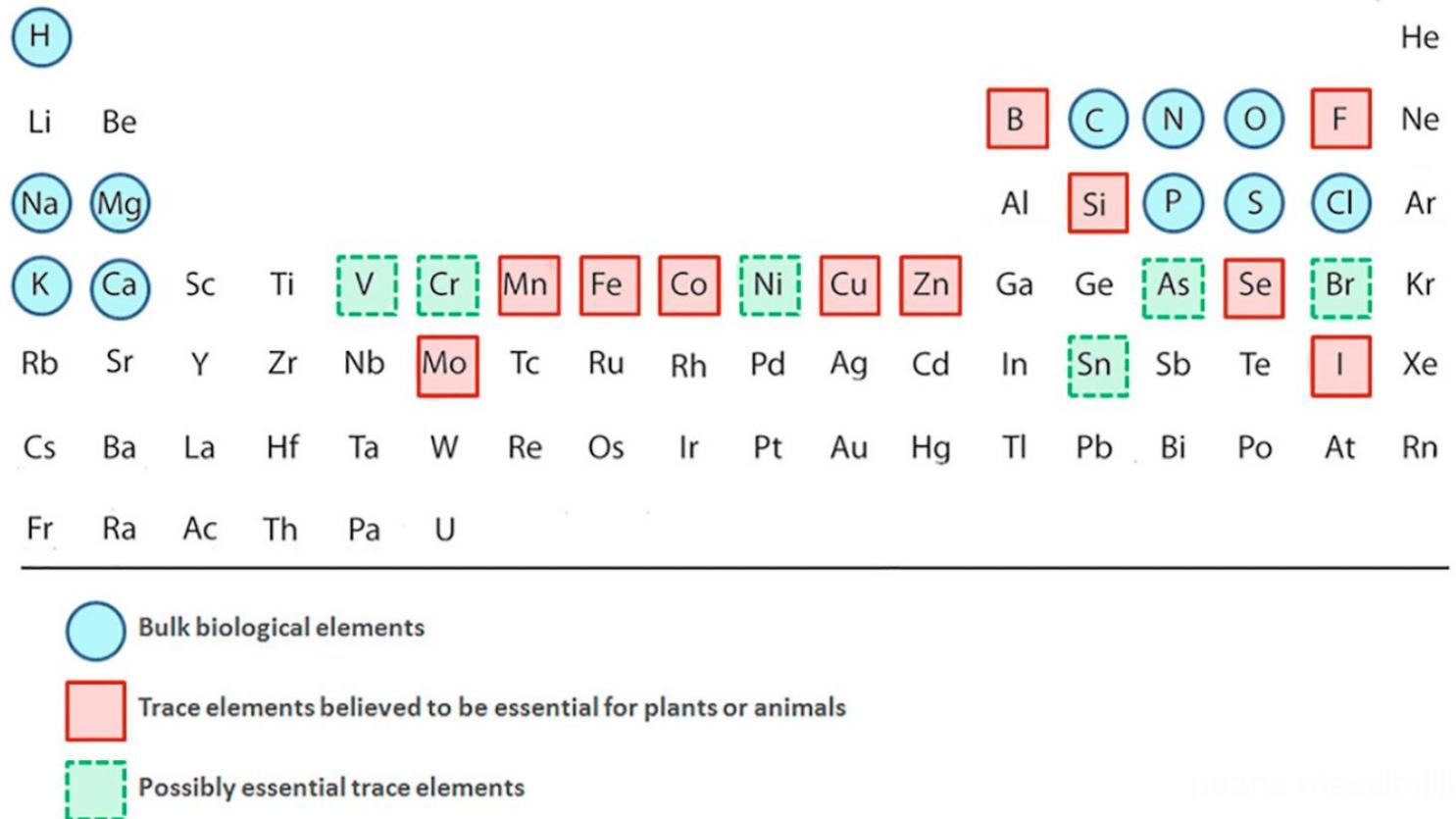
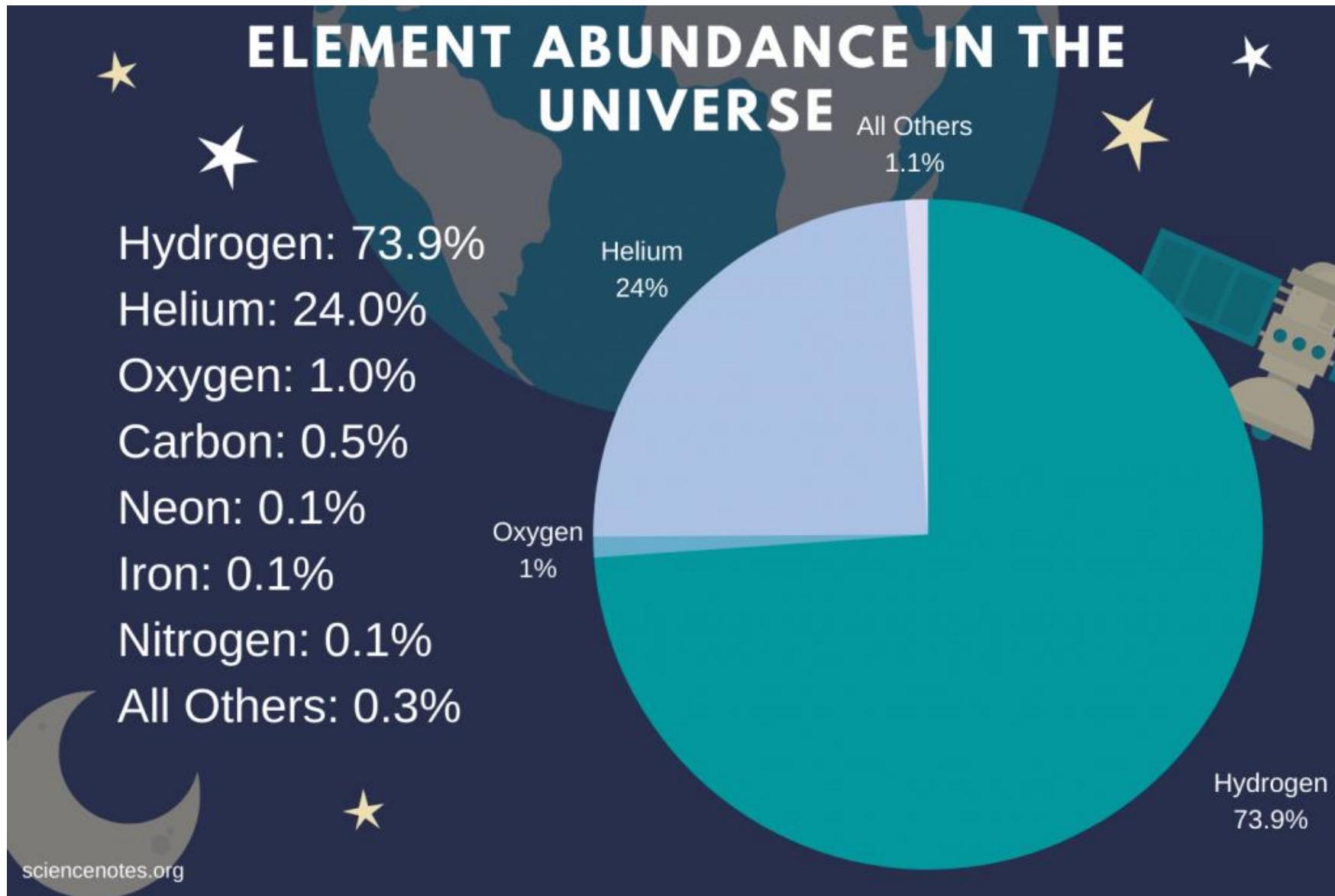
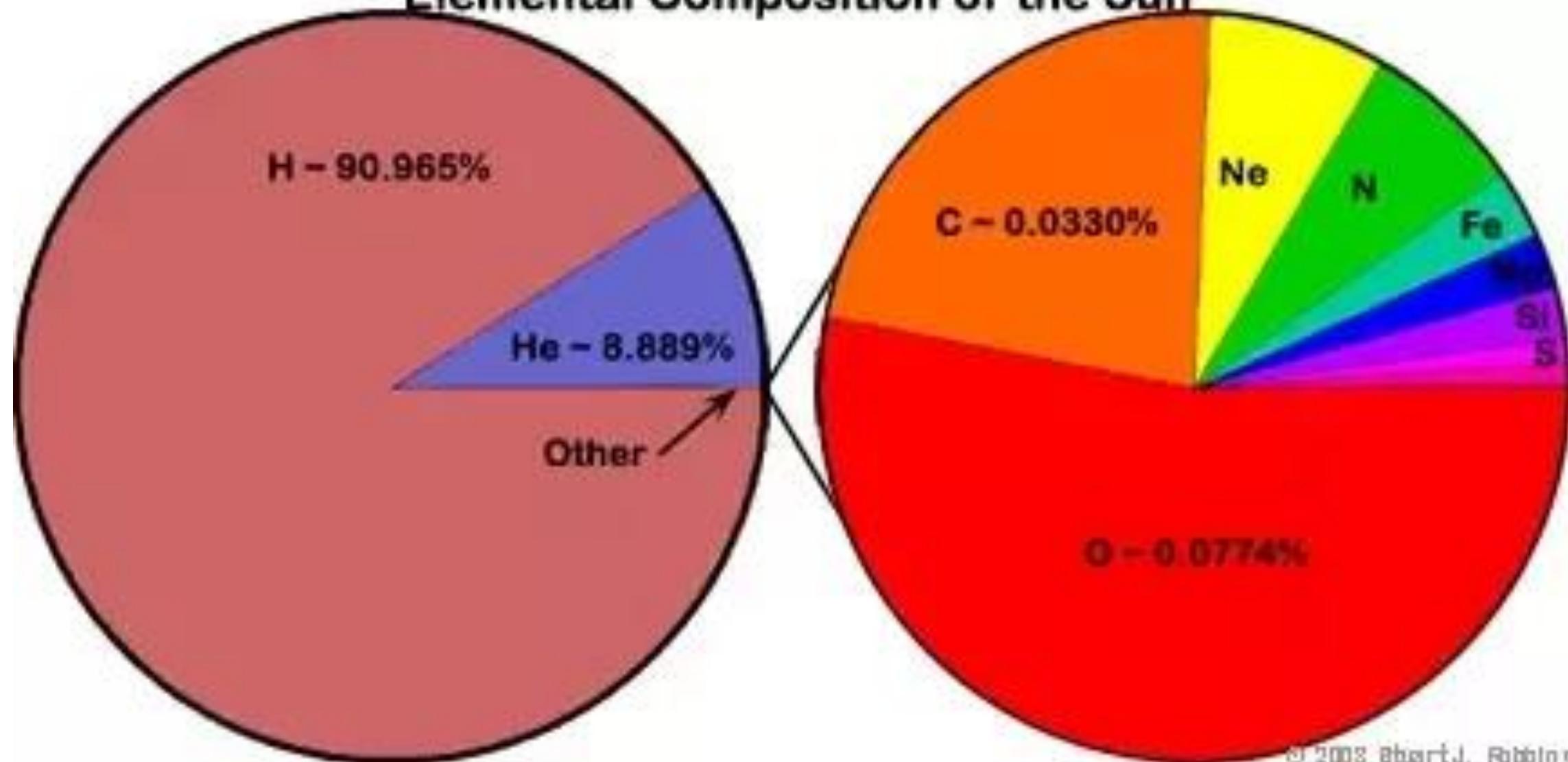


Fig. 1. The periodic table of the chemical elements required for life.

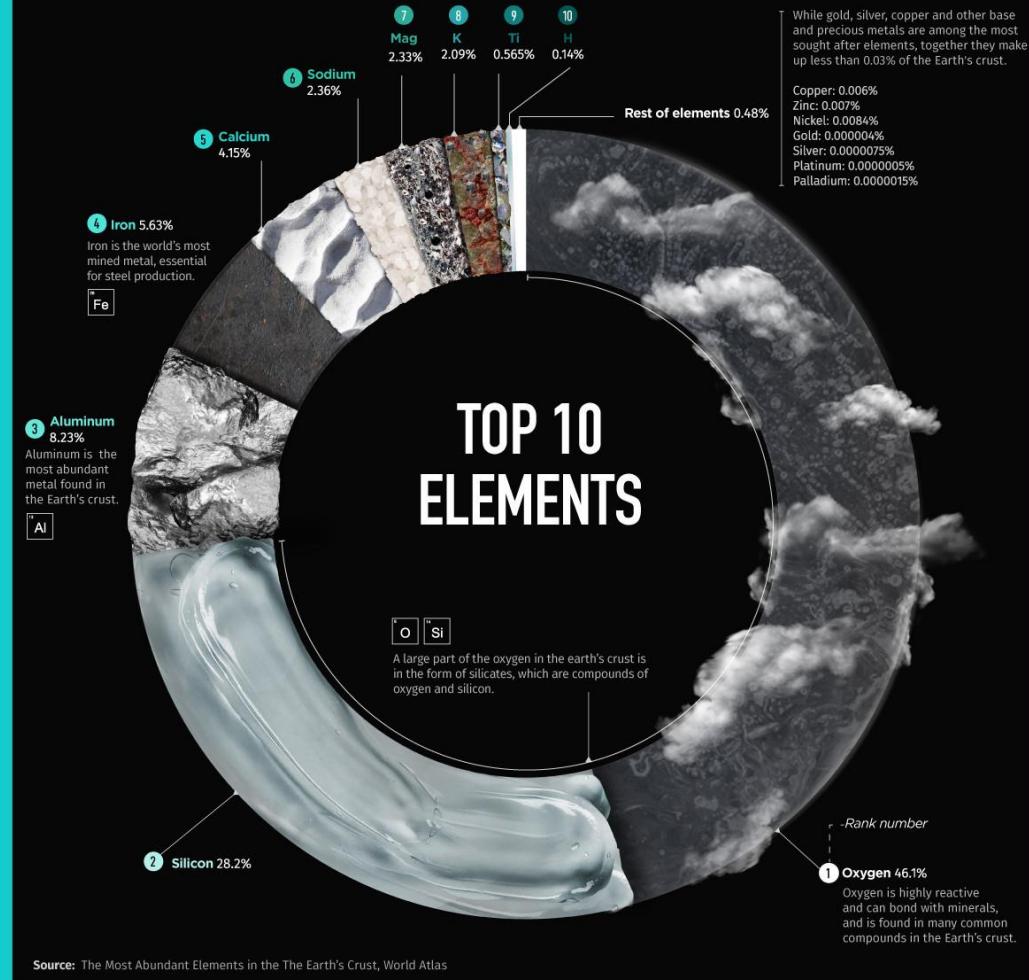


Elemental Composition of the Sun

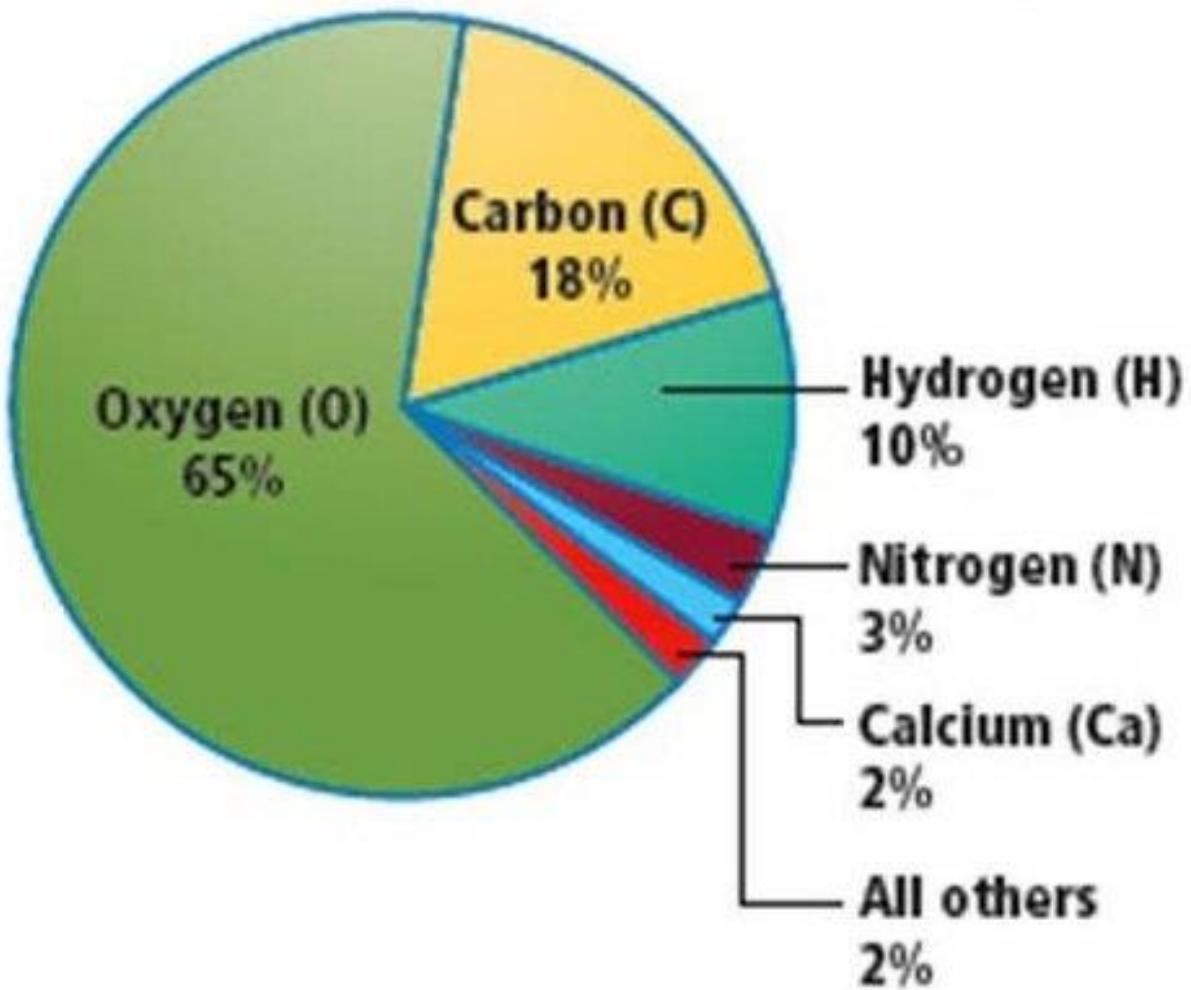


VISUALIZING THE ABUNDANCE OF ELEMENTS IN THE EARTH'S CRUST

The Earth's crust is only 1% of the planet's volume but it contains the materials we use everyday.
Here is the abundance of elements in the Earth's crust by percentage (%).



Percent by Mass of the Elements in the Human Body

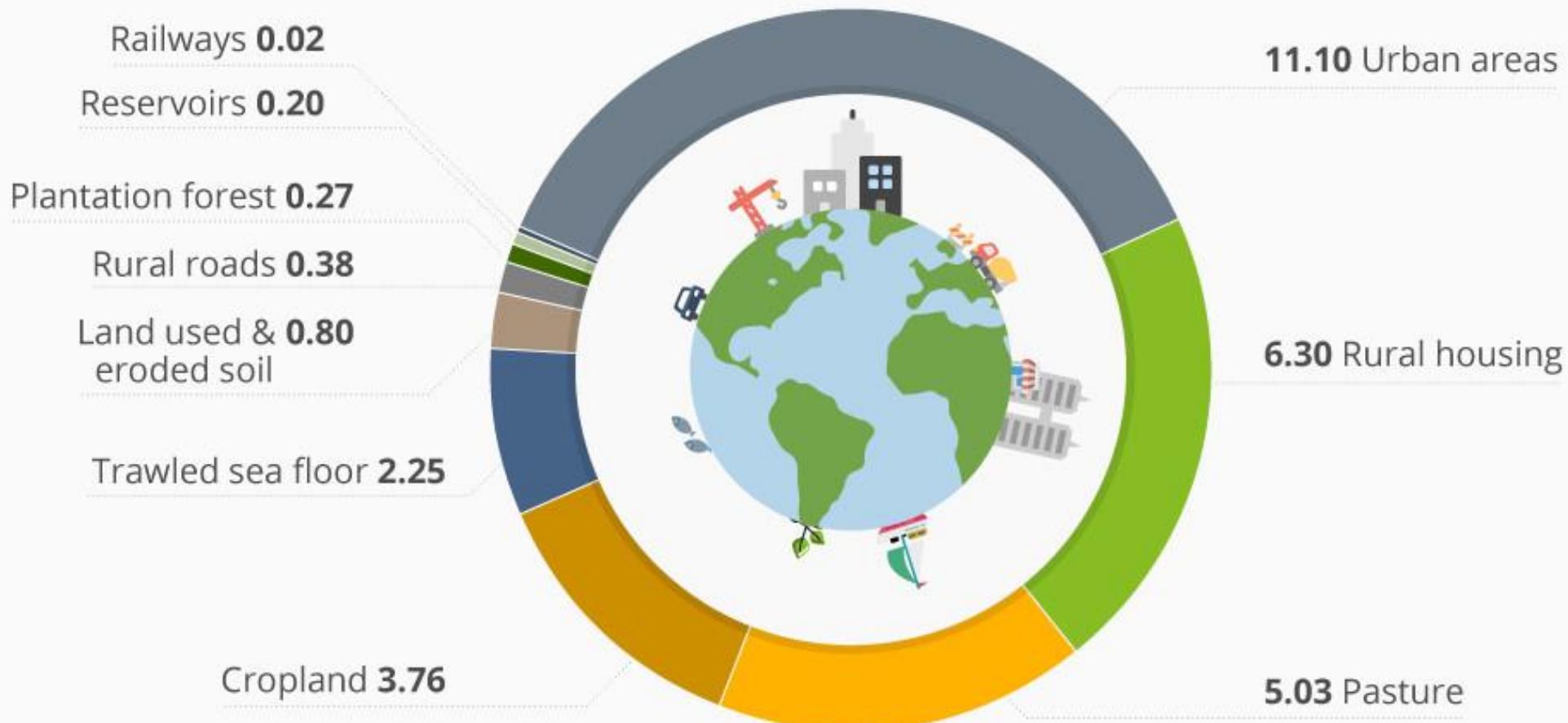


A high-resolution satellite image of the Earth, centered on the Americas. The image shows the continents in green and brown, with white and light blue areas representing clouds and oceans. The curvature of the Earth is visible on the left. The text is overlaid on the upper portion of the image.

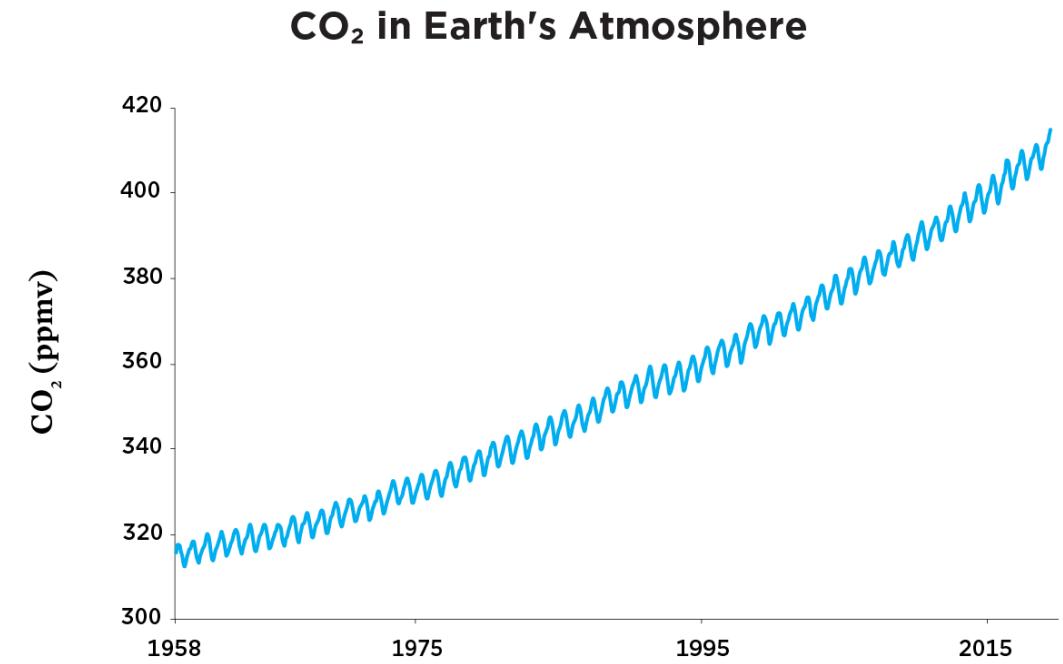
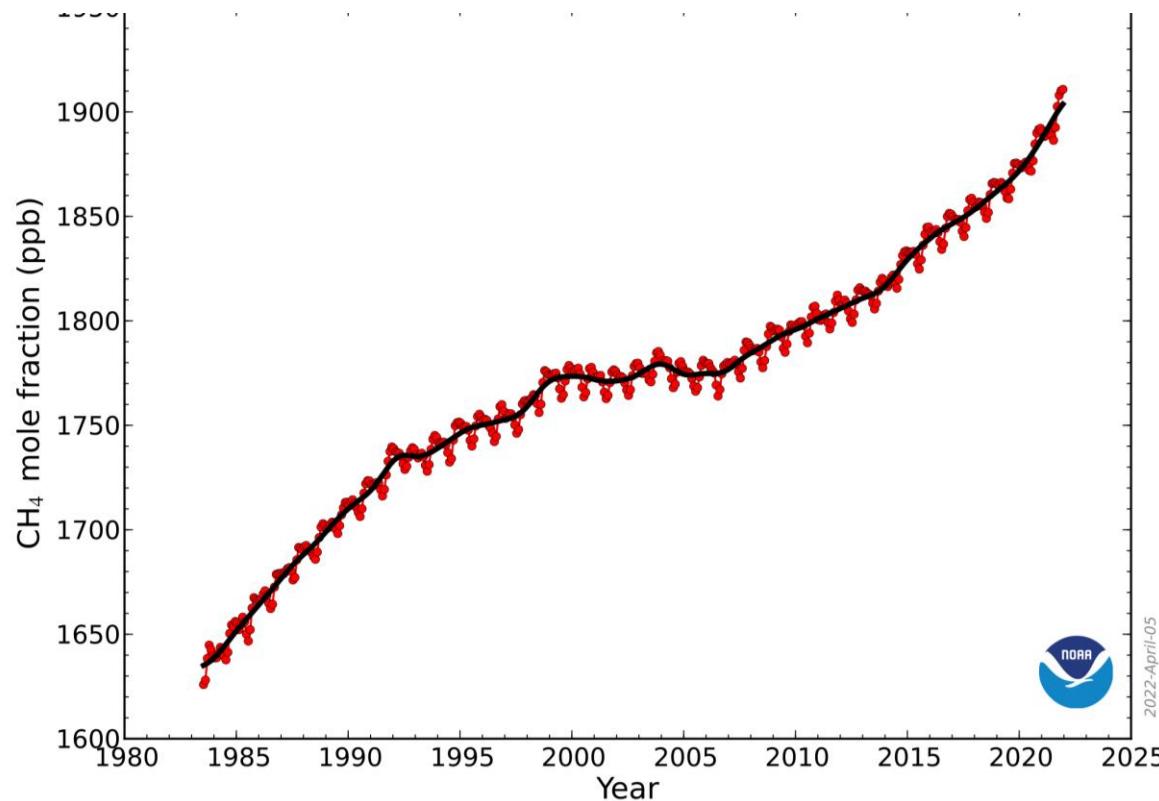
How have humans impacted
life on Earth?

The Weight Of Human Influence On The Earth

Estimated weight of human material output on Earth (in trillion tonnes)



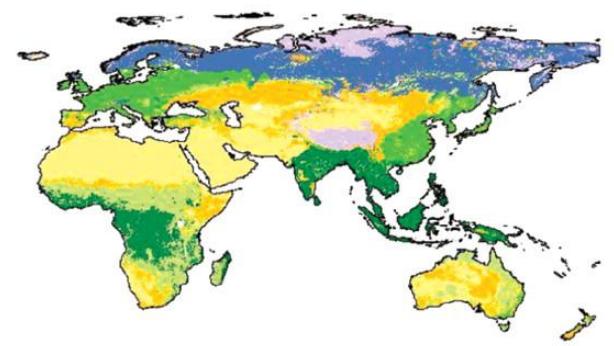
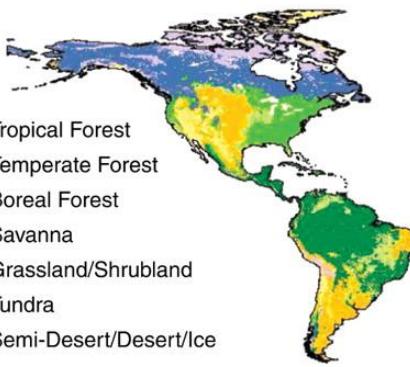
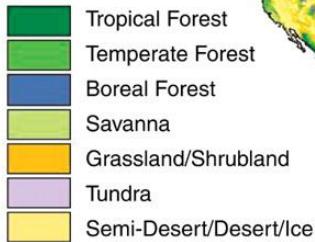
Human-induced changes in the atmosphere



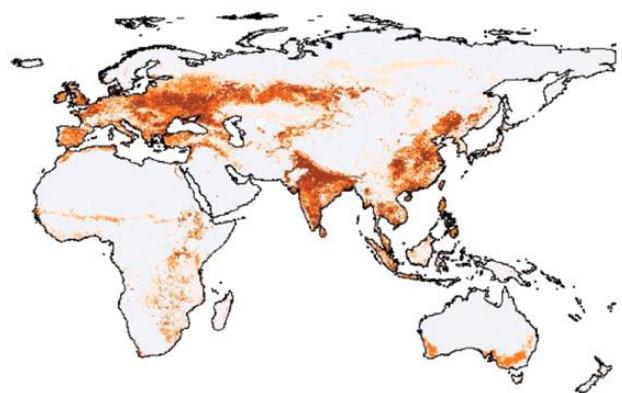
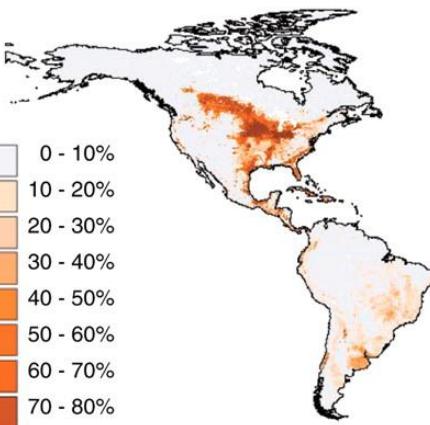
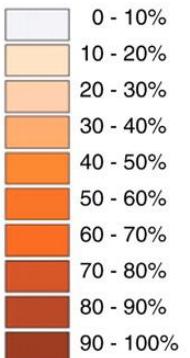
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Data: <http://scrippsco2.ucsd.edu>

Global land use

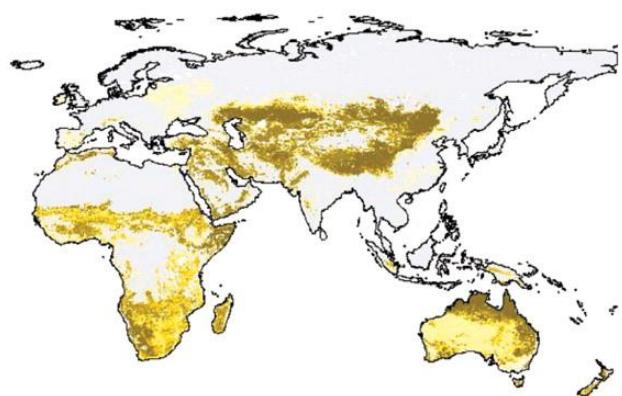
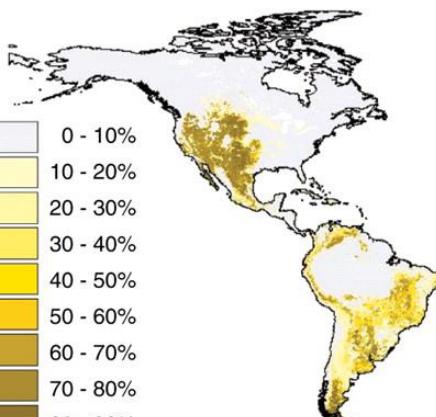
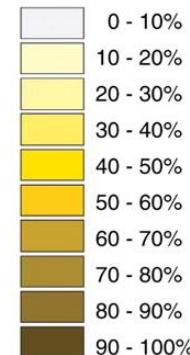
Natural Vegetation



Croplands

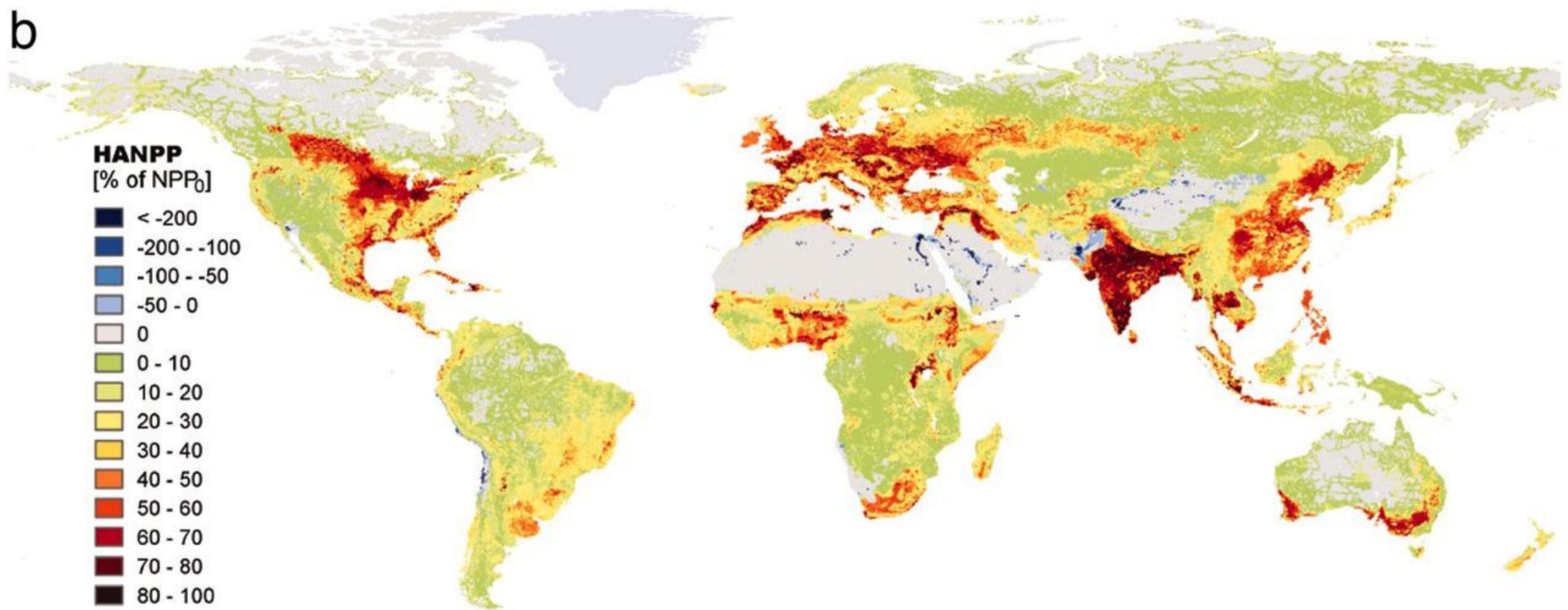


Pastures and Rangelands



Human appropriation of net primary production

b



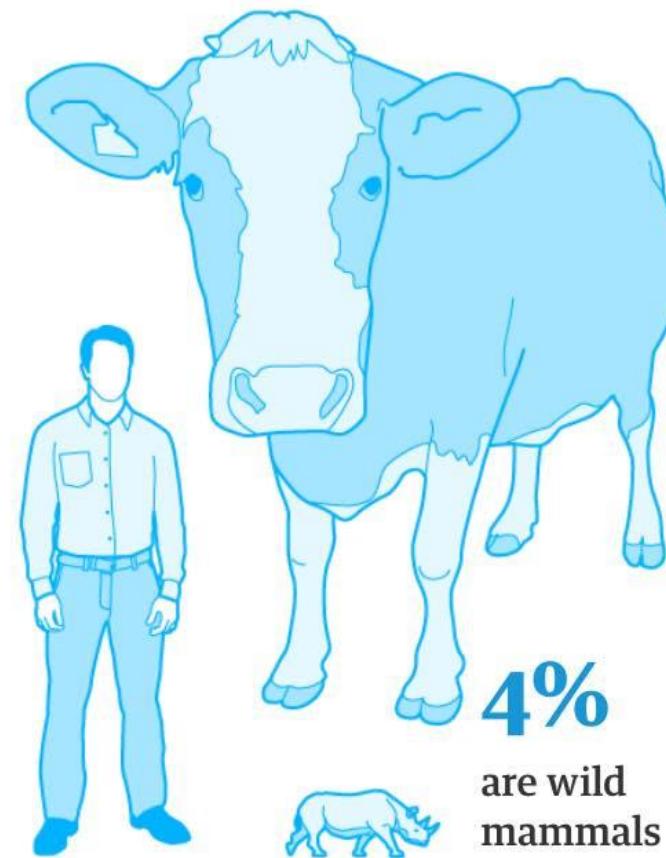
A crisis for nature's semiotic diversity

Figure: From «The biomass distribution on Earth»

Of all the mammals on Earth, 96% are livestock and humans, only 4% are wild mammals

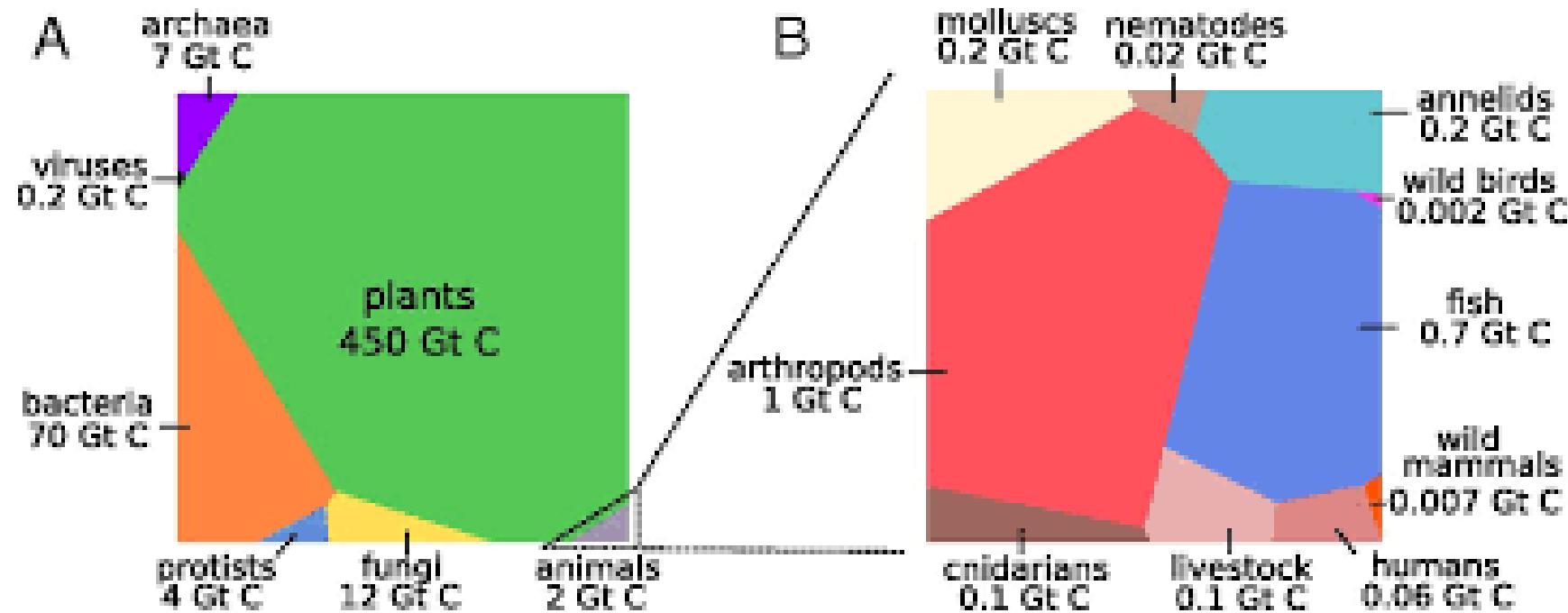
60%
are livestock

36%
are humans



A humbler picture of global biodiversity by biomass

Figure: From «The biomass distribution on Earth»



WHAT IS THE BASIC SITUATION FOR LIFE ON EARTH – INCLUDING: THE HUMAN CONDITION?

Natality

Mortality

Earth

Semiosis

Labor

Alternative Umwelt trajectories for the human species

From «Anticipating the
societal transformation
required to solve the
environmental crisis
in the 21st century»

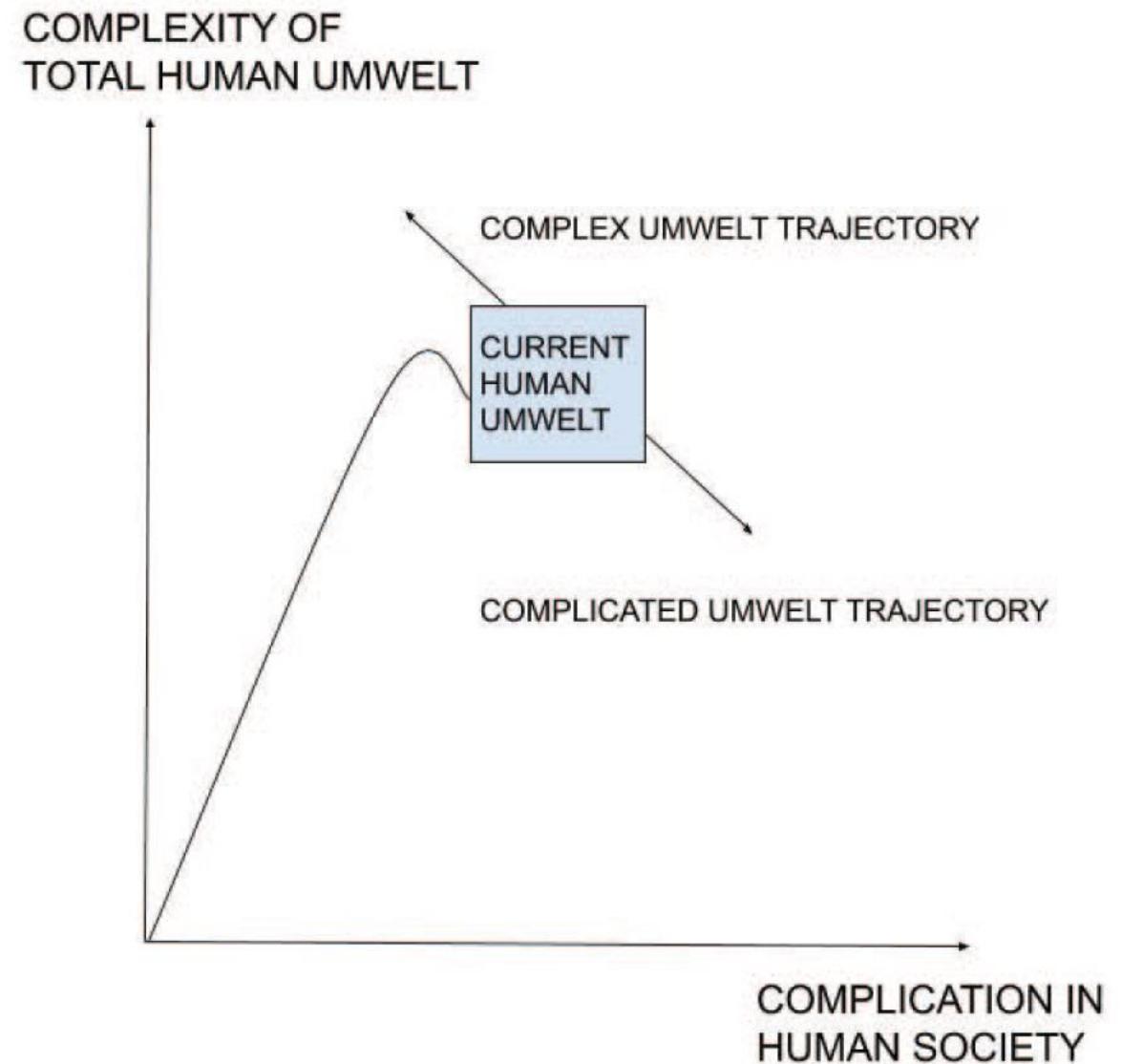


Figure 3. Complex vs. complicated umwelt trajectories.

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