

What is Nothingness?

The hypothesis of the seeming limits.

Adapted from the video *Cosmic Eye* (Obreschkow, 2018)

Check Video first (before reading this presentation) - Submitted in digital media section of the platform.

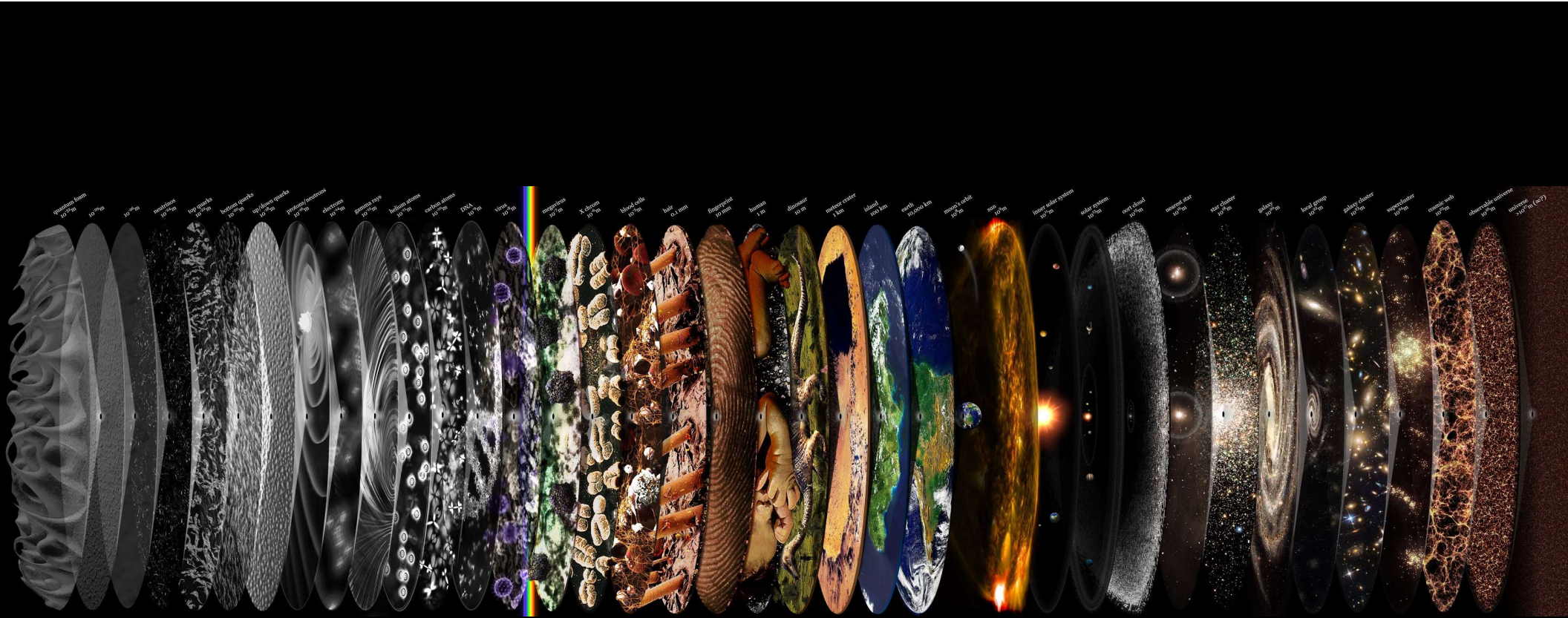
VEED.IO

Cosmic Eye

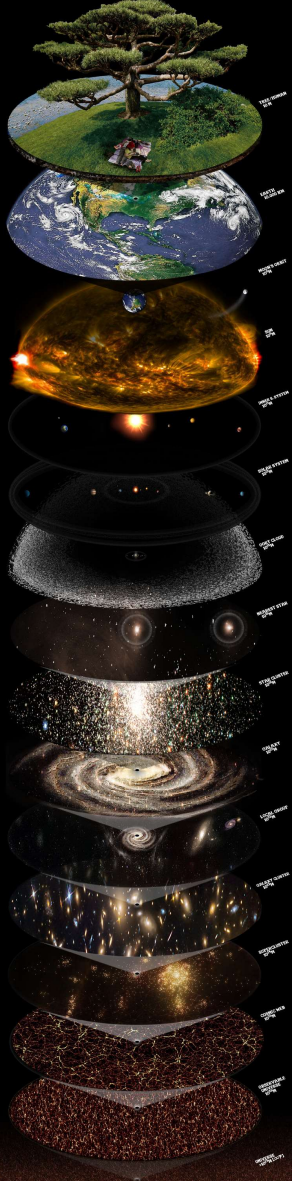
a state-of-the-art view of the universe

version 2.0

Danail Obreschkow



Scales of Nature – Graphs by Pablo Carlos Budassi (2017)



Past

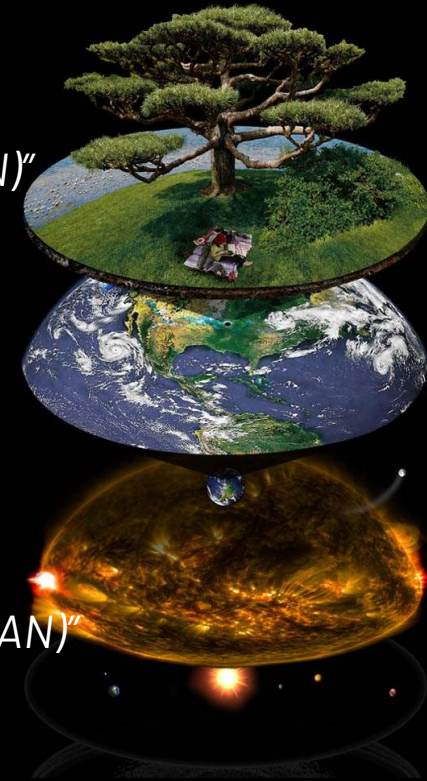
"As it was inside (ATMAN) so it was outside (BRAHMAN)"

Present

"As it is inside (ATMAN) so it is outside (BRAHMAN)"

Future

"As it will be inside (ATMAN) so it will be outside (BRAHMAN)"



10 meters
Average diameter of a tree. The picnic scene is a rendition to the film Powers of Ten (1977)

10^7 m
Diameter of planet Earth (12,742 km)

10^8 m
Moon's orbit (770,000km)

10^9 m
Diameter of the Sun (1,391,400km)

10^{11} m
Diameter of the inner Solar System (600,000,000 km)

*"The distinction between past, present, and future is only a stubbornly persistent illusion... all that there is, is **the present**"*

Albert Einstein (1955)



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PROYECTO **CULTURAL, CIENTÍFICO Y COLECTIVO** DE NACIÓN

Deep Human Ecology

**Habitat as a Network Bridging “Natural” Eco-systems of the Environment
and "Artificial" Techno-systems of the Built Environment**

Daniel F. Marín Vanegas

*Project: ‘Pedagogical model for teaching Habitat Intervention Design in higher
education programs’*

Thirteenth International Conference on The Constructed Environment
Human/Nature: Towards a Reconciliation

17-18 May 2023 in Honolulu, Hawaii

Universidad Nacional de Colombia

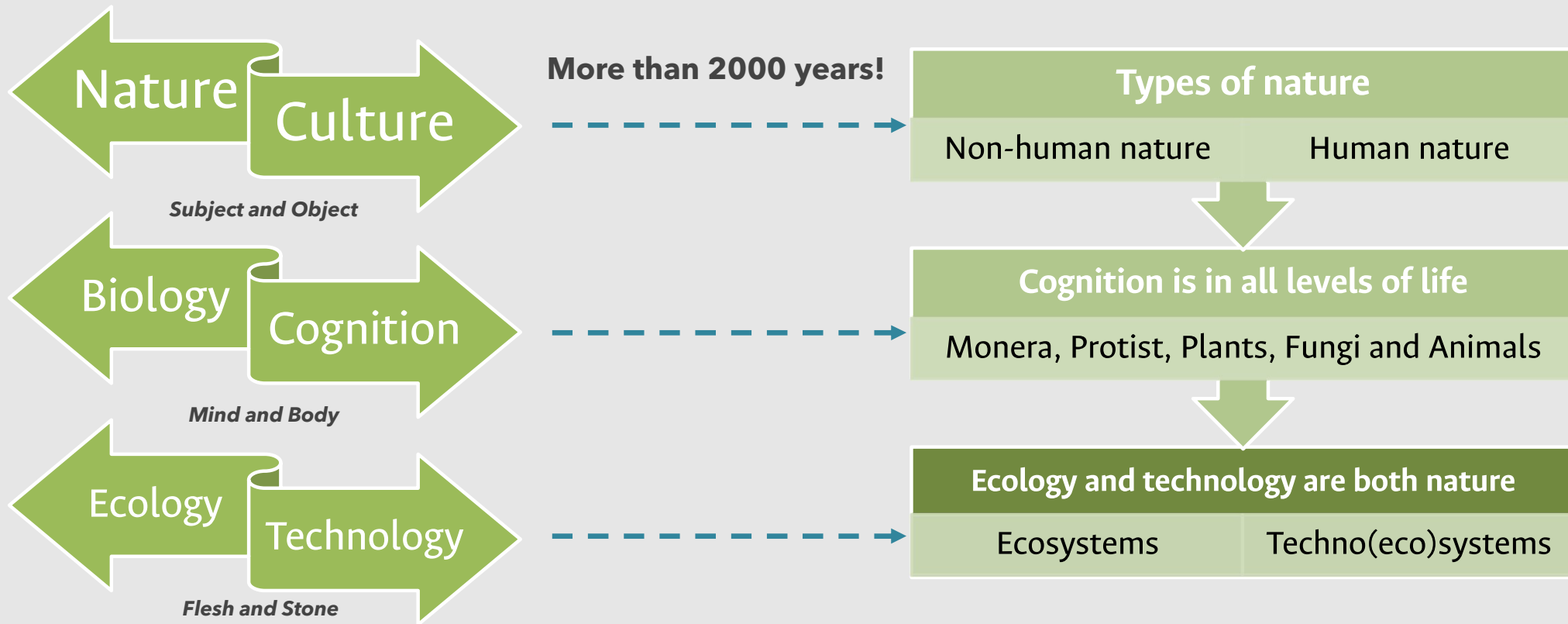
PROYECTO CULTURAL, CIENTÍFICO Y COLECTIVO DE NACIÓN

Presentation Structure

Sections of the presentation	A	B
1. Contextualization (Knowing-What)	A complex problem: the false dichotomy between Nature / Culture TIME IN SPACE: CHRONOLOGIES / HISTORY	The path of the notions of: Habitat and Built or Constructed Environment
2. Conceptualization (Knowing-Why)	The scientific problem of the scale: reality's levels and Orders of Magnitude SPACE IN TIME: SCALES / LEVELS / ORDERS	Deep Human Ecology and its three main ethics: Eco-, Bio- and Anthropos-, centrisms
3. Implementation (Knowing-How)	Levels of Organization of the "Natural" Environment: Eco-Systems SPACE / TIME: THE MULTISCALAR MODEL	Levels of Organization of the "Artificial" Environment: Techno-Systems
Outcomes & Conclusions	Impacts of the model and concluding remarks... To Design for the Community Nature/Culture: two sides of the same coin!	

1. Contextualization: the false dichotomy between Nature / Culture

A connectivity crisis! (historical complex problem)



Diverging realities

Figure 1. Historical false dichotomy and their reconciliation
Elaborated based on Author's paper + (Capra [1] & Odum [2])

Different but converging realities

1. Contextualization: the path of the notion habitat and constructed environment

A two-fold timeline (Habitat vs. Dwelling)

Ecological Habitat
(first as Niche)

Niche: "the place where an organism lives"
Grinnell (1917) [3]
Leopold (1933) [4]



Environmental habitat

"Biological community"
Odum (1971: 46) [6]
"Place of appropriate conditions for an organism, species or animal or plant community to live."
Leopold (1949) [7]
Daubenmire (1968) [8]



Multidimensional habitat

"includes not only the physical space that the organism occupies, but also:" (2005: 311)
Functional roles
Gradients (pH, C°)
Odum (2005) [10]



Built Environment

Interdiscipline
Chynoweth (2006) [12]
Moffat & Kohler (2008) [13]

1900s-1940s

1950s-1970s

1980s-2000s

Human Habitat
1976-2022

Human Housing
(first as Dwelling)

"place of residence, habitation, abode"
Mid-14C [5]



Decent & Adequate Housing

Universal Declaration of Human Rights (1948) [9]



Landscape & Urbanism in housing

Environmental design [11] Thompson & Steiner (1997)



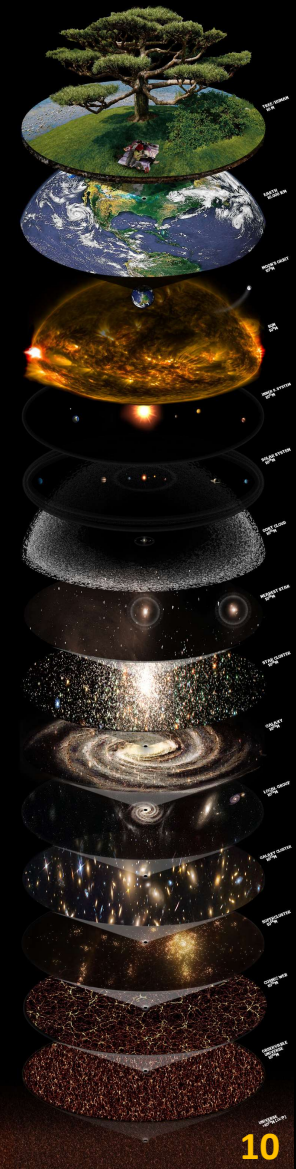
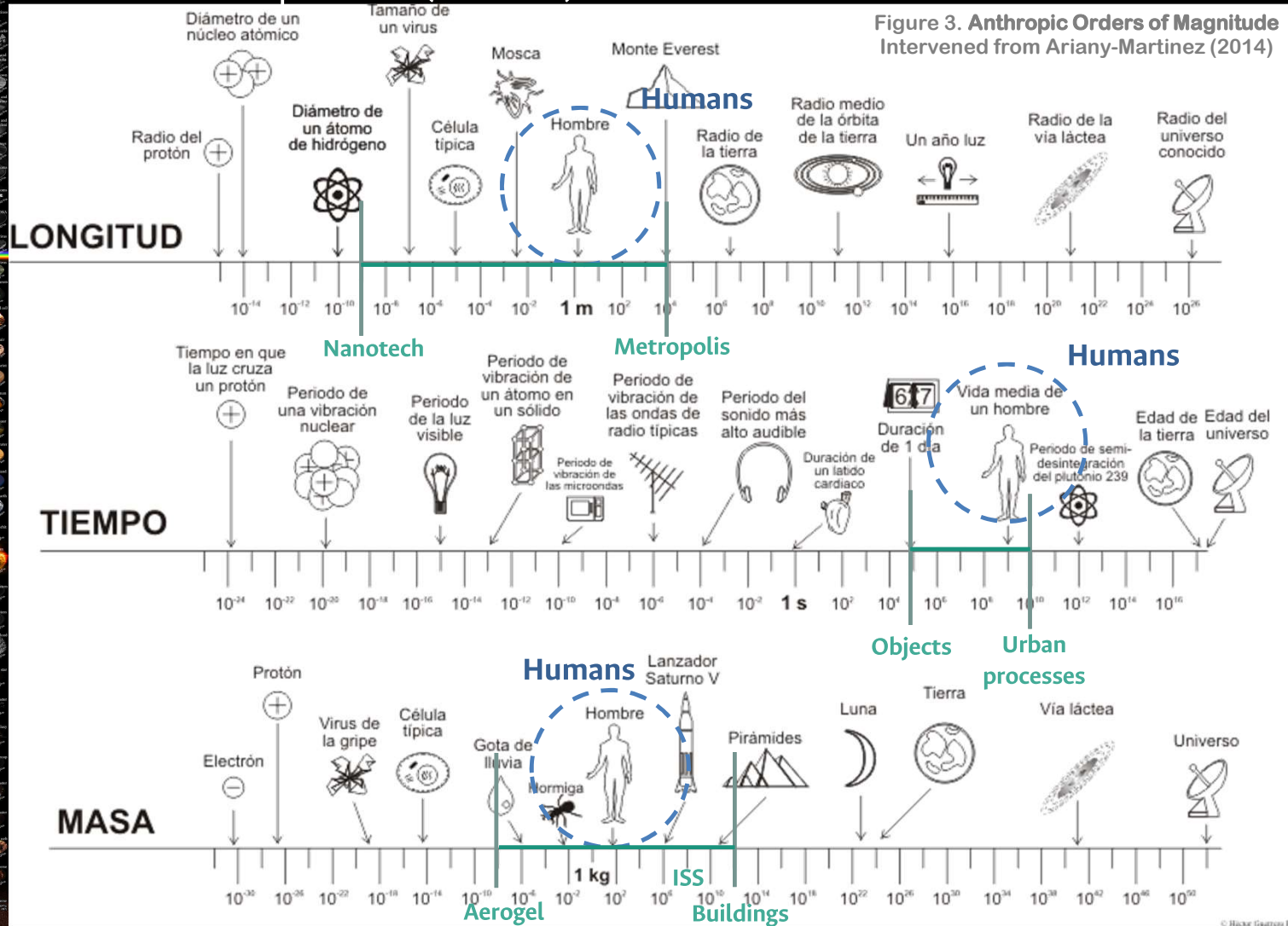
Habitat I, II, III Conferences

Vancouver 1976, Istanbul 1996 and Quito 2016
UN Human Settlement UN-HABITAT [14]

Figure 2. Timeline: Habitat and Built Environment notions. Author's elaboration.

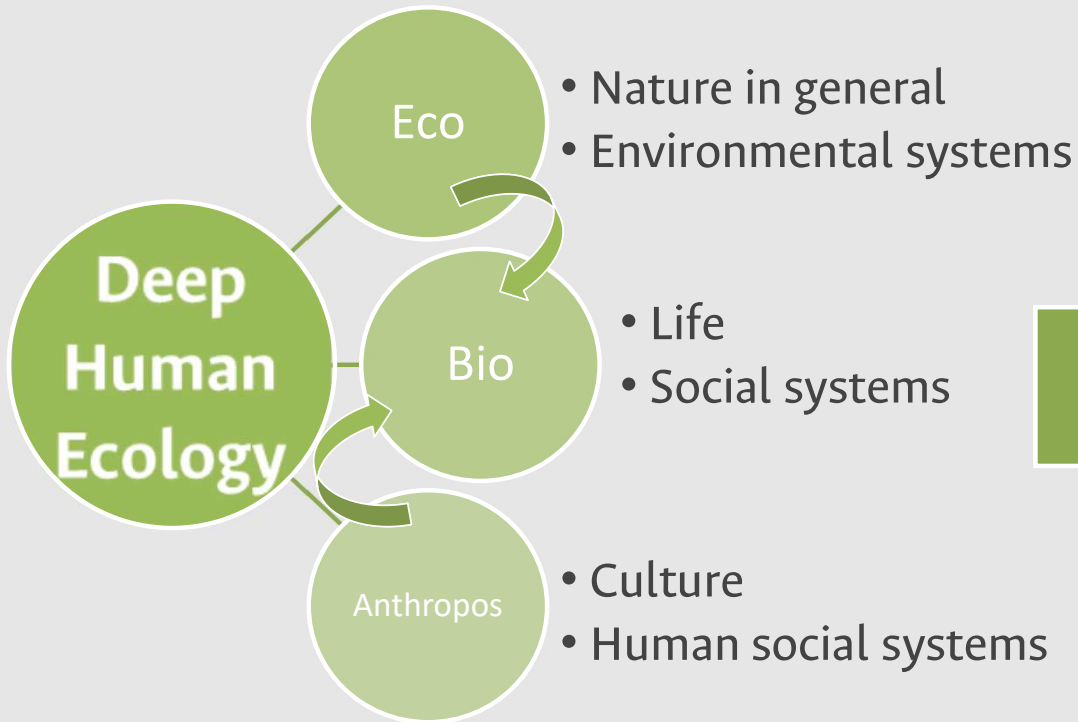
2. Conceptualization: reality's levels and Orders of Magnitude

A scientific problem! (the scale)

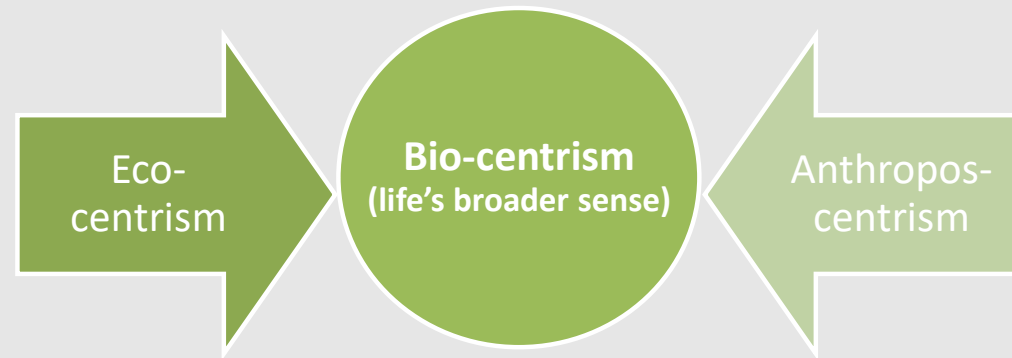


2. Conceptualization: Deep Human Ecology and its three main Ethics

A matter of perspective! (recognizing Points of View)



What we advocate for?



These ethics are not in conflict,
but complimentary

*Cosmo-centrism → becomes Nihilism

Figure 4. The three complementary ethics of Deep Human Ecology
Author's elaboration.

2. Conceptualization: Why Biocentric ethics for a Deep Human Ecology?

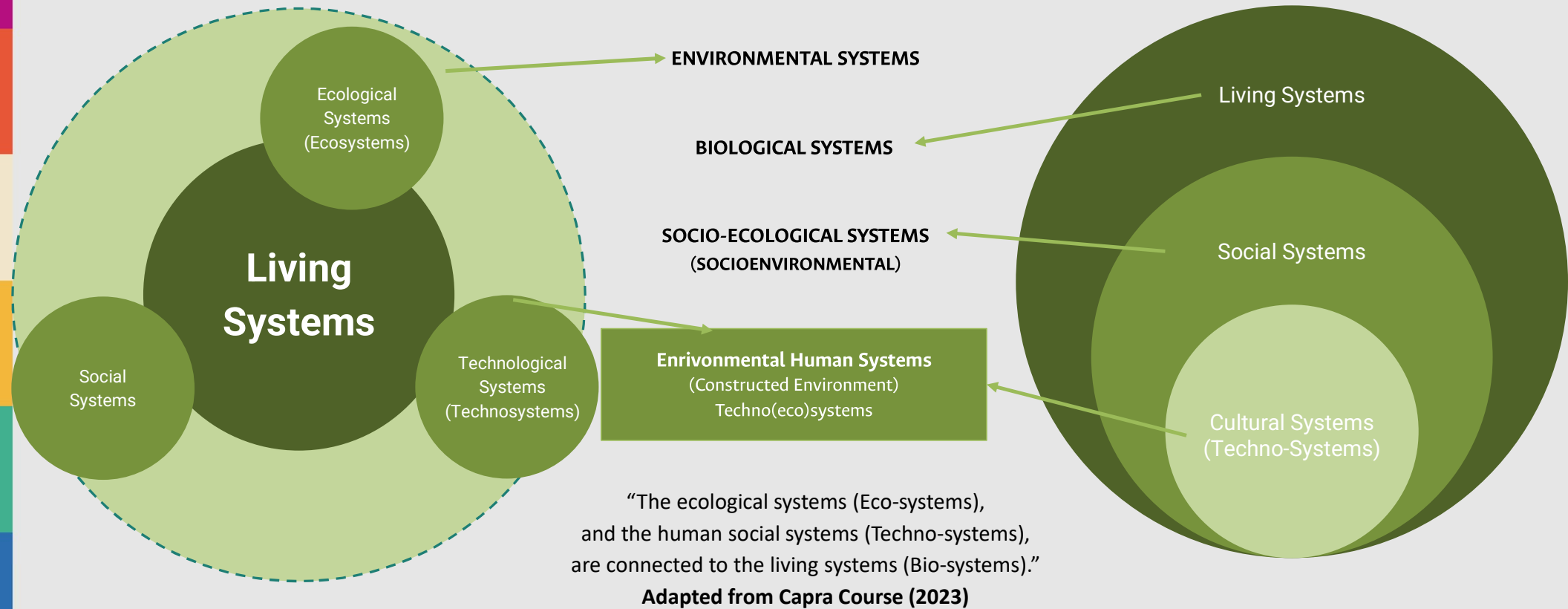


Figure 5. Why Biocentrism? Life encompasses both societies of non-human and human living beings. Author's Elaboration.

Ecosystem services

A notion from the anthropocentric paradigm

Developed from economics by Gretchen C. Daily (1997)*

[15]*Gretchen C. Daily (ed.). 1997. Excerpt from Nature's services: Societal dependence on natural ecosystems, 1–19. Washington, DC: Island Press.

3. Implementation: the “Natural” Environment and its Levels of Organization

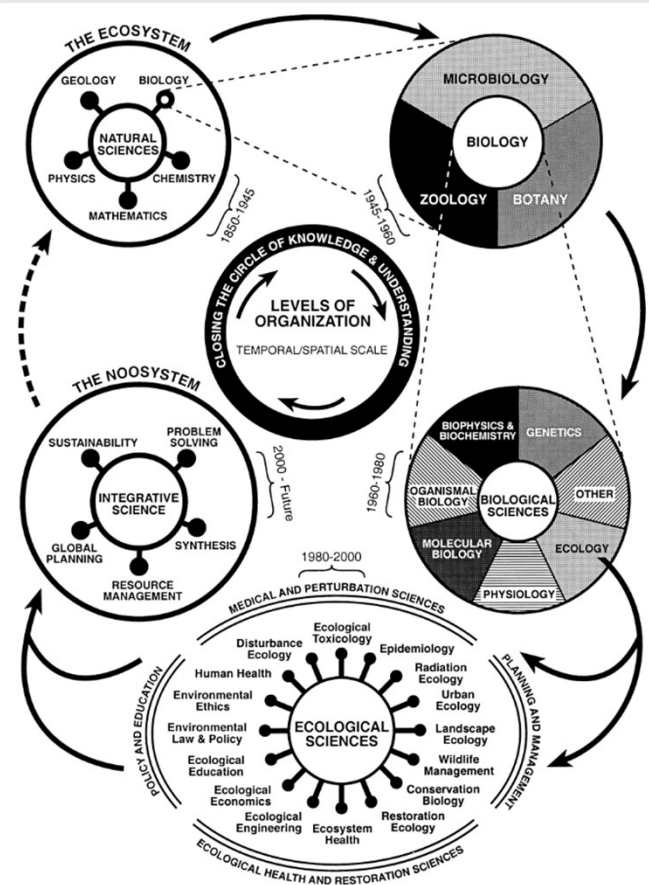


Figure 6. Closing the ecological cycle with the Levels of Organization Concept. Barrett (2001) [16]

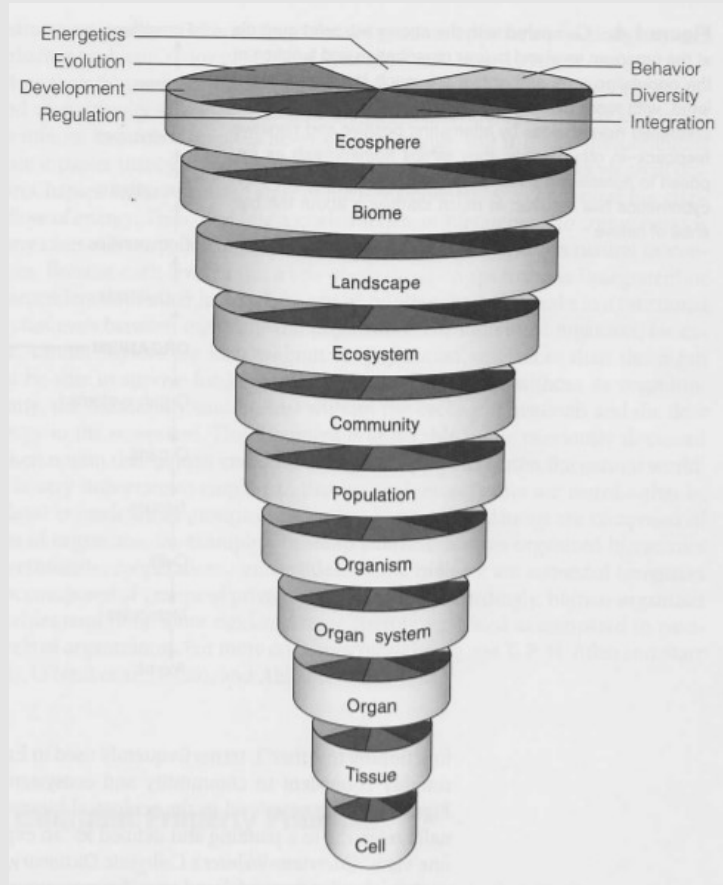


Figure 7. Ecological Levels of Organization Concept. Odum and Barrett (1971) (1997) (2005) [17] [18]

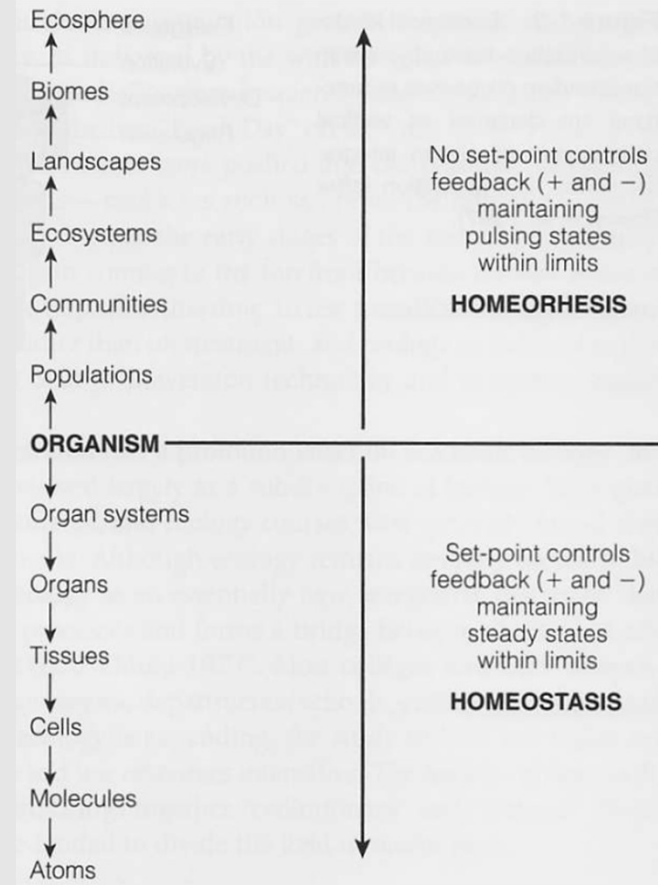


Figure 8. Lower Levels beyond the organism. Odum and Barrett (1971) (2005) [18]

3. Implementation: the “Artificial” Environment and its Levels of Organization

Scales of the Natural Environment (Ecological Systems)

Scales of the Built Environment (Technological Systems)

Eco-Systems

Techno-Systems

And the habitat?

Analogy

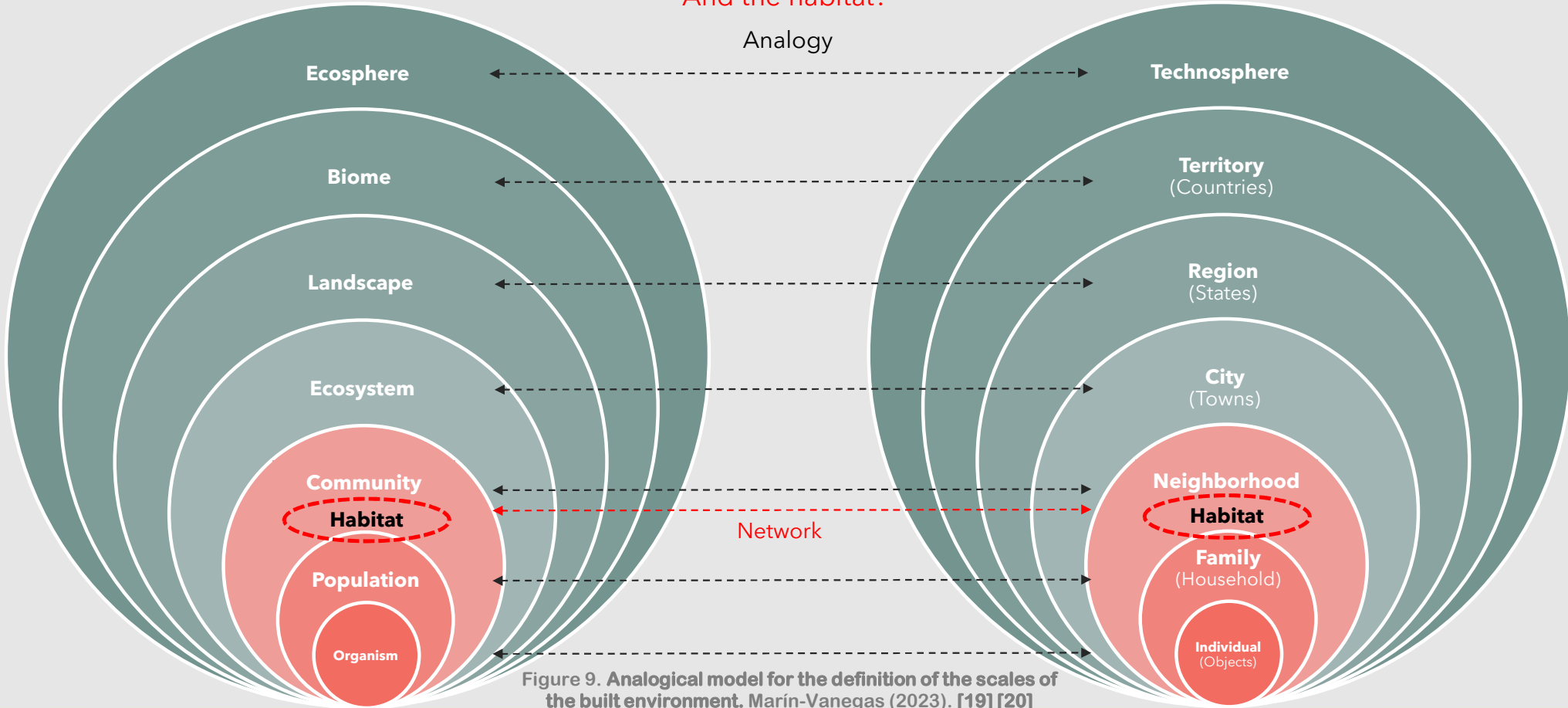


Figure 9. Analogical model for the definition of the scales of the built environment. Marín-Vanegas (2023). [19] [20]

3. Implementation: the temporal scales for the spatial levels of organization

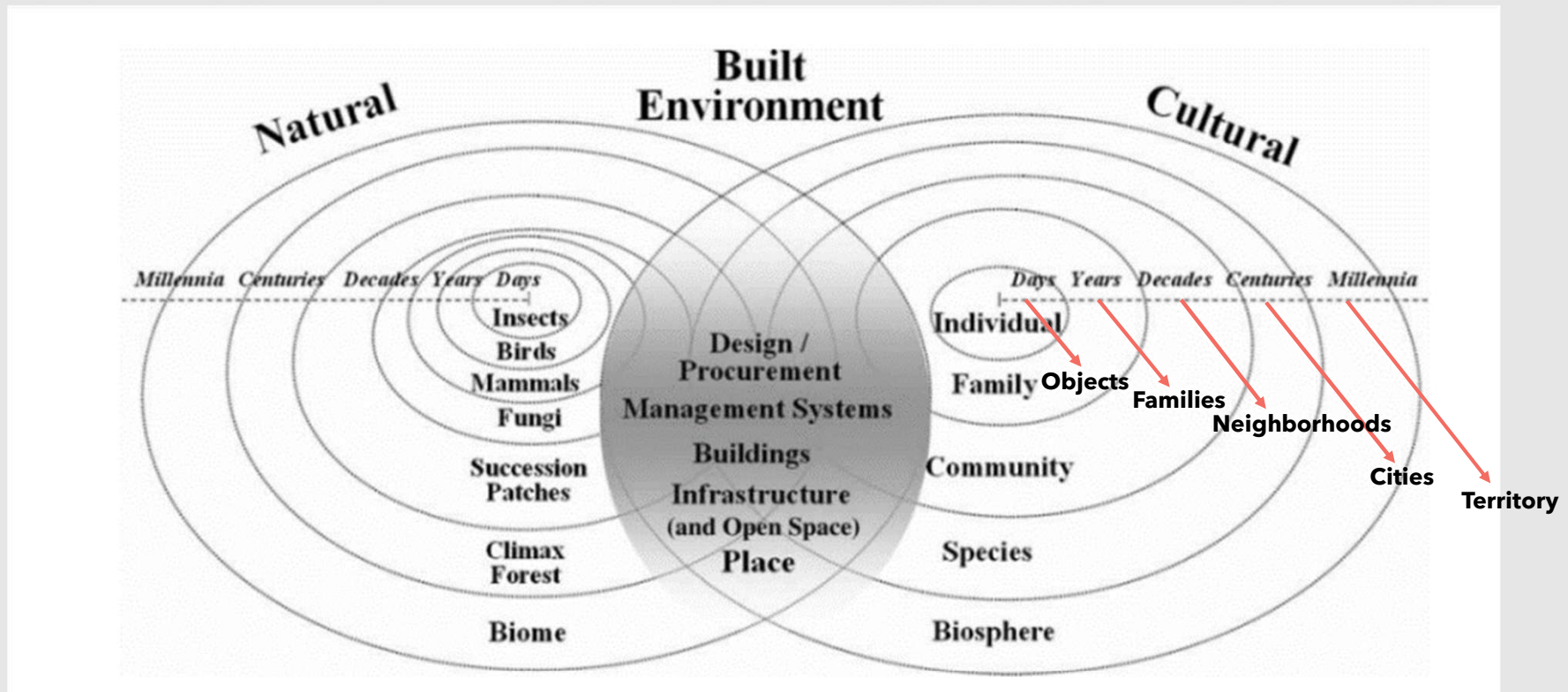


Figure 10. The temporal scales of the built environment.
Adapted from "Time rings" Moffat & Kohler (2008) [13]

Outcomes: impacts of the model for the design of the environment (Natural / Built)

Scales of the Constructed Environment

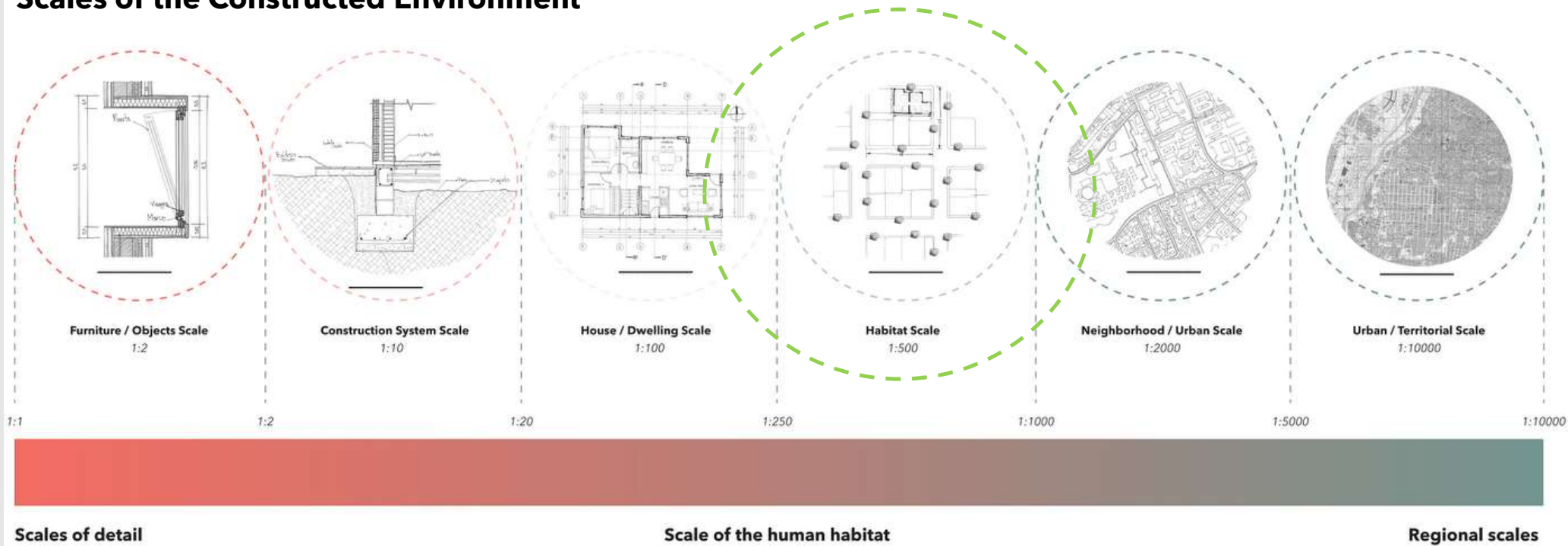


Figure 11. Scales of the built environment with the inclusion of the scale of the habitat. Own elaboration based on international standards for architectural scales. (i.e., CPNAA) Marín-Vanegas (2023) (in press) [21]

Concluding Remarks: «To Design for the Community Nature/Culture»

What communities do we belong to?

“We All Belong To Two Communities:

- 1. The Humanity (The Culture)**
 - 2. The Planet Earth (The Global Habitat)”**
- Fritjof Capra***

*Figure 12. Excerpt based on 2023 Capra Course. [22]

*"The whole is more than the sum of its parts."**

**But the parts are not
less than the whole.**

**Adapted from Aristotle, Metaphysics, Book 8, Section 1045a
(around 350 B.C)*

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References Section 3 (Levels of Organization)

[16] Barrett, G.W. (2001) Closing the Ecological Cycle: The Emergence of Integrative Science. *Ecosystem Health* 7(1): 80-84.

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Odum, E.P. & Barrett, G.W. (2005). *Fundamentals of Ecology*. Fifth Edition. Brooks/Cole Cengage Learning, Belmont.

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References Section “Outcomes and Concluding Remarks”

[21] Marín-Vanegas, D.F. 2023. “The Habitat Intervention Design Process—Part II: A Transdisciplinary Model in the Pedagogy of the Design of the Built Environment.” The International Journal of Design Education (in press) <https://doi.org/10.18848/2325-128X/CGP>

***and following articles on Human Ecology.**

[22] Capra, Fritjof. 2023. The Systems View of Life: Capra Course.

Thank you all!

dfmarinv@unal.edu.co
Builder Architect

Invited Advisor for the Curriculum Reform Committee of the
Curricular Area of Construction and Habitat
Former Bachelor Program Students Representative

Follow our Project in:



*'Pedagogical model for teaching habitat
Intervention Design in higher education programs'*



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