



Eco-ontological Systems of Human Interaction

Rethinking Ecology through Aesthetics

Alexandros Kitriniaris

Architect Engineer - PhD Cand. NTUA
National Technical University of Athens
Athens, Greece
alexandroskitriniaris@gmail.com

Abstract - The object of this paper is to connect ecology with ontology as a complex field of architectural system-based design, and more specifically, as a field worthy of aesthetic consideration. In the post-digital age, globalization seems to be one of the most important consequences for the loss of experience and meaning of space. The modern field of progress is hampered by various ideological stakes relating to the environmental and ecological awareness of place. These preclude the consideration of both the eco-systemic environmental approach, and the potential for cultural and technological evolution that is independent of new material conditions and new design tools that may be perceived as new forms of human perception. The purpose of this paper is to connect ecology and aesthetics, with ontology as an intermediary. The human metabolic mechanism, as well as the perceptual and musculoskeletal systems, is related to a broad network of ecosystemic references. These references comprise the totality of the ecological approach, both of the environment and of the human individual and collective organization. Thus an ecological approach to aesthetics carries new methods of contemplating territories as background of human interaction. Territory is perceived as an energy threshold which corresponds to human interactions forming the principles of the Eco-ontological concept. To this end, comprehension of the territory as an Eco-ontological system refers to the potential positive effect of this research based on systemic concepts with the purpose of improving living experience, especially in densely populated urban centers.

Keywords - Ecology, Aesthetics, Ontology, Energy, Territory.

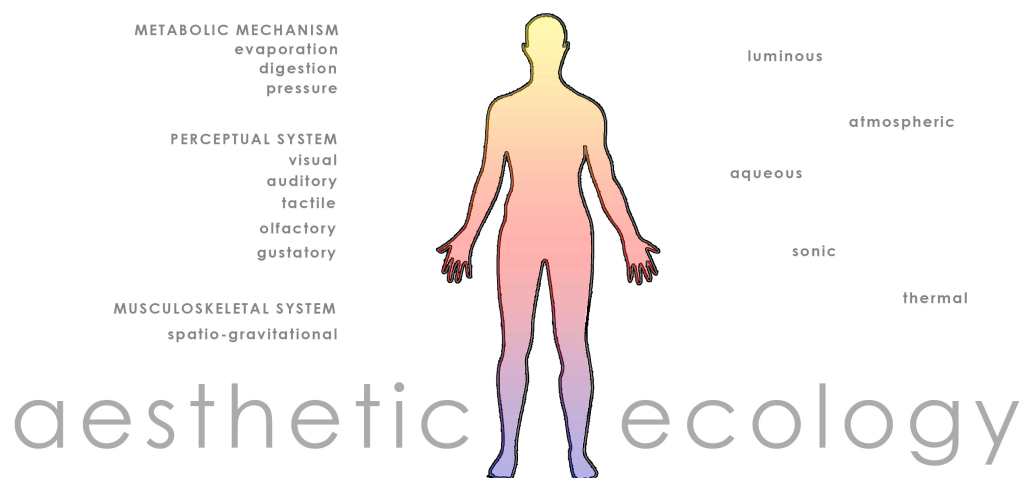


Figure 1. Aesthetic Ecology. (Diagram (c) Alexandros Kitriniaris 2014)

EXPLORING ONTOLOGY AS AN ENERGY SYSTEM

In order to explore ontology, there is an attempt to define the primary meaning of being according to the basic philosophical schema developed by the ancient Greek philosopher Aristotle [1]. Aristotle introduces two supplementary terms for entities: “potentiality” and “actuality.”

For a “potential” entity to become an “actual” entity, it must undergo a variation, so energy must be introduced into the system so that it passes into a state of actualisation. The actualisation of an entity gives it structure and form, and in this way explains the purpose of its existence. Thus, the internal or external energy introduced leads to the actualisation of the “potential” entity, and its transformation into energy. Aristotle names this directed energy “entelechy” [2].

“Entelechy” may be related to the meaning and significance arising from the relationships developing between entities, shaping the rules of correlation between their relative attributes. This means that an entity only acquires meaning when it develops relationships with other entities, and each entity is only able to acquire a specific structure and form via this relationship. Thus the entity exists only as a function of relationships, as it is via these relationships that it acquires its meaning. In general terms, the process of transformation of the entity from the “potential” to the “actual” state can be described as follows:

- ☒ The development of the entity.
- ☒ The growth of relations between entities.
- ☒ The flow of energy inside the system.

REINTERPETING ECOLOGY THROUGH AESTHETICS WITH ONTOLOGY AS AN INTERMIDIARY

In order to clarify the correlation between the ecosystemic approach and the aesthetic approach, it is particularly necessary to reinterpret the three ecological scales via the notion of “ecosophy” as described by the French philosopher Felix Guattari [2]. “Ecosophy” comprises the intersection of the three varieties of ecology, which are on the one hand distinct categories due to the different practices they follow and the different scale of relationships to which they refer. Despite this they appear to emanate together in a constant process that enhances subjectivity. According to Felix Guattari, subjectivity is produced at the point of intersection of the three spectra of “ecosophy”, composing a broader network of subjective, collective, and environmental references. More specifically, “mental ecology” refers to the composition of the human subject, “social ecology” shifts towards the relationship of an individual to the rest of the social group, while “environmental ecology” comprises a process of constant negotiation determined by the relationship of the individual to the totality of ecosystems. Hence at this point the ontological approach may be interconnected with the ecological perspective as follows:

- ☒ Mental ecology and the development of the entity.
- ☒ Social ecology and the growth of relations between entities.
- ☒ Environmental ecology and the flow of energy inside the system.

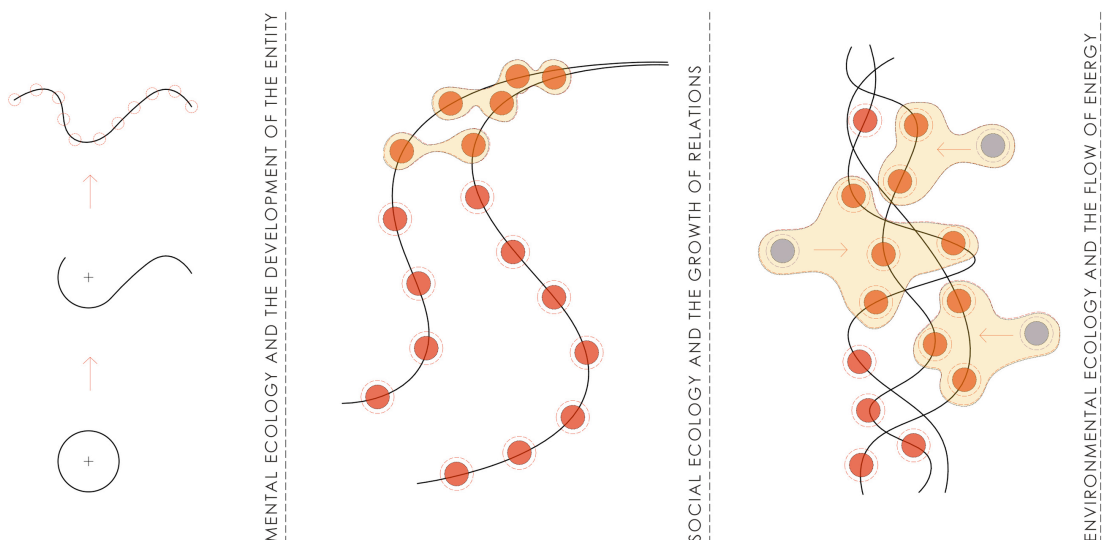


Figure 2.

Diagram of the Eco-ontological concept. (Diagram (c) Alexandros Kitriniaris 2014)

TERRITORIES AS ECO-ONTOLOGICAL SYSTEMS OF HUMAN INTERACTION

A. Introducing Energy behaviours to Territories

The management of energy within ecosystems is related to the spatial layout's energy variations, actualised both on the scale of human perception and of the broader social whole, as well as on an environmental scale [4]. Consequently, although the geometrical dimensions of a space play a significant part in energy management, the dimensions relating to energy systems call for a different design approach [5].

The definition of energy behavior refers to the totality of perceptive levels which allow an energy system to constantly reconstruct its structure [6]. The intention is to describe the variable identity of a territory as a constant process of negotiation, as the identity does not fall within predefined spatial boundaries, but within event emergence fields with variable energy. Consequently a territory is defined as a field of variable energy which is produced by the actual process of human movement which is capable of organising potential spatial fields.

B. The Energy Flow between Territories and Entities

The gradations of the boundaries between atmospheric changes eventually constitute a variable spatial field defined by the alternation of energy flows within each territory [7]. The territory constitutes the background according to which the gradations of the energy variation are articulated, simultaneously comprising an example of the way in which the members of a society delimit their space in order to organise collective gatherings.

In this way the definition of territory is not informed by predefined spatial references, but is constituted via variable energy behaviours which function as receptors for the development of collective activity. In this case the boundary constitutes an area of thermodynamic energy exchange occurring between different energy fields [8]. Therefore the descriptions of the boundary as a field of energy exchange between a given territory and its neighbour could be connected to the notion of a threshold, defining an area of ambiguity. This is to say, an area in which the boundary is an active field of negotiation which escapes the strictly predefined spatial territories of earlier design references that manage strictly predefined spatial boundaries. In this case the territory activates the potential behaviours of the space as it composes the terms of ownership of territories via variable spatial fields, that is, fields relating to the changes of energy in the interior of the ecosystem [9].

C. The Emergence of the Eco-ontological Model

The stable spatial conditions of the built environment appear to predefine human movement in space, thus hindering the development of communicative links with otherness. Conversely, variable spatial boundaries are impressed on perception via the energy variance, finally composing a new topography that is related both to human subjectivity and collectivity, as well as with the environment via the feedback mechanism [10].

Nevertheless, recording energy does not only entail dimensions referring to the total structure of the spatial territory, but is far more relevant to the dimensions relating to the human body. Physical movement in space composes new ecological approaches relating to the intention of residing in ontological territories, as the space is perceived as a sensory artefact which allows humans to compose their space by strengthening the sense of collectivity via the development of new communicative territories with the rest of the social group. Therefore the relationships between people constantly alter the boundaries of space, resulting in the development of a mutual interrelationship between human groups and spatial territories.

Therefore in this case a space does not constitute a smooth and stable envelope surrounding the entities, but a fluctuating and fluid field which attempts to interconnect the human experience. The multiple levels of interpretation of territories relate to thermal, aqueous, sonic and luminous layers. This is to say, layers relating to the human metabolism mechanism, the perceptual systems as well as the musculoskeletal system. Thus the point of departure for architectural design is reversed as the sensory relationships being developed diffuse the territorial boundaries, thus constantly composing new Eco-ontological references.

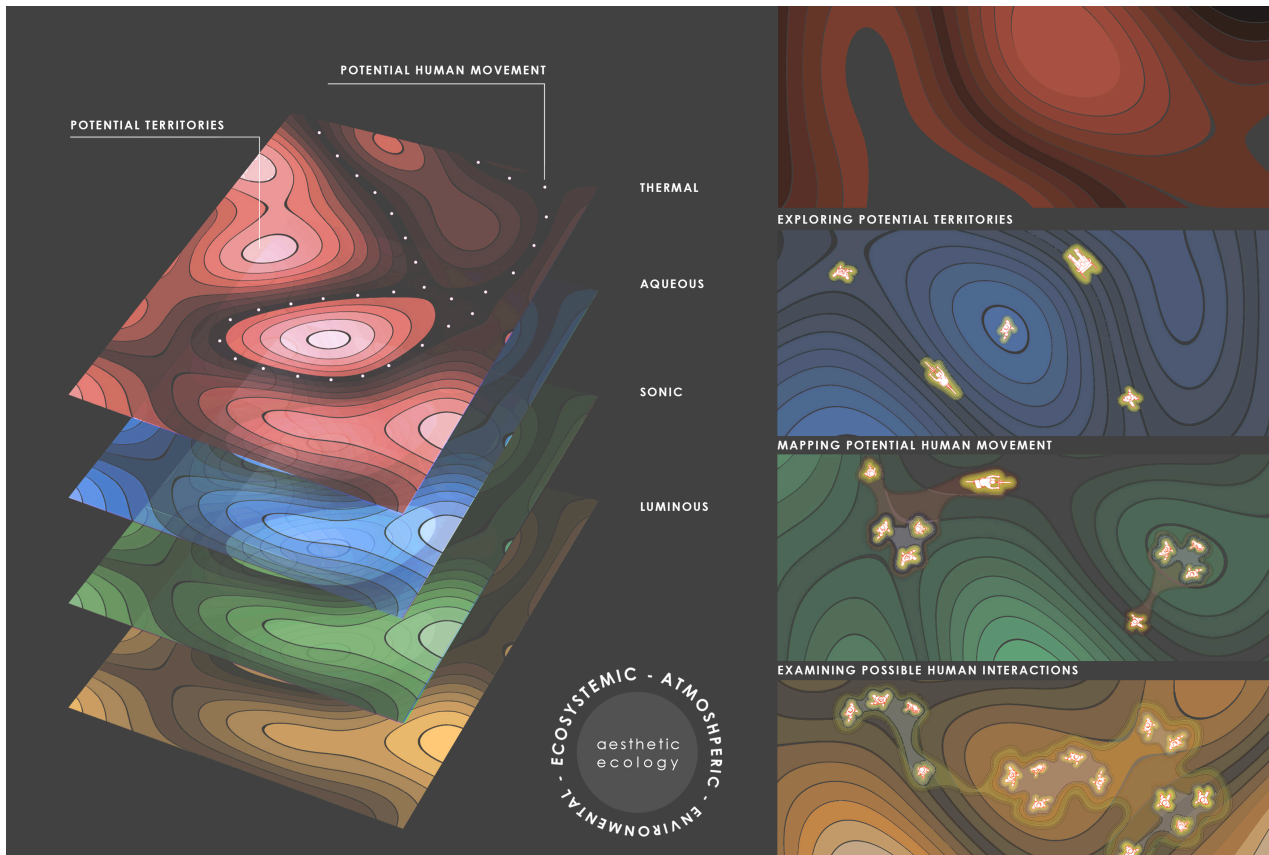


Figure 3. Territories as Eco-ontological Systems of Human Interaction. (Diagram (c) Alexandros Kitriniaris 2014)

ACKNOWLEDGMENT

The concept of this paper is part of a more extended research which would not have been completed without the support of the “Onassis Foundation” Honorary Scholarship, the “Propontis Foundation” Honorary Scholarship, and the “State Scholarships Foundation” Honorary Scholarship.

REFERENCES

- [1] Aristotle, *Physics*, Transl. Hardie and Gaye, Oxford: Clarendon, 1930.
- [2] Aristotle, *On the soul*, Transl. W. Hett, London: Cambridge, Massachusetts, Harvard University Press, 1964.
- [3] F. Guattari, *The Three Ecologies*, transl. I. Pindar, P. Sutton, London: The Athlone Press, 2000, pp.23-69.
- [4] R. Banham, *The Architecture of Well-Tempered Environment*, London: The Architectural Press, 1969.
- [5] S. Kwinter, “Notes on the Third Ecology”, *Ecological Urbanism*, M. Mustafavi, Germany: Lars Muller Publishers, 2010/2011, pp.94-105.
- [6] J. Reiser, “Notes on the Contemporary Architectural Conversation”, *Grib Sheets*, New York: The Monacelli Press, 2005, p.18.
- [7] D. Gissen, *Territory: Architecture Beyond Environment*, Architectural Design Profile, London: John Wiley & Sons, June 2010.
- [8] M. Addington, “New Perspectives on CFD Simulation”, *Advanced Building Simulation*, M. Malkawi, G. Augenbroe, London: Spon Press, 2003, p.147.
- [9] M. Addington, “Energy Sub-structure, Supra- Structure, Infra-Structure”, *Ecological Urbanism*, Germany: Lars Muller Publishers, 2010/2011, p. 244-251.
- [10] M. McLuhan, *Understanding Media: The extensions of Man*, New York: Signet Books, 1964.