Emergence in territorial ecology: territorial adaptation through social-ecological interactions

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The circulation of material and energy flows not only reflects the process characterizing the biosphere's functioning. It also reflects the functioning of societies. Thus, material and energy flows cannot be understood without analyzing social organization, and vice versa. Territorial ecology aims at integrating anthropogenic process of importation, consumption, transformation and exportation of energy and materials within a spatial, social and ecological framework (Barles et al., 2010). It focuses on social-ecological interactions within a geographical area (Barles, 2011) that is invested as an environment and structured as a territory by its inhabitants. It assumes a continuity between human and other biological systems and thus allows an extension of ecological definitions and properties upon human communities. Territory is understood in its ecological meaning, as the results of interactions living beings – and among them, human beings – have, with their environment (Cerceau et al, 2013). Territorial ecology thus questions the nature of these interactions: in a deterministic approach, living beings, their organization and evolution, are the results of pressures and constraints imposed by the environment; in a non-deterministic approach, the relationship between living beings and their milieu is reversed as organisms constitute, compose and adapt their milieu to their own needs (Canguilhem, 1965).

This presentation proposes to discuss the different trends of territorial ecology approaches whether they adopt a deterministic or a non-deterministic conception of the interactions occurring between human beings and their milieu. In order to propose an outcome to this dialectical discussion, we will question the contribution of the concept of emergence in territorial ecology. Emergence qualifies the unexpected appearance of new properties in the process of organization of complex systems (Goldstein, 1999). We will discuss the ability of this concept to propose an intermediary position between determinism and non-determinism (Kim, 1999). As a result, we will propose to describe the process of territorial construction, driven by a territorial ecology approach, through the capacity of human beings to understand and structure their milieu as a territory where they can express, to a certain extent, their ability and capability (Sen, 2008) for adaptation and change. Referring to mesological science, defined by Berque (2000) as the science enhancing the comprehension of symbolic and ecological interactions between human beings and their environment, this presentation will then pave the way to a new methodological approach for a collective definition of a territorial project in territorial ecology.

References:


