

Horizontal Metropolis: Spatial, Social and Natural Capital: Introduction



Brian McGrath and Martina Barcelloni Corte

As hydrologist Andrea Rinaldo reminds us¹, there is a natural power law covering the 3000 years of human city building, and this is a mark of self-organization. Nature has a geometrical signature and its hydrological pathways historically directed agricultural production and human engineered urban settlements, a sacred commons over-lorded by kings and priests. However, the last 400 years witnessed the introduction of an engineered regime of coal and oil powered industrialization, governed by bourgeois private property rights and world trade. Globally, the rise of colonial empires and a regime of market economies, resulted in a European hegemonic world system, developed and directed from metropolitan centres of capital accumulation and based on natural resource extraction and the backs of cheap labour in the peripheries. The metropolitan system was characterized by the concentration of power, the “great metropolis”, with a rigid divide between urban and rural, both lands and people.²

¹We refer to Andrea Rinaldo’s keynote speech during the Latsis Symposium 2015 held in Lausanne, from which this book originates.

²McGrath B., Shane D. G., 2012. “Metropolis, Megalopolis, Metacity” in: Crysler G., Cairns S., Heynen H., 2015. *The Sage Handbook of Architectural Theory*. London: SAGE

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The last four decades have seen, on the contrary, a dispersed and accelerated post-metropolitan urbanization, globally accompanied by new forms of renewable energy, mobility networks and digital communication.³ According to Christophe Girot⁴, we have lost the cardinal principle of cognitive orientation in the age of GPS and we need to regain the common ground of the city in the age of social media. Fragmentation, land use and accelerated mobility has perhaps disturbed Rinaldo's natural power law, with settlements distributed according to thermal comfort and water and food supply. A violent nature demands a topology of horizontal resilience and repair of natural integration at the urban seams, what Girot describes as an "anti-model (anti-metropolitan?) of Central Park". Can the goods and spatial orientation of the metropolis be dispersed horizontally?

Ecologist Mary Cadenasso⁵ has developed a tool for the design of horizontal urban landscapes in her patch-based High Ecological Resolution Classification for Urban Landscapes and Environmental Systems (HERCULES).⁶ Developed for the Gwynns Falls regional watershed in the county and city of Baltimore, Maryland, HERCULES integrates natural and built form to understand urban ecological processes within the patchy "geometrical signature and hydrological pathways" of an urban territory bisecting the sprawling Northeast U.S. megalopolis. Rinaldo's 3000-year history of urban culture has been dominated by architecture as the source of orientation and order and the physical inscription of political power. If Aldo Rossi identified the more collective production of the architecture *of* rather than *in* the city five decades ago, more recently ecologist Steward Pickett⁷ has identified the need to develop an ecology *of* rather than *in* the city. Is ecology, now, Girot's cardinal principle of cognitive orientation?

Pickett's essay may signal the shift of ecology from not just a scientific discipline to being a way of defining a common culture goal for the Horizontal Metropolis. What would our cities look like if ecological as well as architectural principles shaped them? According to Cadenasso, this would not simply entail a layered geographical mapping of landscapes but a deeper understanding of how atmospheric and terrestrial systems are linked and how flows move through systems both horizontally and vertically.

A more integrated and trans-disciplinary understanding of the territory is crucial for the Horizontal Metropolis hypothesis that, beyond the construction of an

³McGrath B., 2015. "An Archaeology of the Metacity", in Ding W., Lu A., 2015, *Cities in Transition*. Rotterdam: NAI010

⁴First chapter of this part

⁵We refer to Mary Cadenasso's presentation during the Latsis Symposium 2015 held in Lausanne, from which this book originates.

⁶Cadenasso, M.L., S.T.A. Pickett, and K. Schwarz. 2007. Spatial heterogeneity in urban ecosystems: reconceptualizing land cover and a framework for classification. *Frontiers in Ecology and the Environment* 5:80–88.

⁷Pickett, S. T. A., 2012. "The ecology of the city: A perspective from science". In McGrath, B. (ed.), *Urban Design Ecologies*. London: John Wiley & Sons.

interpretative concept, aims to explore design strategies able to capitalize on the city-territory's existing and too often overlooked infrastructural support (natural and artificial), as a whole. Such a "palimpsest"⁸, made of deeply embedded logics, could in fact represent a fundamental resource to accommodate urban growth and to reorient the form it could take in the future.

The contributions contained in the second part of this book reflect precisely in this direction, critically analysing different types of territorial rationalities as, for example, those related to water management and its paradoxes (Toselli), to extremely fragmented and dynamic productive landscapes (Rivera-Munoz) or to different forms of social (Testori) and infrastructural (Bruggeman; Pagnacco) accessibility. These analyses remind us that a renewed approach to the city-territory entails not only a fundamental shift in how we conceive our inhabited landscapes (Verbakel), but also the unavoidable introduction of radically new descriptive tools and protocols (Zhang), able to build integrated and "deep" representations of the territory; "thick mapping" (Rojas), which aim to describe a less visible but still extremely effective "fixed capital".

If, as Panos Marziaras reminds us, the Horizontal Metropolis is not only about extension but also (and mainly) about "stabilisation and deepening", about erasing, rewriting and scratching its "palimpsest", the careful description of such a support seems to be a fundamental operation to be performed if we are to consider space not only as the resource⁹ but also the "capital"¹⁰ upon which our future should be re-imagined.

⁸We refer to the term as introduced by André Corboz in: Corboz, A., 1983, "Le territoire comme palimpseste", in *Diogenè* 121 (January-March), pp. 14–35

⁹Light, J. S., 2009. *The Nature of Cities*. Baltimore: John Hopkins University Press

¹⁰Calafati, A.G., 2000. "Il capitale come paesaggio". *Foedus. Culture, economie e territori* n.1; Lévy, J., Lussault, M., 2003. *Dictionnaire de la géographie et de l'espace des sociétés*. Paris: Belin