

ORGANIC UTOPIA

Along the scientific and technological development through the past couple of decades, when architectural discourse moved from architectural object to architectural field, in accelerating environmental and social complexity, the three-dimensional Cartesian space with its Euclidean geometry is becoming noticeably impotent, as it is being ever more compellingly challenged by four-dimensional kinematic or dynamic geometry. Such geometry is now able to construct not just objects but also processes, where time can be considered as constitutive part of geometry and is being already widely utilized in architectural practices as so-called *parametric design*.

The roots of this development extend into history when, according to integral philosopher Ken Wilber, along the course of scientific discoveries theoreticians made the conceptual split between evolution of Physiosphere (matter) and the evolution of Biosphere (life), so the two arrows of time were conceptually divided: mechanistic, where time is running towards dissolution and disorder (entropy); and organic, where time is running towards organization of life into increasing order and complexity (syntropy). Only since the scientific breakthrough into the nonlinear systems (chaos theory), these spheres became compatible, where processes rather than objects came into focus. Nevertheless when looking at the production processes nowadays, we see that established regimes are still heavily subjected to linear principles; which mean moving matter from somewhere else, investing energy on one time to produce inert matter, which is left to dissolution of time. Evidently never along the lifespan of such artifact are matter and life running in the same direction of time. However, the recent insights of contemporary science into the processes of nature are revealing its remarkable elegance and efficiency. The field was widely grounded by scientist Stephen Wolfram, who concluded that the universe is digital in its nature, and runs on fundamental laws which can be described as simple programs.

The digitally equipped architectural discipline at the beginning of the millennia is starting to explore ever more organic approaches towards the field and we are witnessing that certain engineering techniques are starting to reveal the germs of bio-engineering. It is also anticipated through numerous lab experiments that while computer and genetic algorithms are not so unlike, with their rising ability of interaction and mergence, that future human environment will no longer be build, but actually grown in the manner of life-forms, able to produce materials, digest waste, generate energy, supply food, sustain health and environment etc., including all scales of living environment; from furniture and buildings to infrastructure and urban structures.

While zooming-out to the scale of the city, we already recognize urban structure as bio-cultural ecology, where natural resources and bio-dynamics of the city's eco-region is not structurally separated from urban processes and cannot be treated through the principle of *Tabula Rasa* characteristic for Modern city; like the process cannot be reduced to object. Urban growth as internal intention of the city far exceeds the passive role of its eco-region and reductive antagonism of "exploration-vs.-preservation", while in a matter of fact it is becoming the ecology of a higher order, where symbiotic marriage of biotechnological

systems with new wildernesses of countryside leads to a sustainability paradigm of how can urban growth be even more efficient in developing new forms of urban and cultural landscapes.

All this comes down eventually to ethical challenges; what an integration of such two systems means for internal perspective of individual and society? It is known that the 19th century Humanism cannot be separated from Romanticism and its utopia of *Romantic Love*, while 20th Century was nourished by the utopia of *Progress*. If, as it seems, 21st Century is then driven by “*Organic*” utopia, then the biological systems are not just another technology and Nature is not just something to be preserved, but something with a deeper capacity of development and interaction. What kind of power will come to the hands of distinct individual; comparing him with the *shaman* in the deep forest of higher order that will play with energies of the digital networks. What kind of aspirations and ideals will unfold to the creative individual in these new fields of networks and new processes of creation; as physicist and mathematician Freeman Dyson once said, that the new generations of artists will write genomes like poets are writing verses. Creative individual will have the tools to compose the symphonies with biology. Nature as utopia and a deeper unfolding of the world, where a force of creation, imagination and personality is manifesting through complex adaptive systems, and vice versa where blind biological systems can develop and grow its genetic algorithms through the vast fields of the abstract mind of good, true and beautiful.

Miha Volgemut

Domžale,
November 2016