

# Landscape Topology FS 2020 V05

Our deeper connections with the landscape can be understood as individual layers. In an age when topographies are going to be manipulated and transformed on a very large scale in order to protect coastal areas from floods and cities from noise and other disturbances, we are going to have to reinvent our way of thinking landscapes. Topology<sup>1</sup> is a term that truly embraces the physical and aesthetic reality of a place and that has its roots in the ancient Greek words *topos* ("place") and *logos* ("word" or "study"). Although it is presently understood as a mathematical term relating to the study of continuity and connectivity in abstract surfaces, topology can also be understood in a way that encompasses a broader approach to the constructed reality. Topology is the art of working on a landscape with complex surface structures and artificial topography as they interrelate with the forces of change in the environment. It refers also to the manner in which landscapes are assessed and shaped by societal and cultural necessities. In this sense, topology means not only controlling and shaping a landscape, but also intuitively understanding its adaptive potential when faced with such priorities. Adopting a topological approach to landscape architecture will help uncover new relationships between meaning, function and form, thus inviting the engineering, landscape and architectural professions to operate together in this changing reality.

We are now over seven billion humans on earth, and unbounded population growth will certainly bear immeasurable repercussions on both the cultural and biological diversity of our planet, ultimately jeopardizing humankind itself. We have entered an age of complete natural fabrication for the purpose of humankind. Landscape architects will be asked to reinvent forms of nature that respond appropriately to the unwieldy challenges of ground conditions linked to climate change and other human-induced nuisances such as noise and pollution. These new fabrications may require a proactive understanding of ecology and diversity, but will also produce landscapes that question conventional wisdom and completely redefine an understanding of nature that is embedded in our collective consciousness. The landscapes of our era will seek new forms that take overpopulation, dwindling natural resources and environmental threats and nuisances into consideration. Destructive climatic events around the world are increasing in frequency and will heighten the need to work together on a new landscape and urban order that can strengthen our defenses. Cities like New York City, for example, which are integrating landscape topology along their coastlines will help construct a future that is more resilient. Fundamental changes that led to the first instance of landscape architecture came about during the planet's last period of major climatic change at the end of the ice age roughly 9,000 years ago. The recent acknowledgement of a contemporary climate crisis is going to affect landscape thinking very deeply and at a much larger scale than before, bringing together various actors such as engineers, planners, architects and landscape architects under the banner of topology.



Park Buitenschot, Schiphol Airport, Amsterdam  
H.N.S. Landscape Architects  
Photo: Paul de Kort.



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But what, then, are the rules of this new topology? How can they be best formulated to answer the questions and necessities of our times? Our deeper connections with a landscape can be understood as countless layers of meaning inscribed by a society and culture onto the surface of a given place over the course of decades, centuries and even millennia. Times change and the deeper meaning of landscape prevails only in the form of a place that elicits respect. In most landscapes, nearly all venerable traces from the past have now become illegible: they have been either erased or displaced by violent acts of transformation. A site having witnessed a plethora of significant events may only leave a faint palimpsest of these traces, where none ultimately leaves a mark significant enough to signal a direction. It is precisely the manner in which we clarify our site analysis and build upon such a direction that makes landscape topology so important and meaningful at present. New topical landscapes will emerge in the coming years that better express the specific needs and priorities of our world exceeding seven billion inhabitants. Designers may observe, acquire and understand knowledge about a given place, but they will also need to develop methods and tools that help them think creatively about the present situation, to find solutions that are in synergy with other disciplines. A topological approach to landscape design supposes a fundamentally new kind of project that allows for a mode of interaction between disciplines. In this manner, future landscapes will be prototyped, simulated and tested by other fields of competence in a series of feedback loops. This process broadening the knowledge base of a project between science and design will require strong cross-disciplinary dialogue with repeated iterations that will yield new forms of natural systems. This, in turn, will have deep repercussions on the secular values that we attribute to nature at present. The twenty-first century is going to be one of natural invention and reinterpretation, where landscape architecture will come to the forefront with new topological methods. It will close the romantic era, which has been fed by a general sense of remorse due to a loss of wilderness, ever since the onset of the industrial revolution. In this rapidly changing world, with limited resources at hand, a complete change in attitude towards nature will be needed before landscape can reinvent itself, moving from passive nostalgia to a form of active creation. The examples of topological work that are shown in this lecture mark only the beginning of a landscape trend that is going to grow and change the way that we apprehend and modify our natural world to come.

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<sup>1</sup> "Topology" is a term in landscape architecture that was recently coined: see e.g. Christophe Girot et al.: *Landscript 3. Topology*, Berlin 2013 and Christophe Girot et al.: *Pamphlet 15. Topologie – Topology*, Zurich 2012.

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"Hochacker" in Hagenwil/Switzerland  
Photo: Georg Gerster.