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Urban Design in the Age of the Anthropocene

Facing demographic shifts, climate change and finite resources

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A close look at the urbanization of the planet today reveals that most people live in sub-, peri- and exurban areas. Complex infrastructural networks interweave villages, agricultural areas, cities and commercial parks and dispersed settlements into urbanized territories all over the countryside. The expansion of contemporary urbanization had never come to existence without the extensive individual mobility that emerged in the second half of the 20th century on the basis of low priced and seemingly inexhaustible fossil fuel. This is the urban form one is dealing with when discussing future challenges for urban planners and designers. Extensive commuting, the fusion of rural and urban as well as superimposed scales of interrelationships make the situation even more complex. And the demographic and socioeconomic changes of an increasingly cross-linked global society additionally amplify this process of urbanization.

The urbanization of the landscape

Considering their ecological footprint, developed nations of the West claim a bigger part of the planet's surface per capita than they are entitled to. Consequently, land use needs to be thought through strategies for urban expansion. The new trends were characterized by a traditional compact and dense city cores sophisticated building laws and the control of car use (urban car free zones) in all modern cities. The building development in the city core is surrounded by a comprehensive green belt. The so-called ‘Territorial Land’, that comprises a vast hilly zone between the Lake Geneva and Mont Blanc, has developed into a large polycentric urban network over time. The majority of Swiss economic, agricultural and cultural activities result in more intensive use of landscape. Leisure activities in Switzerland, for instance, are responsible for more than 40% of overall traffic. Farmers complain about littering along roads, trafﬁc and conﬂicts with horseback riders or mountain bikers. In the traditionally compact and dense city cores sophisticated building laws and licence agreements have been developed and negotiated over the centuries to allow the coexistence of a broad variety of activities. This legal groundwork is one of the basic foundations of the cities’ urbanity. Such negotiation processes will have to be conducted for the entire territory, including the uninhabited areas, in the future.

The Swiss condition

Due to its topography, a wide area of Switzerland is not habitable. And while the population is still growing (although all forecasts for the developed world point to a stagnation in medium terms), high pressure is exerted on the entire territory, especially on the fertile parts of the lowlands. The so-called ‘Mittelland’, that comprises a vast hilly zone between the Lake Geneva and Mont Blanc, has developed into a large polycentric urban network over time. The majority of Swiss economic, agricultural and cultural activities result in more intensive use of landscape. Leisure activities in Switzerland, for instance, are responsible for more than 40% of overall traffic. Farmers complain about littering along roads, traffic and conflicts with horseback riders or mountain bikers. In the traditionally compact and dense city cores sophisticated building laws and licence agreements have been developed and negotiated over the centuries to allow the coexistence of a broad variety of activities. This legal groundwork is one of the basic foundations of the cities’ urbanity. Such negotiation processes will have to be conducted for the entire territory, including the uninhabited areas, in the future. The mentioned global trends of the past decades, presenting the challenges for the future, are studied and well known. Rather than showcasing blatant utopias, it is more necessary than ever to develop concrete design approaches for the transformation of the urbanized landscape into regenerative territories, maintaining a high quality of life. Closing resource and energy cycles is the order of the day. But certain self-sufficient eco-cities, local energy networks or closed loop recycling management systems run the risk of excluding the non-involved or non-paying others. Responsible design for future open territories should therefore exemplify their potential to accommodate socially democratic coexistence. Based on individual freedom, the division of labour, specialization and plurality.

A ubiquitous understanding of today’s territory

Everything shaped by humans is culture; this includes the territory. Cultured landscapes emerge through a medium dense form of interaction with nature. Their regional differences are due to natural conditions and increase with growing technological development. With this holistic concept of the ‘Kulturlandschaft’ we emphasize to consider this issue not only, as well as non-constructed areas as ONE continuous culturally shaped landscape.

The challenge in the future is to design and develop sustainable concepts based on the implementation of renewable energy sources for these territories in order to provide enough living space, employment and a high quality of life for the entire population. Thereby architects, planners and urban designers play an important role. The building block in Europe is accountable for a majority of the energy consumption with construction being the most resource consuming human activity. Its orientation versus region is therefore not just a marketing strategy but rather a social necessity in the long run. Additionally, spatial and strategic design is a powerful tool to test and negotiate future developments with the various players involved.

Implementing robust long-term strategies

To steer and orchestrate upcoming tasks such as infrastructure renewal, settlement densification and self-sufficient energy and resource supply, long-term strategies are needed. Within the federal system of Switzerland the municipalities enjoy a large autonomy with respect to spatial planning. Taking this into account, the follow up potential in quality development of the ‘Kulturlandschaft’ is to be considered. The municipalities are overwhelmed with conflicting trends in line? Quality management is an intriguing challenge under such conditions. Universal regulations hardly result in outstanding energy solutions, whereas fragmented makeshift risk unfair treatments of different landscape toppers. To orientate versus regions and groups. For this reason, specific regional approaches should be fostered that allow easier adapted answers to local conditions without losing superior perspectives. The cultivation of diversity renders the environment to be more resilient and attractive.

Taking the landscape as a point of departure

A ubiquitous understanding and topology are key qualities of Switzerland. In large parts, its territory has been man-altered over the centuries. The starting point for every urban design approach should be considering the landscape as an integral component of the urban territory. For that purpose, contemporary productive utilization of land is indispensable and should be facilitated in the long run. Sensibilizing all involved actors for the handling and advancement of the spatial qualities of new productive landscapes is an essential ingredient for the development of a sustainable future.

Responding to specific local conditions

A broad variety of different landscape typologies can be found in Switzerland’s ‘Kulturlandschaft’. This diversity, together with the prospering economy, is one of the main reasons why the country is so attractive for many visitors and immigrants. But its success is also at risk to become its own adversary. How can one bring these opposing trends in line? Quality management is an intriguing challenge under such conditions. Universal regulations hardly result in outstanding energy solutions, whereas fragmented makeshift risk unfair treatments of different landscape toppers. To orientate versus regions and groups. For this reason, specific regional approaches should be fostered that allow easier adapted answers to local conditions without losing superior perspectives. The cultivation of diversity renders the environment to be more resilient and attractive.

For regenerative territories

The capacity of regeneration based on own renewable resources, to be human, financial or material, plays an important role in the future resilience of a territory. But their complexity often makes it difficult for non-professionals to rate the relevant proposals. Planners and designers are therefore responsible to identify and visualize comprehensible options to decision makers and inhabitants in order to allow well-considered decisions. The openness for experiments provides an essential subject to perpetual change. There exist many possible futures that sometimes seem less certain to achieve at first but could deliver exactly the missing pieces for regenerative open territories that allow worthwhile development possibilities for everyone.

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Kulturlandschaft is one of the main fields of research at the Chair of Architecture and Urban Design of Professor Kaes Christiaanse at the Institute for Urban Design of the ETH Zurich. Applying transdisciplinary concepts at the interface of teaching, research and practice, its team of experts around of Michael Wagner investigates how incentives for sustainable development strategies for live to medium dense urban terrains can be created with a focus from within the landscape. One of the goals is to activate synergies through the coordination of different stakeholders in order to develop robust strategies for the design of context-sensitive spaces with high living quality.

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