New Landscapes Perspectives for Planning

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Abstract

This chapter explores the contemporary renewal of the concept of landscape and its application to regional and town planning. Its utility has to do with the ability to analyse and design territories, ecosystems, networks and infrastructures at all scales. At the same time, landscape becomes both a medium and a management tool to restore deteriorated territories and activate abandoned areas based on the idea of enhancing the ecological potential of places. Ecology is used to generate the necessary processes to develop strategies to achieve future sustainability over time by accommodating or even catalysing change (natural or man-made). As a result, landscape perspective integrates synthetic nature with an open, dynamic, adaptable and flexible decision-making system for complex spaces.

Keywords

Landscaping • Ecological processes • Resilience • Sustainability

The new landscapes perspectives that have arisen in recent years are the result of reflection and committed attitude to the times we live in, establishing the potential for a creative lifestyle, while aware of its limits. In the current era, known as the Anthropocene, the planet's resources are increasingly limited, whereas the vulnerability of regions and cities has increased. The economic crises, the effects of climate change, migration, epidemics and wars have increased the risks to the planet. This risk is no longer related to political or economic power since it depends on unpredictable, global phenomena. This new perspective necessarily changes the way we approach work and calls for a complete overhaul of the practice of modern urbanism, in order to be in harmony with the Earth.

It was in this context that a renewal of the concept of landscape and its application to regional and town planning took place. Its utility has to do with the opportunities it reveals compared to current town planning, and the ability to analyse and design territories, ecosystems, networks and infrastructures at all scales. Its potential, furthermore, resides in the possibilities it confers to become a medium, a management tool to restore deteriorated territories and activate abandoned areas. In short, to transform the environment and convert it into a design project.

From the discipline of landscape architecture, design strategies are put forward based on the idea of enhancing the ecological potential of places. Some, such as James Corner, call this strategy 'Lifescape'. He developed projects such as Fresh Kills Park or in his joint proposal with Stan Allen and Nina-Marie Lister, for the Downsview Park in Toronto, in a tender calling for bids in 1999. It consists of working with a landscape as a process based on a series of flexible, continuing stages, a readable landscape, designed to promote diversification and succession over time (Corner 2005, 14–21). The aim is to build a diverse, resilient landscape on the basis of existing natural conditions. With these objectives, an ecological process of environmental restoration and renewal on a large scale is designed, not only recovering the healthy biodiversity of ecosystems, but also enabling dynamic cultivation of other ecologies that include much wider scopes: human programmes and activities; financing, management and adaptive handling; environmental technology, renewable energy and education; or new forms of interaction between citizens, nature and technology over time (Field Operations and Planning 2006).

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Ecology then becomes a key tool, in the matrix used to generate these strategies, with a view to achieving sustainability over time. This matrix consists of several coordinated systems that encompass the habitat (landscape) and programmes (areas or facilities) and transit (paths and roads). These systems, arranged in layers, organize the space, creating the landscape framework for the project. This underlying framework is sufficiently flexible, coherent and durable to accommodate change (natural or man-made) that may take place in the future. From this perspective, rather than deleting the past or recreating a natural environment lost through time, growth is proposed that emerges from the past and present towards an identity-based future. The result will be integrating, synthetic nature, while being wild and cultivated, renewed and built. This must undoubtedly entail changes in the way we design and experiment with these recovered landscapes in territories and cities (Corner 2005, 14–21).

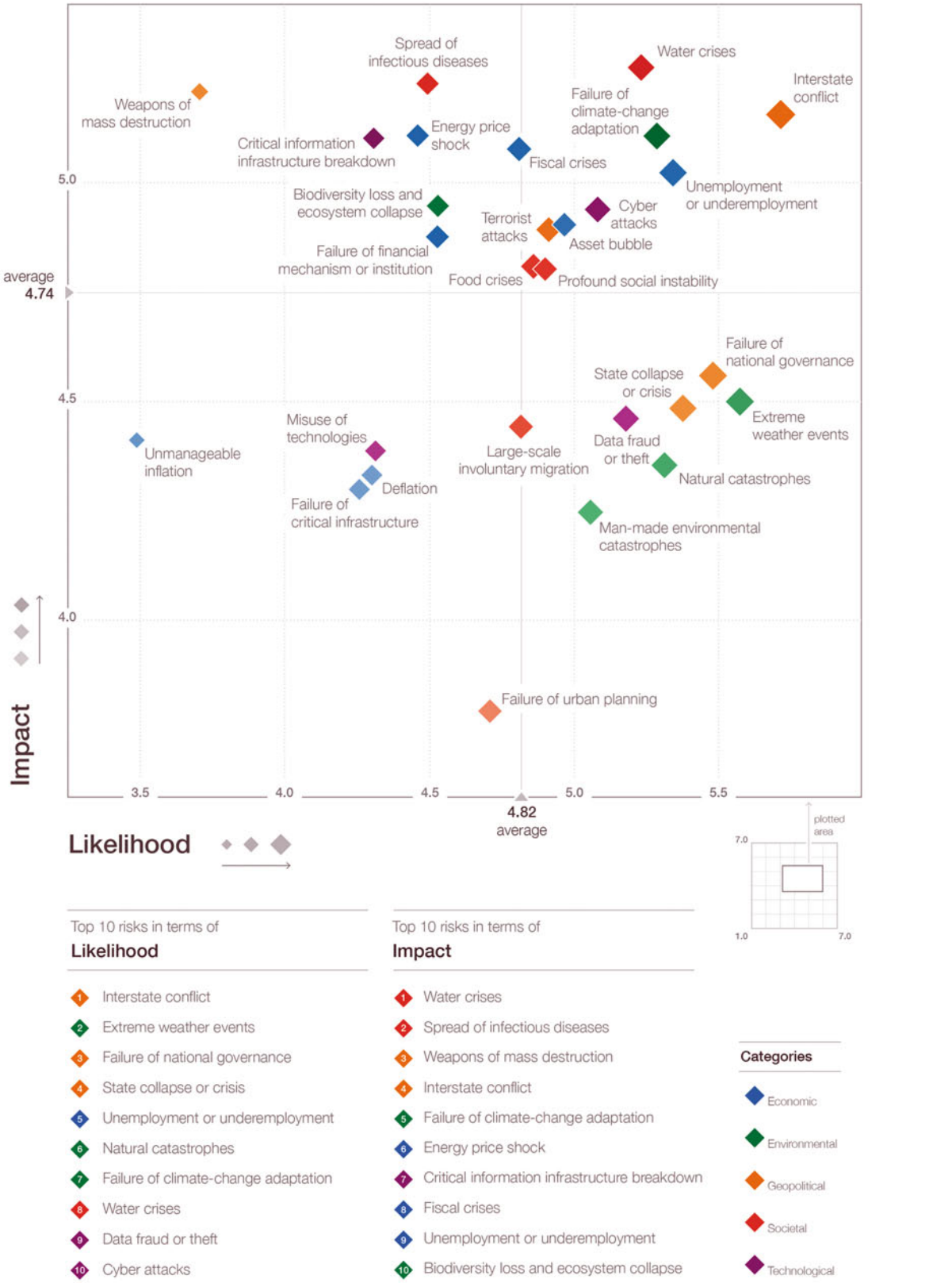
Other authors, such as Anita Berrizbeitia and Linda Pollak, join this trend, claiming that project design strategies must follow natural, dynamic processes, thus becoming open, dynamic, adaptable and flexible decision-making system for our complex contemporary cities and metropolises (Berrizbeitia 2007, 175–198; Pollack 2007, 87–120). In order to study these spaces, we must take the future repercussions of each process into account, as well as the historical processes that have made and sustained them. The latter is important since many spaces where intervention has taken place are vast, abandoned sites, former industrial areas, wasteland and even dumps, and therefore, the cultural dimension and social perception also become an important part of the project. With this type of action in mind, today we are faced with many spaces and urban parks of apparent stable development that are actually artificially maintained ecological conditions. Ecosystems undergo transformation and disturbance on a regular basis, both in short- and long-term cycles; therefore, this landscape perspective provides an operational and programming dimension that facilitates the emergence and evolution of self-managed ecological systems, or resilient ecosystems. The latter is a basic requirement for long-term sustainability(Corner 2005, 14–21; Lister 2007, 35–58; Pollack 2007, 87–120).

"There is a common tendency to focus on natural features (e.g. rivers and trees) rather than the processes that shape and structure them (e.g. flow of air, water, and materials; plant reproduction and growth). Ignoring natural processes leads to harmful consequences, including the failure of planners to accommodate dynamic change, their failure to make connections among seemingly unrelated issues and phenomena and to realize opportunities"(Spirn 2003, 204–205). As Anne Whiston Spirn claims in this text, the key is thinking how human activities, their forms and structures interact with air processes (flows and transference), the earth (geology and soil), water (cycles and flows), life (reproduction, growth, behaviour) and ecology (energy, information, material flows, succession and behaviour). It is not about imitating forms, or using local materials, so much as it is about adapting the form to processes. If we pay attention to the finer details of these items, to the form and structure of the environment, designers and planners will be able to accompany and integrate change and dynamism, to establish relationships between apparently unrelated items and create new opportunities (Spirn 2012, 6).

Back in the 1960s, Ian McHarg called for a 'design with nature', giving structure to a conceptual framework that authors such as Frederick Law Olmsted, Jens Jensen and Aldo Leopold had advanced through their research and projects. We could, therefore, consider that, since Olmsted, the landscape perspective has sought to integrate design with the ecology of places through planning processes, promoting a unity between nature and society. That is precisely the approach that Dirk Sijmons proposes for the sixth edition of the Rotterdam Architectural Biennial: nature as a spatial intervention to contribute to developing more resilient cities and environments for a sustainable world (Sijmons 2014).

These theories have recently been renewed with ecological town planning, promoting urbanism which, in addition to paying special attention to ecological variables, features techniques and technology inherent to this subject (Mostafavi and Doherty 2010). It is an approach that is more metabolic than morphologic. There are many authors, too many in fact to cite in this short text, who have highlighted the potential of this perspective as a useful tool for planning space. From Ian McHarg to James Corner, Alan Berger or Chris Reed to name but a few. In fact, Reed, in a recent paper under the title of "Projective ecologies", emphasizes the relevance this change of paradigm has for planning, governed by a dynamic understanding of systems and their changes. This question is related to its adaptability, resilience and flexibility (Reed and Lister 2014, 14–21).

In short, the introduction to landscape thinking in planning and design has been present since the middle of the last century in many different fields and on different scales: landscape architecture, townscape, landscape planning, ecological town planning, ecological design, green architecture, green infrastructure, green town planning, environmental art and many others. Theorists, scientists, researchers and designers have been reinforcing this field of thought through science, art and humanities in a time that is characterized by the need to hybridise culture and nature. This chapter's title "New Landscape Perspectives" has the aim of bringing attention to the proposals that converge in these approaches to form resilient thought, understood as a tool for creativity in multi-scale planning and design based on ecological processes. The potential of landscape as a resource, in the words of Charles Waldheim, as a machine, as defined by Mohsen Mostafavi, or as a field of operations,



Source: Global Risks Perception Survey 2014.
Note: Survey respondents were asked to assess the likelihood and impact of the individual risks on a scale of 1 to 7, 1 representing a risk that is not likely to happen or have impact, and 7 a risk very likely to occur and with massive and devastating impacts. See Appendix B for more details. To ensure legibility, the names of the global risks are abbreviated. Also see Appendix A for the full name and description.

Fig. 30.1 Global risks, in WEF Global Risks Report, 2015

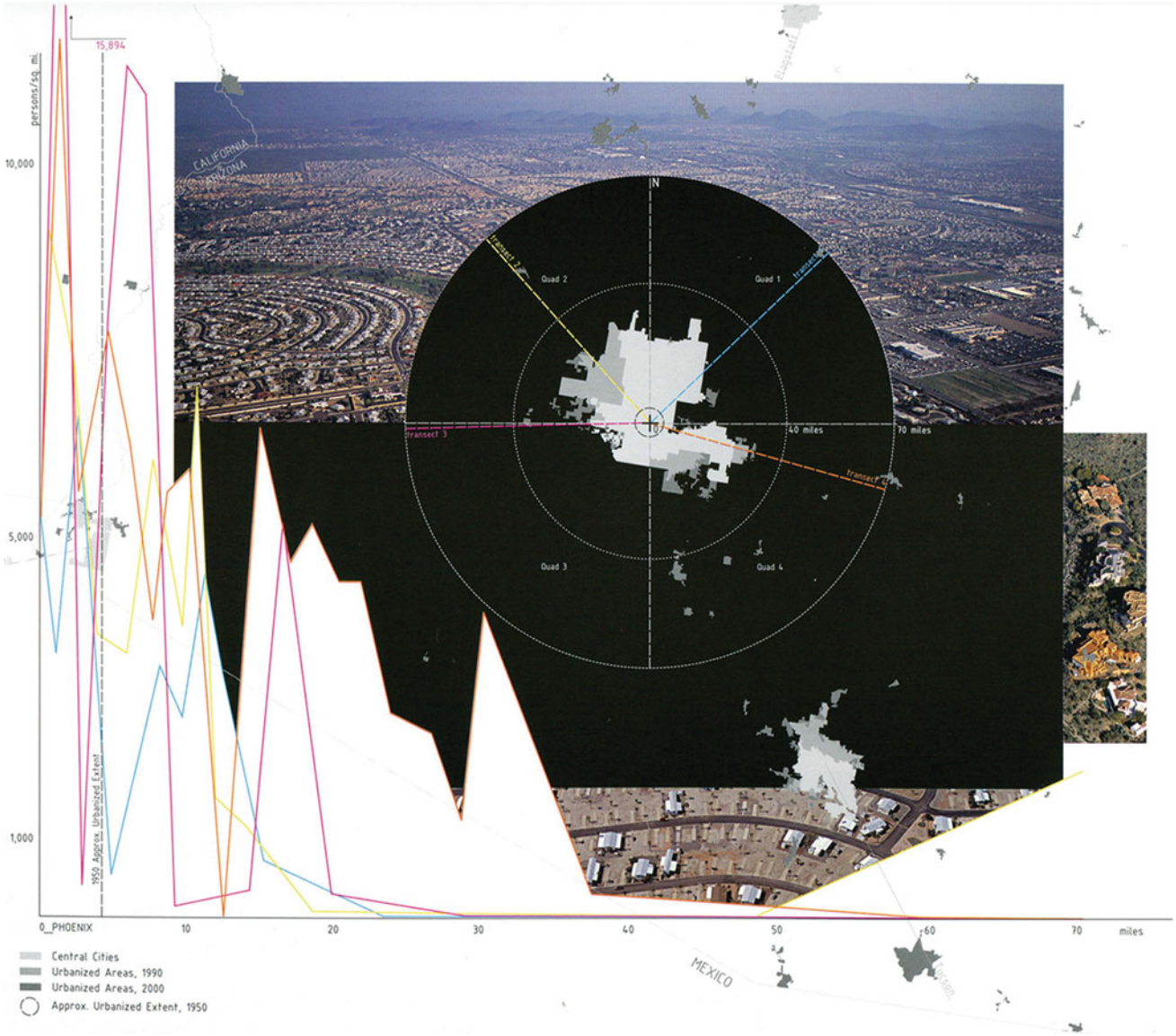


Fig. 30.2 Pohenix, Arizona. Allan Berger, in Drosscape: Wasting Land 2007

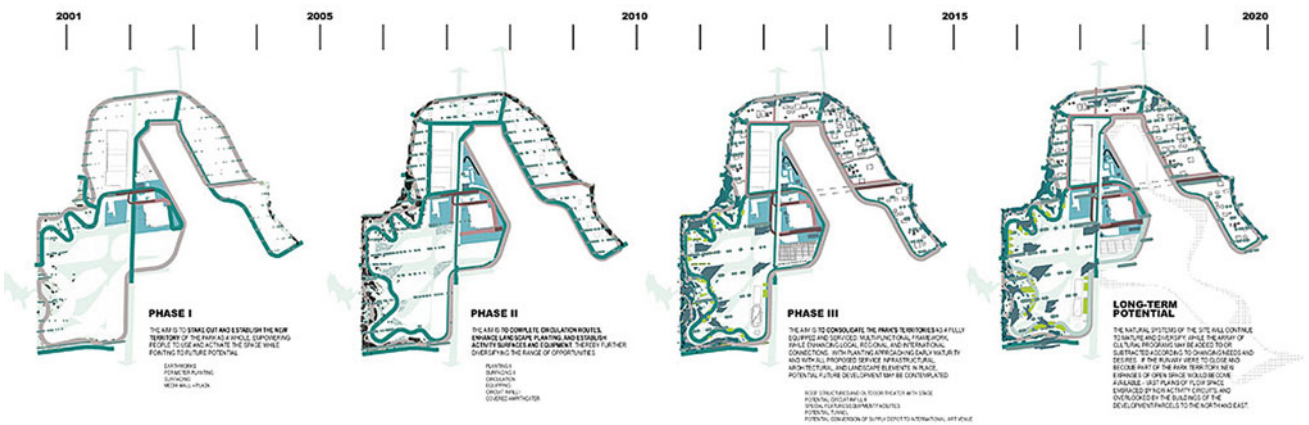


Fig. 30.3 James Corner, Stan Allen and Nina-Marie Lister, Emergence through Adaptive Management. Downsview Park Competition, Toronto, Canadá, 1999

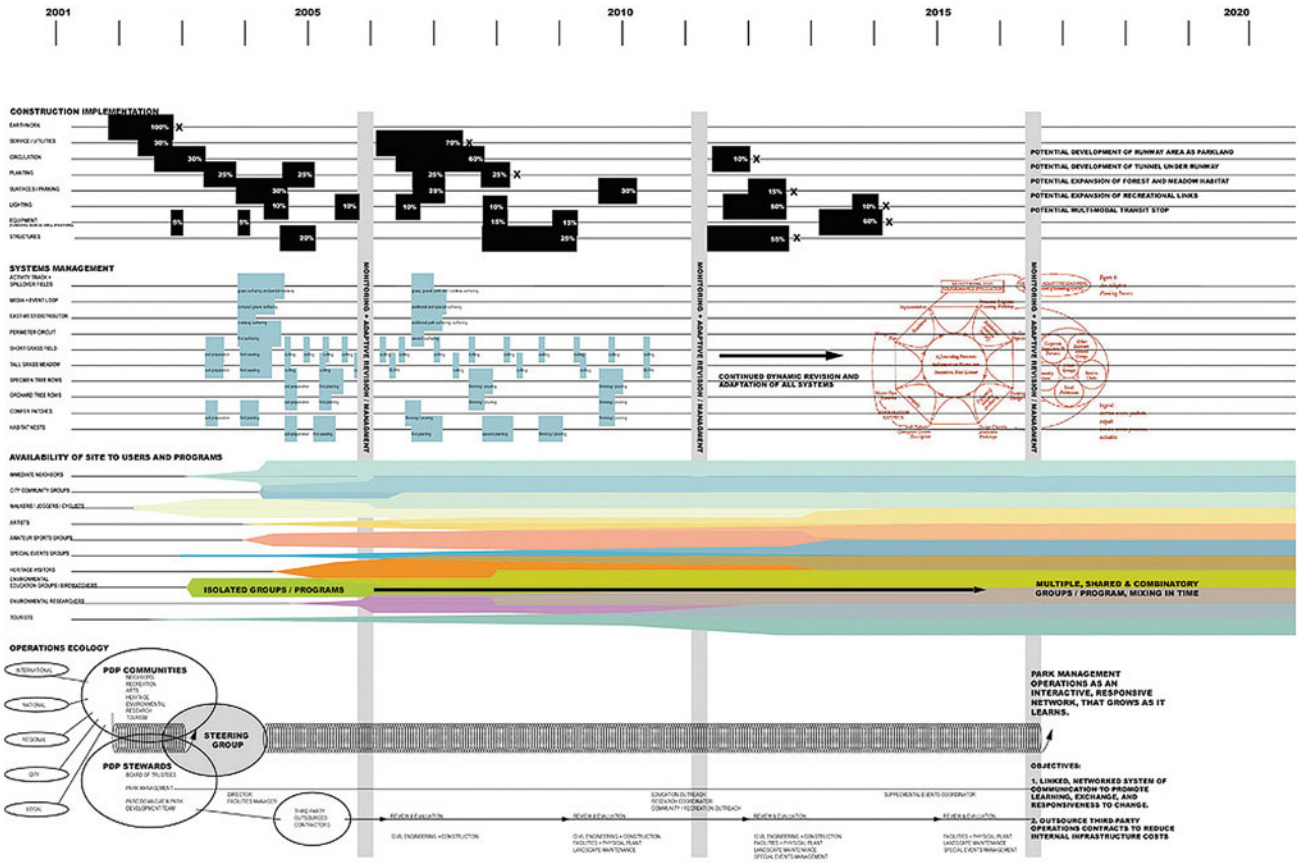


Fig. 30.4 James Corner, Stan Allen and Nina-Marie Lister, Downsview Park Competition, Toronto, Canadá, 1999

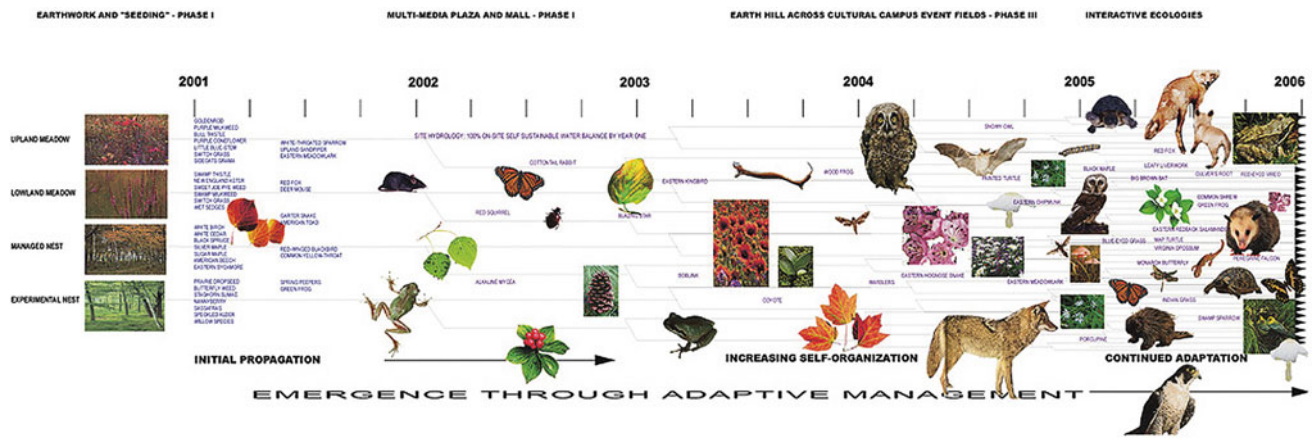


Fig. 30.5 James Corner, Stan Allen and Nina-Marie Lister, Downsview Park Competition, Toronto, Canadá, 1999

according to James Corner, opens a new framework for planning and design at all scales.

Using the scheme proposed by R. Weller in "Global Landscapes" (2013), the two cases presented here are only a sample of how this approach from landscape permits working at all scales, relating the design process with the instrumental processes provided by ecology, and thus developing all its potential.

Therefore, we could claim that if, during the twentieth century, cities and urban design were the focus of attention, now is the evolution of the landscape concept and its re-emergence as a useful instrument for planning that has placed it at the centre in the twenty-first century. Designing from the perspective of landscape entails establishing the necessary relationships between nature, place and society, through ecology, science and art.

Fig. 30.6 FABRIC and JCFO, Urban Metabolism for IABR Project Atelier Rotterdam, 2014. The FABRIC and JCFO design offices mapped the inbound and outbound material flows to and from the city of Rotterdam and the Delta, analysing how those flows interacted on the territory and the space, and exploring how they can have a positive impact on environmental management of the city both individually and as a system

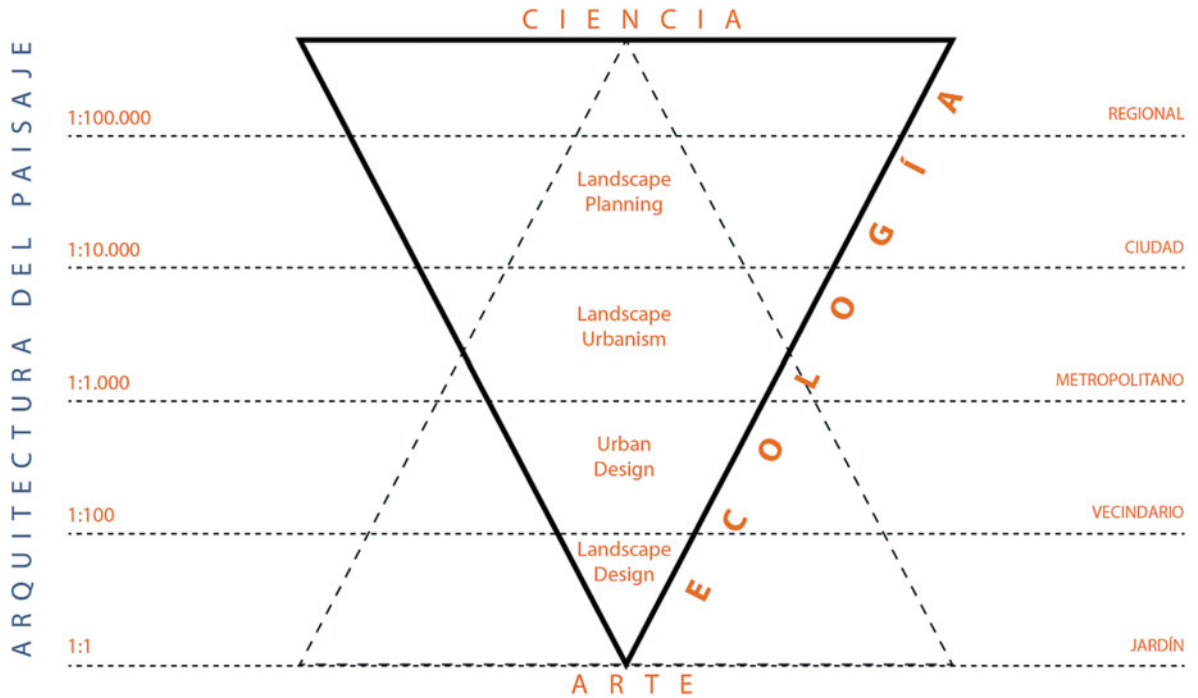


Fig. 30.7 Richard Weller, diagram depicting the scope of landscape architecture today and its relationship with design and planning throughscales, in Weller, R. "Global Landscapes", 2013

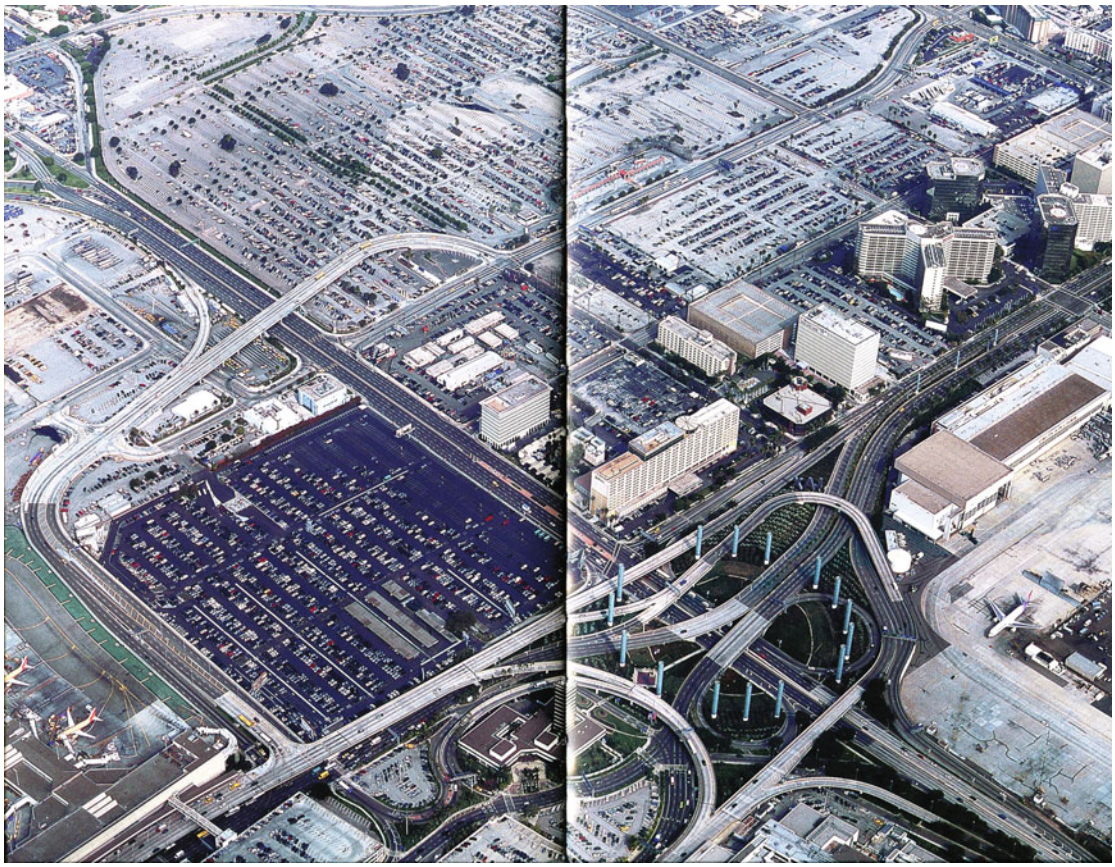


Fig. 30.8 Parking lots at Los Angeles international airport

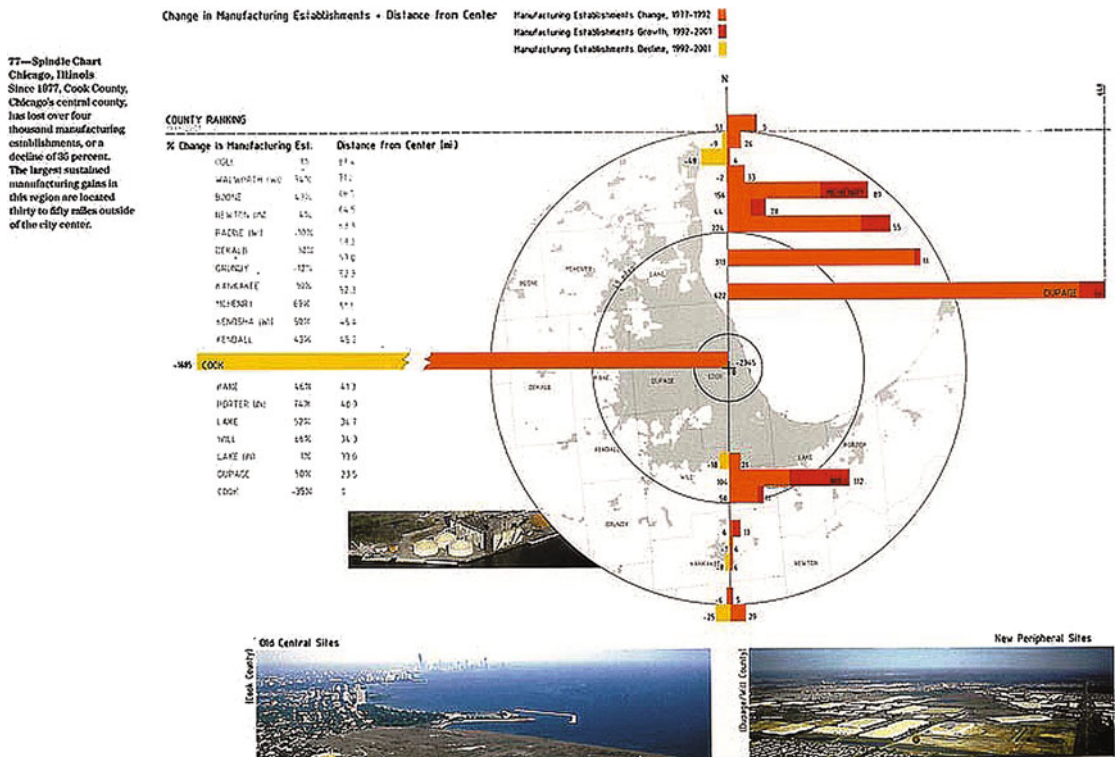


Fig. 30.9 Allan Berger, in Drosscape: Wasting Land in Urban America, 2007. Berger develops the idea of waste landscapes in American cities, including 'how', 'where' and 'why' they were created and also 'what' and 'when' for any possible re-development of them

Case Studies

Emerald Necklace, Boston (1884–1910s)

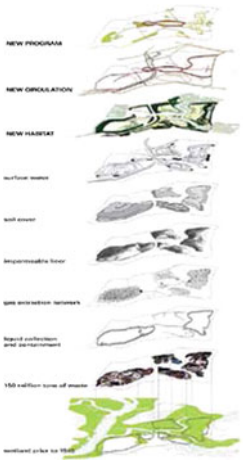
The park system designed by Frederick Law Olmsted in 1884 for the city of Boston, known as the Emerald Necklace covers a length of over 12 km and 450 ha. It is a green infrastructure that connects parks, lakes and river areas in a complex system. The project, considered a pioneer in implementing green infrastructures in the USA, emerged in 1875 with approval by the Boston Municipal Council through a Parks Law favouring access to nature by inhabitants in the city which at the time was undergoing strong development as a result of the Industrial Revolution. This project continues today, through the restoration of Muddy River.

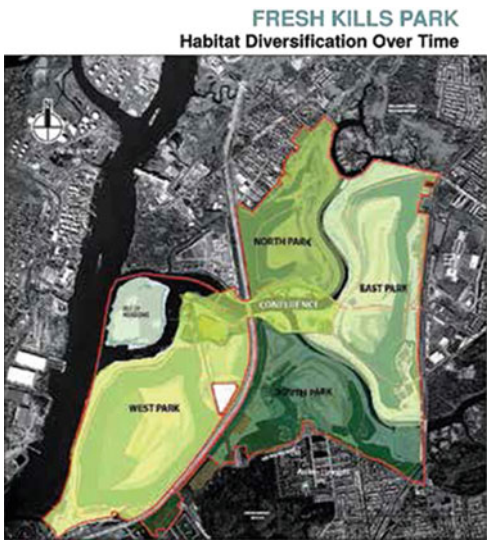
Olmsted, aware of the limits and repercussions of growth and intensive development of the city, promoted public health, the use of passive transport and the reduction of flooding along Muddy River through ecological recovery of the landscape and leisure use. He restored Back Bay, a former swamp that had been used as a dump, as well as the banks of the Muddy River, as an element to structure connect the parks system, thus resolving the existing health problem and recovering lost biodiversity. Moreover, the project served to retain rainwater, mitigating flooding and at the same time separated heavy traffic from pedestrian walkways and renewed contact with nature.

Fresh Kills Park, New York (Project, 2001. Development 2006–2036)

The project, developed by James Corner (Field Operations) for New York in 2001, consists of recovering the Fresh Kills dump, the largest in the world, as a public park, located to the west of Staten Island in the River Hudson estuary.

Because of its scale and complexity, the project develops the idea of Lifescape, as described previously. The strategy proposes a series of flexible, continuing stages, a landscape in process, designed to promote diversification and succession over time. The project is subdivided into five parks, to be developed in three stages, each spanning a ten-year period. It features establishing new habitats, based on improving the properties of the soil through agriculture and recovering the wetlands. Once the soil has been improved, there will be a process of establishing pioneer plant communities. Native species will be used for the most part, as well as a collection of different species adapted to the prevailing conditions of the site, susceptible to improving the development conditions of the different habitats. The use of small-scale plantations provides a variety of species in each of the habitats, testing their adaptability to the conditions of the park. Thus, a diverse landscape is achieved, self-manageable and resilient, which recovers its ecological value, introducing a programme for public use, while purifying polluted water, reducing the need for park maintenance and acting as a buffer zone from the storm waves, as could be seen during Hurricane Sandy.





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