Framing the Open (Urban) Project: Insights from Landscape and Ecology

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ABSTRACT

In the 80's and 90's, architects grew interested in experimenting with change over time, flexibility, indeterminacy, multiple layers and programs – what Manuel Gausa defined as an emerging open logic in architecture. At the same time, landscape and ecology were seen by many as the most appropriate medium to operate in the context of complex urban infrastructure and fringe areas. Currently, the threat posed by climate change and the increasing investment from cities on creating and repurposing open spaces and infrastructure, is feeding a renovated interest in landscape design. However, it is also leading to an increasing objectification of landscape. This paper will look at five recent projects of landscape architecture to reflect on the value and limits of 'open-ness' in urban design.

In the almost one-thousand-page volume published following his doctoral thesis, architect and theorist Manuel Gausa highlights how, during the second half of the 20th Century, a change of 'logic' happened in science and society, one that would radically mutate architecture three decades later. Open: espacio, tiempo e información *(Gausa, 2010) is a theory, a manual, and a dictionary aiming to articulate the impact that scientific discoveries (from fractals to system and chaos theories), philosophical thought (especially by Foucault and Deleuze), and technology (digital computing, mobility and communication systems) had on the practice of architecture. In the same way in which Picasso, Henry Ford, and Albert Einstein in early 20th Century influenced what would become, 30 years later, modern architecture; Marshall McLuhan, Guy Debord, Edward Lorenz, Benoît Mandelbrot, Gilles Deleuze, the Internet, and the first flight to the Moon, in the 60's, have influenced the work of architects at the end of the century (Gausa, 2010). The work of architects and writers such as Rem Koolhaas, Toyo Ito, Alejandro Zaera-Polo, Winy Maas, François Roche, Ben van Berkel, Caroline Bos, Eduardo Arroyo, Iñaki Ábalos, Juan Herreros, Aaron Betsky, Sanford Kwinter, Andreas Ruby, Bart Lootsma, and Stan Allen represented what Gausa and others called 'advanced architecture' (Gausa et al., 2003), an architecture that is multiple, relational, irregular, interactive, or, in other words, open (Gausa, 2010; Gausa et al., 2003).*

In Europe and the United States, notions of complexity, chaos, dynamic systems, and topology became recurrent in architects' theory and practice. These notions also raised increasing interest in the concepts of landscape and ecology. In the 80's and 90's, social progress, technical development, the interchange of information, and increased mobility fostered growing freedom in the occupation of space, generating a complex and interactive urban system. To use Sanford Kwinter's words, the city became to be understood as "a vital ecology with a rich life of its own", an autonomous adaptive organism, characterized by indeterminacy, mutation, and evolution (Kwinter, 1995, p. 26). Architects started experimenting with architecture and urban design projects that resembled 'landscrapers' (Betsky, 2006); mimicked 'artificial ecologies' (Allen, 1997) or artificial landscapes (Ibelings, 2000); manipulated logistics and infrastructural dynamics (Allen, 1999; Zaera-Polo, 1994); worked as 'machinic landscapes' (Mostafavi & Najle, 2003); and so forth. These theories also raised increasing interest in landscape architecture and landscape architects as experts in dealing with surfaces and projects that were dynamic and open-ended; a condition that a building could hardly achieve. Greg Lynn, in his famous essay "Architectural Curvilinearity: The Folded, the Pliant and the Supple" (1993), noted how Thom's catastrophe nets entered into architectural projects as a technique but also introduced an alternative description of spatial complexity. However, while diagrams and simulations could help to define the continuous variation of form, the folding process remained purely generative. Change and dynamism did not relate to the actual form of the end product (Lynn, 1993). In landscape architecture instead, spatial form was 'freer' and allowed to set a project that was capable of permutation,

open to change in space and time (Allen, 1997, 2014; Umemoto, 2011).

These same theories and urban changes, however, had an equally significant impact on landscape architecture, especially in the United States, where the discipline had passed a century of history and was quite consolidated.[1] Frederick Law Olmsted initiated the American professions of Landscape Architecture and City Planning in 1882, arguing for a synthesis of the two. He imported the English pastoral vision of landscape and applied it to urban parks, suburbs, and campuses, but he also saw in landscape the opportunity to accommodate the movement of pedestrians and traffic, the flow of water, and the removal of waste, creating a new typology of urban infrastructure in dynamic relation with the environment (Meyer, 1994; Spirn, 1996). In the 60's, landscape architect and planner Ian McHarg, influenced by environmental writings of that time, reinforced the power of landscape and ecology as guides for design. He advocated that nature could dictate the best conditions for urban development (McHarg, 1969) and made explicit this kind of information through a multi-layer representation of environmental characteristics. Along the same lines, Richard Forman's principles of landscape ecology translated ecological rules into spatial elements, most notably corridors, patches, and matrices (Forman & Godron, 1986).

However, these deterministic approaches seemed to fail when looking at the increasing complexity and indeterminism of the contemporary city. The supremacy of flows on fixed configurations and the rapid change of urban settlements required landscape - and especially landscape cartography - to shift from being exclusively deterministic (univocal, total, exact, and literal in its referent)

to becoming increasingly indeterminate (open, versatile, abstract) and evolutionary in its trajectories (Corner, 1999b). Post-modern landscape architecture challenged the pastoral aesthetic characteristics - á la Olmstead - and rigid determinism - á la McHarg and Forman - to pursue a project that could address the complexity of the city.[2] Dismissed postindustrial sectors of cities, suburban areas, sites of extraction, production, and infrastructure strained both urban centers and rural areas, presenting new challenges for landscape architects and urban designers alike (Corner, 1999a; Berger, 2007). These sites could benefit from an approach that allowed a certain degree of indeterminacy, flexibility, and change over time, understanding landscape and ecology as agents to organize large-scale settings establishing open and dynamic relations among parts (Corner, 1997; 1999a). The first projects by James Corner and Stan Allen's office Field Operations - the finalist and winning proposals for the defunct airport Downsview Park (1999, Toronto) and Freshkills's Landfill (2001, Staten Island) - represented an attempt to design through ecological processes, suggesting a new approach to both landscape architects and urban designers.

Landscape and ecology soon became mediums to understand and organize the whole city (Allen, 1999; Waldheim, 2006). Kenneth Frampton, in his 1995 essay "Towards an Urban Landscape", refers to Los Angeles as a dystopic megalopolis – one in which priority should be accorded to landscape rather than to freestanding built form. Before him, Reyner Banham had instead used the metaphor of the 'four ecologies' to describe Los Angeles as a city defined by relations and lifestyles rather than forms or objects (1971). In the 90's, Detroit became the manifesto of the emergence of landscape as a medium for urbanism (Daskalakis, Waldheim, &

Young, 2001). It is working on Detroit - the city that expressed at best the success but also the failure of industrial development and planning - that Charles Waldheim (2004) developed the concept of 'landscape urbanism'. Building on David Harvey's theories (1989), Waldheim underlined that the failure of the post-Fordist metropolis could not be attributed to designers, but it was instead the result of capitalist economic and political processes (2004). Under such an economic system, the growth and dispersion of urbanization, as well as the rapid obsolescence of industrial sites and infrastructure, are inevitable. Landscape, better than architecture, could make sense of these conditions by transferring the focus from the buildings, or local operations, to the whole city. Landscape urbanism could make sense of a city that was shrinking, sure, but was also expanding and mutating, proposing an approach that is flexible and undetermined, open to change in space and over time (Waldheim, 2004).

Nowadays, disciplinary divisions between landscape architecture and urban design as well as inter-disciplinary convergences like landscape urbanism are considered superfluous by most practitioners. The two disciplines have collated in many aspects, sharing instruments, theoretical references, and challenges. Preoccupied with climate change, pollution, loss of biodiversity, and reassured by the increasing revenue that parks generate, municipalities and states are investing a significant number of resources in landscape design. Is open-ness still a needed characteristic for urban design projects? And to what degree can this - quoting from the call of this issue - make sure that the project will "adapt to dynamic and fluctuating circumstances" and "incorporate the indeterminate and unpredictable parameters that will have

an impact in the future"? Does landscape design still provide a powerful medium to achieve open-ness and to what degree? What are its values and limits?

The following projects are all developed by landscape architects and are chosen intentionally to differ in scale and purpose. The Detroit Future City Strategic Framework Plan proposes a set of guidelines, objectives, and design strategies to deal with undetermined conditions of the city. The Brooklyn Bridge Park is a 2-kilometer-long park developed on what was previously the Brooklyn harbor facing Manhattan; several connections and a promenade link together a series of piers characterized by different programs and multiple users. The Living Breakwaters project proposes a large-scale proposal in which oysters and activists collaborate in creating a dynamic system to increase the resilience of the coastal landscape. Becoming Garden is an installation that offers the opportunity to create new interactions in a tough neighborhood. The Atlas for the End of the World is a series of critical and projective cartographies that expand the scope of landscape conservation and design to the global scale.

OPEN AS UNDETERMINED (OR UNFINISHED)

Stoss Landscape Urbanism, The Detroit Future City Strategic Framework Plan, *Detroit, Michigan, 2013.*

Once the most representative city of modernist planning and capitalism, Detroit became the most representative example of their failure. At the beginning of the 21st Century, Detroit stood devastated. Whole urban blocks were demolished and spontaneously returned to nature. In 2010, Detroit Future City (DFC) was funded as an independent think tank, policy advocate, and

innovation engine to focus on the future of that city. In 2013, DFC, in collaboration with Stoss – a Boston based landscape architecture and urban design office –, presented The Detroit Future City Strategic Framework Plan. The Plan is a comprehensive, action-oriented roadmap for decision-making to improve the quality of life and business in Detroit. The project identifies productive efficiencies by establishing links between social, economic, and ecological systems and provides a series of landscape strategies to be implemented wherever the local conditions make it favorable. Various types of blue and green infrastructures are set up on vacant lots to clean air, water, and soil and to improve the health of urban ecosystems. Unoccupied land becomes the primary resource.

The Detroit Future City Plan has received criticism for adopting design strategies that disproportionally burden its poorest and most isolated residents, and, as such, has been "forced to redesign its public participation mechanism" (Clement & Kanai, 2015, pp. 382-383). However, the proposed framework was open enough to adjust according to feedback and new challenges and incorporate the many initiatives involving artists, landscape designers, private investors, and community organizations.

OPEN AS MULTIPLE (OR MULTI-LAYER)

Michael Van Valkenburgh Associates MVVA, Brooklyn Bridge Park, *Brooklyn, New York, 2003-2018.*

The Brooklyn Bridge Park site is a 2-kilometer-long park extending along the shore of the East River. The majority of the site was a defunct bulk cargo shipping and storage complex, rendered obsolete by the rise of container shipping. Out of operation since 1983, the complex

included six piers and several upland warehouse buildings. The project, designed by Michael Van Valkenburg Associates MVVA, was started in 2003, when more and more people were moving from an increasingly expensive Manhattan to Brooklyn (DUMBO had just been registered in the National Register of Historic Places district in 2000), and finished in 2018. Although the park undoubtedly offered a backbone for hi-end real estate development along the shore, it provides space for a wide variety of settings and programming. Public sport fields, play grounds, pic-nic areas, beaches, and lawns are in majority free and for multiple users, transforming the park into a vital urban threshold and social infrastructure with spectacular views of the Manhattan skyline. The park was also designed to withstand storms and major floods. In 2012, although Hurricane Sandy struck many piers, the park weathered the storm relatively unscathed. Topographical changes blocked incoming flood waters, soft edge treatments of rip-rap and salt marshes held up against violent water forces, and the park itself soaked up waters that might have damaged the surrounding neighborhoods further.

OPEN AS DYNAMIC (OR FLEXIBLE)

Kate Orff Scape Landscape Architecture, Living Breakwaters, *Staten Island, New York, 2012-ongoing (implementation 2019).*

In 2012, Hurricane Sandy impacted 13 States and ravaged the New York-New Jersey region, revealing the real physical and social vulnerabilities that all coastal cities face from sea level rise and extreme weather events. As a result, President Obama's Hurricane Sandy Rebuilding Task Force launched an innovative design competition, Rebuild by Design, that encouraged different approaches to create more resilient cities and coastlines

(Bisker, Chester & Eisenberg, 2015; Ovink & Boeijenga, 2018). Scape was one of the leading winning teams of the Rebuild by Design competition. Their project Living Breakwaters was proposed for the South Shore of Staten Island, linking in-water protective interventions to on-shore resiliency and community engagement. Building on the Oyster-tecture project proposed by Scape for the MoMA exhibition 'Rising Currents' (Bergdoll, 2010), Living Breakwaters employs a necklace of breakwaters to buffer neighborhoods from wave damage and erosion while providing a more biodiverse habitat for juvenile fish, oysters, and other organisms. The living infrastructure is paired with social resiliency frameworks in adjacent neighborhoods on-shore to help increase awareness of risk, empower citizens, and engage local schools in waterfront education (Orff, 2016). The proposal incorporates hydrodynamic and wave modeling, ecological data collection, active community feedback, agency coordination, and constructability assessment and is currently being implemented by the Governor's Office of Storm Recovery.

OPEN AS INTERACTIVE (OR SHARED)

Coloco and Gilles Clément, Diventare Giardino *[Becoming Garden], Palermo, Italy, 2018.*

French landscape architects and artists of the multidisciplinary design studio Coloco often collaborate with landscape designer, botanist and philosopher Gilles Clément, conceiving gardens as an open project in which the designer provides the guidelines but then it is up to the citizen to build and maintain the project, reacting to the evolution of nature. The 'Diventare Giardino' project was created in occasion of the Manifesta 12 – Palermo biennial exhibition 'The Planetary Garden.

Cultivating Coexistence', curated by Ippolito Pestellini Laparelli, Bregtje van der Haak, Andrés Jaque, and Mirjam Varadinis. In their mission statement, the group cites the same Gilles Clément who described Earth as a 'planetary garden' with humanity as its gardener (Clément, 1997). For this exhibition, Coloco and Clément recycle an abandoned plot of ZEN II, a modernist social housing district designed by Vittorio Gregotti and partially built between 1975-1980 – a site at the center of permanent controversies and political debates. The Diventare Giardino project consisted in setting the ground for a long-term appropriation of the residential common space by engaging the inhabitants in preparatory workshops, creating soil fertility conditions that are resilient to the changing climate of the Mediterranean, encouraging botanical biodiversity, and revealing the natural ability of plants to inspire solutions for the contemporary habitat. Based on Gilles Clément's idea of the planetary garden, Coloco invited residents to become gardeners of their common area, harvesting and maintaining a new form of shared space with a long-term impact.

OPEN AS EXTENDED (OR UNLIMITED)

Richard J. Weller, Claire Hoch, and Chieh Huang, Atlas for the End of the World, *2017.*

The Atlas for the End of The World was conceived in 2013 by Richard Weller to assess the target set by the United Nations Convention on Biological Diversity's (CBD) to protect 17% of the global terrestrial area by 2020. As of 2016, the world's terrestrial and inland waters protected area total was hovering 15.4%, meaning that an additional 1.6% of the global terrestrial area needs to be secured under the International Union for the Conservation of Nature's

standards. The Atlas for the End of the World was conceived to analyze the extended state of urbanization and ecosystems but also to find out where, as a matter of priority, this land – which is the equivalent of 695,835 Central Parks - should be protected, and how can design and landscape architecture, in particular, assess its conservation and transformation (Weller, 2017). Designed as a web-based interactive document, the Atlas surveys the status of, and conflicts between, conservation, land-use and urban growth in the world's 36 biodiversity hotspots - regions which by definition harbor the most threatened and irreplaceable biodiversity on Earth. The Atlas also identifies 383 of the 422 major cities in the hotspots, which are sprawling, and forecast to continue to sprawl, in direct conflict with remnant habitat and endangered (Red Listed) species. Through its analysis of both large-scale land-use and peri-urban growth that is in conflict with biodiversity, the Atlas serves as a geopolitical tool for planners and conservationists to focus and prioritize their efforts and prepares the ground for the involvement of landscape architecture in regions where the profession's skills are most needed (Weller, 2017).

CONCLUSIONS – OPEN AS OPEN

Richard Sennett notably contraposes the 'closed city' - the segregated, regimented, and controlled urban environment - to the 'open city' where citizens actively hash out their differences and planners experiment with urban forms that make it easier for residents to cope (Sennett, 2010, 2018). When it comes to design, these translate into creating borders - spaces of interaction and exchange - instead of boundaries – lines of separations; leaving projects unfinished and creating unresolved narratives (Sennett, 2010). Although theoretically

Sennett's concept suggests a promising, enticing alternative, in practice we are actually moving in the opposite direction. The fact that malls and department stores have replaced urban public space is nothing new. Today, even in the case of public parks and gardens, we are witnessing a relentless circumscription and privatization. Especially in the United States, private donors, associations, and companies sponsor the construction of public spaces that will carry their name, or that will be available to host private events, limiting public access. Even climate change, one of the main challenges of our century that sparked a renewed interest in landscape and ecology, is often seen as an opportunity for economic growth.

According to the United Nations latest reports on Climate Change (United Nations Environment Programme, 2018), our goals to start lowering our fossil fuel emissions after 2020 will fail. Global warming, sea level rise, storms, droughts, erosion, and the many effects that these causes will only worsen in the years to come, leading to massive loss of biodiversity, population displacement, and migration. Despite the effects that these changes are having on mobility, housing, property, and people's everyday life, urban planning exclusively relies on an understanding of land and real estate as permanent commodities. Also, many of the large parks designed to mitigate the effects of climate change are partially funded by private developers that will repay the investment through the increased value of their nearby properties and new developments, or obtaining construction rights on other (often equally sensitive) areas. This logic is fomenting the same economic dynamics that are claimed responsible for climate change in the first place (McWhirter, 2018) and is exacerbating

social inequality. While the most vulnerable areas of cities and territories are often posed at greatest risk – in a vicious cycle that has been defined by many as 'climate gentrification' - parks and waterfronts become more and more like objects, with well-defined boundaries and users.

The projects presented above represent examples of possible alternatives, in which the indeterminacy, dynamism, multiplicity, interaction, and extension that have characterized landscape and ecology are not lost in the design process and may endure in its implementation. The Detroit Future City Strategic Framework Plan, despite the limits represented by its looseness, sets environmental objectives and relational parameters that create a platform through which new development projects can be evaluated and mitigated. Scape's Living Breakwaters proposal for the southern shore of Staten Island consists in building a series of water barriers in which local fishes and oysters can proliferate and contribute to the consolidation of the protecting hedge. Residents are also involved in the project through educational workshops and 'ecological walks' that aim to actively engage people in the maintenance of the waterfront and raise awareness on the risks of erosion. The Brooklyn Bridge Park, although more traditionally a park and certainly a driver for new luxury real estate development, includes such a variety of open activities and brilliantly orchestrated change of scenery, to attract a very diverse public any time of the day. Coloco's Becoming Garden is a small project, yet it is an excellent example of landscape as a medium for interaction, among people and with the environment. With a few elements, the project activates a process in which residents start to take care of their common space by

reacting to the spontaneous growth of different species. Finally, the Atlas of the End of the World shows the extended impact that design could have, beyond the specific sites and including global ecosystems, geopolitics, and education.

Richard Sennett (2018) suggests that the closed city has spread from the global North to the exploding urban agglomerations of the global South. Resiliency to climate change, industrial sites reclamation, waste treatment, air quality, are objectives that must be tackled globally. Many of the obsolete industrial sites emerging in Europe and North America after the 80's are the result of international corporations moving the production to countries like China, India, Mexico, and Brazil. In the future, landscape design will become increasingly relevant in these countries, as the incredible success of practices such as Turenscape by Kongjian Yu in China already shows. Latin American capital cities such as Medellin, Bogotá, São Paulo, Mexico City, and Santiago de Chile are currently investing large amounts of resources in creating more livable cities and green infrastructure and restoring industrial sites that have become obsolete or shrank in size, fomenting the emergence of interesting landscape design projects and interdisciplinary practices[3] (Aparicio & Sordi, 2017). Beyond the reference projects presented in this paper, there is a great opportunity to build an alternative discourse on landscape at the global scale, one that might escape the logic of the closed city and instead insist on pursuing an open landscape project that is indeterminate, dynamic, multiple, interactive, extended. m

NOTES
(1) The first European program in Landscape Architecture was funded at the Norwegian Institute of Life Sciences in 1919. In 1962, Reyner Banham famously claimed that while English landscape painting was a singular contribution to art, no such claim could be made for landscape architecture. Landscape design was a copy of painting, which was itself a copy (Banham, 1971).

(2) Post-modern landscape architecture was equally inspired by architecture projects - such as Bernard Tschumi's and OMA's la Villette Park Competition - and essays by historians (Reyner Banham), philosophers (Henri Lefebvre and Gilles Deleuze) and political geographers (Edward Soja and David Harvey).

(3) See: www.landscapeasurbanismamericas.net

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