WAITING PLACES

weak strategies in spaces of displacement

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PREFACE

Complex infrastructural design for emerging environments.

During the XX and XXI Century, the rapidly changing geo-political, economic, and ecologic conditions made clear that the context for urban design projects is dynamic, and it evolves together with its surrounding emerging environments.
In recent decades, this shift of paradigm (Khun, 1962) posed a challenge to architecture, which appears unable to tackle the complexity of rapidly evolving environments. In 2006, Andrea Branzi wrote "It seems almost as though the reign of that which we call architecture has now been transformed into a thin, traversable diaphragm, in a sort of transparent screen placed between two continents – that of the networks and virtual urban services, and that of internal spaces, of operative systems, of ambient component ware, flexible and ductile, capable of following the continuous mutations of productive and social functions" (Branzi, 2006; p. 16-17).
Nowadays, the continuous "mutations of productive and social functions" (Branzi, 2006) constitutes one of the most common reasons for functional obsolescence of the built environment, and consequent need for adaptation of a given site. Consequently, the notion of "mutations" (Koolhaas et al, 2001) suggests that temporality, the movement of flows, and in-formal processes are foundations for contemporary designs. Although theoretically expressed, the notion of mutation is a key concept for the interpretation of phenomena related with rapid urbanization and de-urbanization. For this reason, the interest of the research does not rely on static architectural forms, but rather on those elements, dynamic and mutable, which characterize contemporary urban living practices.
The aim of this paper is to explore those practices, and especially flows' containment features, as one of the basis for shared life. Therefore, their hybrid identity is based on both technical elements and their integration with social and environmental context, and is the basis for the development of an "urban" space. The interface between these two aspects is the infrastructure, as

a product of a building process that is related to urban dynamism. At first, infrastructural design deals with long time spans, both in terms of design process, operational time and decommissioning, sometimes quantified in hundreds of years. Secondly, because of long time spans, infrastructural design acknowledges complexity by considering a variety of hazards and risks that could affect the system during operational time. Thirdly, albeit often conceived following sectoral rationalities, with little to no interest for the relationship with the social and environmental context besides quantitative calculations on flows, as ridership figures or traffic volumes, infrastructural constructions have a significant impact: they shape the city form because of their lying on the ground.

The definition of infrastructure is complex, and controversial. The Merriam Webster Dictionary (2014) defines infrastructure as the "underlying foundation or basic framework (as of a system or organization), the permanent installations required for military purposes, the system of public works of a country, state, or region; the resources (such as personnel, buildings, or equipment) required for an activity". According to Paul Edwards, the terms originated in the military parlance meaning fixed facilities, while later it expanded its semantic range to include "any important, widely shared, human constructed resource" (Edwards, 2002; p. 187). Edwards continues his argument by mentioning the concept of "flow" (referring to Manuel Castells' "space of flow") as key for the definition of infrastructure as the construction that allows flows of goods and services to function. For this reason, he defines the infrastructure as "sociotechnical in nature" since it implies organization, background knowledge, general reliance, widespread accessibility (Edwards, 2002; p. 188).

The case study of the Bekaa Valley camp presented in this book clearly expresses the position of this paper.

Formerly agricultural fields, under the pressure of migratory flows originated in Syria, the land is converted in a refugee camp, defining an emerging urban environment in the area. The urban condition poses the challenge of containing basic flows as storm water and sewage in the short term, while avoiding permanent installations to allow for a variety of uncertain mutable scenarios, unplanned at the present state.

This problem could be tackled in two ways. The first and merely technical one would generate a solution based on standard elements as prefabricated septic tanks and pipes, combined to simply perform as a sewage system. The second approach, let us call it "sociotechnical" (Edwards, 2002; p. 188), would consider the infrastructure as a complex system that has an obvious practical function, but also plays a role in the urban realm defining public spaces, their perception, and a variety of ephemeral

conditions as smells and shades that could allow people to inhabit it. This approach would in fact generate a complex ecology and a landscape, having quality of space, quality of life and livability as the main goals.

In the above-mentioned project, a careful choice of technologies, and their displacement on site lead by the idea of "working across boundaries" (McKinney et al, 2009) rather than reinforcing them defines a sociotechnical approach. The strategy involves the use of not-permanent vegetal materials, ensuring the system accountability together with perceptive and spatial qualities for people inhabiting the camp. An hologrammatic territorial concept, defined through ecological patterns, suggests a weak strategy (Branzi, 2006) of land inhabitation. Moreover, the provision for the spread of Brassica juncea, an invasive plant erasing the work of the designer in case of functional obsolescence, metaphorically represents the openness to multiple future scenarios.

In conclusion, rapidly emerging environments require a complex approach toward infrastructural design. A better integration between the engineering disciplines and the landscape design at an early stage is strategic to deploy on the land built objects working on multiple levels, from the basic, functional one of accommodating flows, to the complex one of accommodating life and unplanned events. Within this framework, landscape design discipline and its practices play an important role: using soft materials, and a design rooted in process rather than form, landscape could be the interpretative tool of the mutual relationship between built objects and the surrounding mutable emerging environments.

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