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“The urban grid, between symbolic and diabolic space“

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Introduction

The aim of this research is to investigate about different meanings attributed to the urban grid throughout history, in order to reinterpret its use in present-day planning practices. The focus will be put on ideological interpretations, in relation to presumed social and political implications in the use of the grid, and with regard in particular to the context of the last two decades, analyzed through the case studies.

The research concerns on one hand the use of the grid as tool of spatial and juridical organization of the territory, in relation to its formal specificity. On the other hand cultural, social and political meanings assigned to the grid will be questioned in relation to the different cultural contexts in which they arise.

A common thread guiding the research is a question about a possible dichotomy between a *symbolic* and a *diabolic* character of the grid. The terms *symbolic* and *diabolic* are used here as purely metaphorical and conceptual categories to interpret different aspects of the urban grid throughout history, cultural contexts and theories.

The urban grid is considered “symbolic” – etymologically meaning “throwing things together” - when it represents the cosmos, its order, its ontology and when it presents a meaningful center, where people and meanings are concentrated. As symbolic structure, the grid helps citizens to physically and mentally orientate within their city. “Symbolic” cities are finite, delimited entities with proper dimensions and a proper order. They present a “centripetal force” and are not supposed to expand over their set limits.

On the other hand “diabolic” has the etymological meaning of “throwing things apart”, suggesting the idea of a centrifugal force and a consequently empty, insubstantial center.

This might be the case of the modern grid in the “generic city” or in the “city-territory”, whose structure is potentially infinite and tending to expansion all over the territory, overcoming the distinction between city and surrounding nature, between urban fabric and countryside.

The methodology of the first two chapters consists in a non-chronological historical analysis, which considers examples of uses and meanings of the grid. The examples will

be compared at the level of formal features, which become conceptual categories for a deeper analysis of the grid in relation to its cultural, social and political implications.

The third chapter presents an analysis and comparison of case studies. It develops in a similar methodology, based on an open analysis of formal categories, and combined with an iconographic analysis of plans and representations of the projects taken into consideration as case studies: OMA's "Mission Grand Axe", and Zaha Hadid Architects' "Kartal-Pendik Masterplan".

In the end the work of the architecture team DOGMA will be presented as an alternative answer to the post-fordist situation of planning practices. In their projects the grid assumes a role of neutral frame and fundamental structure for the definition of a basic architectural grammar and for the development of an *autonomous* architecture.

This thesis is then concerned with the relationship of planning forms - in particular of the urban grid - with their cultural contexts and ideological implications. An investigation about the grid becomes also a pretext: its goal is to analyze the grid as paradigm for the interpretation of social and political dynamics, which occur in relation to planning practices.

Chapter I

Geometries

In this first chapter I will present an investigation about the grid as tool for the definition of spatial order, and about its juridical or functional values in relationship to the territory the grid is applied on.

With the grid planners inscribe on the territory a geometry, often negotiated and compromised with local qualities of the land, with its physical features or cultural traditions, while sometimes its realization tends to be as much as possible uncompromised and precisely following the image of a perfect geometry. The need for applying a perfect geometry on a land is basically the need for measuring, as the etymology of geo-metry – earth's measurement - suggests. Karl Schmitt helps us understanding what the grid is there to measure, through his definition of “nomos”. This word is generally translated with “law”, but looking at its origin and historical uses it reveals a significant relationship between the juridical order of a society and the spatial/physical order of the *appropriated* land, thus, “between order and orientation” – *Ordnung* and *Ortung*.

The spatial order it represents is based on those acts of appropriation, delimitation, subdivision of land which constitute the basis for social norms to be inscribed. “Nomos” is the Greek word for the first land-appropriation (Landnahme) and subdivision (Raum-Teilung).¹ It originally comes from “nemein”, which means land subdivision² When *order* can't prescind from spatial *orientation*, the grid could be considered the basic tool for an

¹“Das griechische Wort für die erste, alle folgenden Maßstäbe begründende Messung, für die erste Landnahme als die erste Raum-Teilung und -Einteilung, für die Ur-Teilung und Ur-Verteilung ist: Nomos.” Schmitt, 1974

² „Nomos dagegen kommt von *nemein*, einem Wort, das sowohl “Teilen” wie auch “Weiden” bedeutet. Der Nomos ist demnach die unmittelbare Gestalt, in der die politische und soziale Ordnung eines Volkes raumhaft sichtbar wird, die erste Messung und Teilung der Weide, d. h. die Landnahme und die sowohl in ihr liegende wie aus ihr folgende konkrete Ordnung; mit den Worten Kants: “Das austeilende Gesetz des Mein und Dein am Boden”; oder, mit dem anderen, gut bezeichnenden englischen Wort, der *radical title*. Nomos ist das den Grund und Boden der Erde in einer bestimmten Ordnung einteilende und verortende Maß und die damit gegebene Gestalt der politischen, sozialen und religiösen Ordnung. Maß, Ordnung und Gestalt bilden hier eine raumhaft konkrete Einheit.“ Schmitt, 1974

efficient subdivision, measuring of land and ordering of space and society, because of the specific features of its geometry.

What is common between all types and examples of grids and could define the grid as such is a system of rectilinear and parallel axes, crossing each other at right angles and constituting a continuous interconnecting fabric. However, there are many exceptions confirming this rule. Trying to avoid a strictly structuralist approach, the features of *two-dimensionality*, *rectilinearity*, *orthogonality*, *continuity* presented below should be read as conceptual correspondences to juridical or functional principles applied to the organization of land.

Two-dimensionality

As most of urban plans, the grid plan is two-dimensional and usually thought for a flat surface. The grid requires as first step the process of making a virtual, if not even physical, *tabula rasa* on a land, conceiving the territory as surface.³ Like plans in general, the grid plan is firstly an image, the idea and representation of an order, and more than any other urban structure it needs this conceptual “leveling” of land. Its corresponding image is the cartographic image, which reduces the earth to its own surface and reality to its representation. Therefore, the grid as cartographic image represents the translation of a metaphysical or rational order of interpretation into the physical space, through a two-dimensional geometry.

For instance, Rykwert explains how citizens of ancient Roman cities could relate their form to the cosmological order, thanks to the two orthogonal axes: “boundaries are never drawn without reference to the order of the universe, for the decumani are set in line with the course of the sun, while the cardines follow the axis of the sky”⁴.

³ “Where the land is flat, the grid s on its own. This is the closest the city planner will come to a blank sheet of paper. On level ground a standardized format can be painlessly repeated. ... Roman towns in Gaul, it has been observed, “demonstrate a quite remarkable disdain for existing features... The demand was for a virtual *tabula rasa* .. so that the new city could be shown in a condition of ‘perfect horizontality’” Quoted in Kostof, 1993

⁴ Rykwert, 1963

The city was a tool for coding and decoding the meanings of a cosmological order, but not only an analytical tool; city is seen in Rykwert's work as a huge symbol of the cosmos, which enhances memory and knowledge, as a complex of signs through which inhabitants would identify themselves in a common past.⁵

Throughout history the city can't be separated from its representational role. According to Franco Farinelli the city doesn't exist without the map and viceversa, it can exist only as a self-conscious cultural construct. Exemplary is the case of Catal Huyuk, site discovered in Anatolia dating back to the 7000->5000 b.C. Its fresco is the only prehistoric urban map we have nowadays, depicting the city below the volcano Hasan Dag while erupting. The volcano is represented in axonometry, while the inhabited site is represented from a bird-eye perspective. The part representing the city is abstract - an almost geometric grid of urban blocks. Thanks to this abstraction it is much more than the first landscape ever painted: it is an act of urban self-consciousness, of awareness about the specificity of the nature of an urban organism. Thanks to this ability to create an abstract reflection about itself, Catal Huyuk can be considered a city⁶.

Rectilinearity and orthogonality

Rectilinearity is the basic principle for abstraction and for the representation of an order. It spatially corresponds to the *rule* in as much as it represents a direction: "rule" comes from the latin "regula", the straight line drawn by the *Rex* - the priest - on a land in order to define a territory. *Regere fines*, the original religious act of construction, means to draw the borders in a straight line. It represents the act of foundation of a city by a priest, consisting of the delimitation on the ground of the sacred space dedicated to the city⁷. With the borders is defined as well the area of influence of a certain rule/jurisdiction. This act gives the rules, the directions to follow in order to be part of a society. Every irregularity is leveled, in order to give a stable foundation to the normative building of a society.

⁵ Rykwert, 1963

⁶ Farinelli, 2003

⁷Émile Benveniste, quoted in Zanini, 1998

Rectilinearity combined with two-dimensionality tendentially leads to orthogonality as basic and most “neutral” principle for a spatial structure: given a flat surface and two directions, they need to be orthogonal to each other in order to obtain angles of the same size. The homogeneity of such a structure creates a supposedly neutral space which can serve as frame, and coincides with the general rule of the grid. According to Deleuze and Guattari, framing corresponds to territorializing. The frame is what establishes territory out of the chaos, and it is the first construction, the corners of the plane of composition. With no frame or boundaries, there can be any territory, and without territory there may be objects but not qualities that can become expressive, that can intensify and transform living bodies. Territory may be understood as surfaces of variable curvature or inflection that bear upon them singularities, eruptions or events⁸.

A singular interpretation of orthogonality as basic principle for coordinating space, movement and perception is based on human physiology. According to an explanation of Euclidean geometry by Elie de Cyon, the human experience has three dimensions, because the human ear has three channels, orientated on three planes perpendicular to each other.⁹

A straightforward functional explanation of orthogonality in urban patterns is the Commission’s report of 1811 about the Manhattan project, which states flatly “that a city is composed of the habitations of men, and that strait sided, and right angled houses are the most cheap to build, and the most convenient to live in”¹⁰.

Continuity and interconnection. The fabric

The sectors created by the subdivision of space through the grid are interconnected by the grid itself as fabric. An important feature is the continuity of the fabric, which creates a *homogeneous* space, homogeneous in subdivision - a modular space – and with homogeneous orientation of the obtained sectors. It implies a general rule and a single unit of measurement.

⁸ Grosz, 2008

⁹ La Cecla, 2011

¹⁰ Kostof, 1993

The metaphor of the fabric is used by Deleuze and Guattari to explain the concept of striated space as “the space instituted by the State apparatus”¹¹. In a striated space, “in the simplest case, there are vertical and horizontal elements, and the two intertwine, intersect perpendicularly ... a striated space of this kind is necessarily delimited, closed on at least one side ... Was it not these characteristics that enabled Plato to use the model of weaving as the paradigm for ‘royal science’, in other words, the art of governing people or operating the State apparatus? ... Geometry lies at the crossroads of a physics problem and an affair of the State.”¹² For this reason the character of the grid as fabric has been often read as tool for the overall control and territorial influence of a certain power. “The advantage of straight through-streets for defense has been recognized since Aristotle, and a rectilinear street pattern has also been resorted to in order to keep under watch a restless population. Refugee and prisoner camps are obvious settings”¹³.

Combining the defining principles of the grid, it seems to be the basic geometry to spatially and juridically define a territory in a uniform, homogeneous organization.

Grid as common unit of measurement

The grid provides a common unit of measurement to the territory on which it has been superimposed. It gives a common orientation and a reference system to a whole territory as it would have always been a kind of Cartesian coordinate system, which allows an analytical conception and use of space. Regarding the planning of *bastides* in the Middle Age, for instance, the orthogonal plan “was the only system that facilitated the calculation of area and the coordination of parts”; as David Friedman puts it, “in the Middle Ages it is only on an orthogonally articulated plane that the precise location of a point could be known”.¹⁴

Along different traditions, we can find similar territorial systems based on a common unit of measurement applied to the whole territory governed by a state and creating a

¹¹ Deleuze and Guattari, 1987

¹² Deleuze and Guattari, 1987

¹³ Kostof, 1993

¹⁴ Quoted in Kostof, 1993

correspondence of measurement between the city's plan, the survey of surrounding agricultural land and the colonies.

According to Kostof, "the control of their countryside has always been a main worry of cities. A program of colonization or land reclamation is particularly dependent on the equitable distribution of agricultural land if it is to attract settlers. This often entails a large-scale grid of some sort. The two rectilinear systems of town and country are likely to follow similar rules applied at different scales, and the same unit of measurement. In early imperial China this unit was the *li*, which roughly corresponds to the Greek *stadion* (ca. 600feet/180m)." In the case of the Roman centuriation the standard measure was the *actus* (120feet/ca. 37m), which was the standard measure gave by the State for planning¹⁵. The same measurement system was valid for both town and countryside planning and same surveyors were in charge of both¹⁶.

Another significant example is the case of Spanish colonies in the New World, where "land management was practiced on a regional basis. The jurisdiction of the original colonial cities was extraordinarily large. The territory of Asunción stretched for some 300 miles (500 km.) in every direction: the whole of present-day Paraguay thus belonged to this one city. Land tracts were generally square, 10.000 *varas* on each side."¹⁷

The organization of North American territory with the National Survey of 1785 was based on *miles*: townships measured 6 by 6 miles. Every other township was subdivided into plots one square mile in area and the 36 sections were eventually broken into more manageable halves or quarters. In the precedent examples the survey adjusted to topography, while "the national Survey of the United States was strictly oriented to the points of the compass"¹⁸.

¹⁵ "As a rule, town planting was the State's prerogative, and its responsibility as part of broad administrative policy. These official plans were straightforward, and sometimes standardized. Verona and Pavia had identical grids, and blocks of equal size. Where private benefactors or local authorities became involved, cities were rarely comemed with such prosaic regularity". Kostof, 1993

¹⁶ "There was no strict separation between planned cities and the rectangular land survey of the agricultural land around them". Kostof, 1993

¹⁷ Kostof, 1993

¹⁸ Kostof, 1993

What does it culturally and politically mean to adopt a single measurement system? As two-dimensional space the grid measures a land surface or spatial relationships - i.e. distance - with geographical features, while these spatial measurements correspond to measurements of a different order, a symbolic or representational order, mainly representing the area of influence of a certain power. According to Schmitt, jurisdictions are originally related to land appropriation – *Landesnahme*, “taking of land”. The “*nomos*” of a territory is the terms of its original appropriation, its taking - in German “*nehmen*”. According to Schmitt, this was the jurisprudential basis for the European appropriation of the New World. Thus, the act of delimitation and subdivision of a territory is not simply a partition of property, but has usually the goal of keeping control on the territory by a central power, for instance by applying a system of taxation on land property.

According to Corboz, a modern state can’t prescind from this kind of overlooking control and from the idea of a homogeneous and *measurable space*. He distinguishes it from the “elastic” space of Middle Age, when for instance the idea of moving Venice to Byzantium¹⁹ was seriously taken as a possible strategic initiative. This plan is only conceivable when it implies an idea of elastic, mobile territory, a “smooth space”, not confirmed on a site by an earth’s *nomos*.

An “elastic territory” doesn’t satisfy the need of a modern state for a total, exact and unitary representation of land.²⁰

The conceived possibility of applying a common measurement system of a certain juridical and social order to a new territory corresponds to the consideration of a

¹⁹ “En 1229, le doge Pietro Ziani propose de transporter Venise à Byzance ... Par son contenu légèrement surréaliste, cet épisode fait toucher du doigt les conditions matérielles dans lesquelles le pouvoir s'exerçait jusqu'au *XVIe*, siècle au moins, incapable qu'il était, par défaut d'instruments, de mesurer exactement les termes d'un problème géopolitique. ... la démesure des croisades : par une carence de la représentation.” Corboz, 2001

²⁰ “Ce territoire élastique ne pouvait satisfaire aux exigences d'un Etat moderne. Il importait donc de le représenter à la fois totalement, exactement et unitairement. Un système de triangulation, une méthode de projection, un catalogue de signes s'élaborèrent peu à peu, jusqu'à acquérir une souplesse et une précision littéralement fabuleuses. La cartographie scientifique des Cassini mise au point au cours du *XVIIIe* siècle s'est partout substituée aux méthodes empiriques des relevés à but fiscal qui se pratiquaient alors en Europe ; la base nationale de son réseau géodésique autorisait une coordination systématique des informations sectorielles, organisées en un système logique sans faille”. Corboz, 2001

territory as still juridically undetermined, which often implied the lack of acknowledgement of already existing sovereignties or jurisdictions of the land.

In a perspective conceiving a space as juridically neutral, the grid seems to be the most efficient pattern for a rapid appropriation of “untouched” lands. In Greek colonies by 600 BC, for instance, “there was no prior Greek village structure that had to be respected, no ancient Greek sanctities. So there was no justification for the making of ‘organic’ cities through synoecism or other processes of assimilation, as had been the case in the homeland. Prior land division did not have to be respected. In the colonies the land was culturally and ritually blank - from the Greek point of view of course. You brought your gods and their cults, and institutions like the agora, that premier symbol of self-governance, and the concept of the *polis* - city-state - itself.”²¹

Similarly, “to the Romans of the late Republic and the early Empire, the grid represented the New Order. It was not wasted on small local towns in the provinces, which could remain ‘organic’. But colonies, capitals of provinces – *municipia* - and capitals of *civitates* where the administration of each Gallic nation was centralized had to be gridded.”²²

This sort of attitude toward a colonized territory is present in the whole history of colonies up to the extreme cases of South and North American colonies: “settlers on the frontier, whether from fear or simple greed, treated native Americans as part of the landscape rather than as fellow human beings; on the frontier nothing existed – it was a void to be filled up ... the farms were expected to be engulfed rather than incorporated ... development according to the grid abolish whatever existing settlement was encountered. In this neoclassical age, ... they aggressed against the environment; their victories lay in neutralizing it. ... Instead of establishing the significance of place, control operated through consciousness of place as neutral”²³.

²¹ Kostof, 1993

²² Kostof, 1993

²³ Sennett, 1992

From the closed to the open grid

Besides the similarities between different historical uses of the grid plan, an important transition occurred from a pre-modern to a modern approach.

The application of the grid in pre-modern history was delimited to a given area. It was a second step of a city's foundation, following the act of delimitation of the area where the city was supposed to develop. The grid, combined with the city's borders, formed a closed figure, a diagram, therefore a representation of a closed order, including a more or less fixed/articulated system of public and private, sacred or profane spaces, which configured the city as an organism. Therefore, the grid wasn't supposed to expand over its set limits.

An example is the Roman grid. Rykwert talks about the ritual acts of foundation, which were firstly based on the delimitation of the area devoted to city's development. The drawn limits had a symbolic and sacred value, they could be crossed only through the gates. Only after the definition of the borders the grid could be drawn, starting from the two main axes, which defined the focus, the symbolic center of the city, usually marked with a public square. The limits and the centralized structure allow a formal/diagrammatic composition of the urban fabric, and rhythmic arrangements of streets.²⁴ The symbolic meaning of city's form is given by its being an enclosed image, a diagram.

According to Franco Farinelli, it is with the return of the rectilinear and orthogonal plan from classical times in the Erculean addition of Ferrara, designed by Biagio Rossetti end of 15th century, that the modern conception of space starts, reducing the city to a spatial extension. This new vision will gradually lead to an increasing abstraction of space and will provide the conceptual basis for a functional use of land and for its capitalistic management.

²⁴ "Whether restricted by its own defensive armature or by consensually set up natural barriers like farm fields and common lands, a closed grid to some extent composes itself. Some of the elements at the disposal of the designer are rhythmic arrangements of streets, the creation of a strong center, and the disposition of open spaces. Street rhythms are variously generated. The designer might scan unequal street widths, or unequal street intervals". Kostof, 1993

With the rise of a modern conception of urbanism, with the expansion of cities or development of modern cities of foundation, the city gradually loses its fix and sacred limits to develop a conception of extensible urban fabric. The grid is then allowed to spread, extend over its first delimitation, and therefore loses its symbolic meaning as part of a diagram which represents the organization of the city and identifies a social order.

Already with the “Laws of Indies” of 1573 Spanish colonies in South America were intended to possibly grow from the central *plaza* outward thanks to the easily extendible gridded patterns. The grid also allowed to avoid the loss of symmetry of the urban fabric around the main *plaza*, while extending.

The extreme example of open grid is the North American grid of the late 18th century-19th century. The National Land Ordinance ensured that the urban blueprint for most of the United States would be the grid. The grid became the standard for new sections of old towns as well ... but nowhere more fanatically than in New York, where a three-member commission planned the whole of Manhattan as far as 155th Street in the form of identical blocks, unrelieved by public open spaces.²⁵

The American grid “was meant to be boundless, to extend block after block after block outwards as the city grew”. The planning commissioners of Manhattan’s 1811 plan acknowledged: “It may be a subject of meriment, that the Commissioners have provided space for a greater population than is collected at any spot on this side of China”²⁶. When Americans saw the natural world around them as limitless, “they saw their own powers of conquest and habitation as subject to no natural or inherent limitation”²⁷.

Spiro Kostof describes in his work a significant transition from the model of the closed, delimited grid to the model of the open grid:

the 1811 plan of Manhattan represented the abandonment of the Colonial closed grid for the open grid of the new era of the Republic. The closed grid is essentially a pre-capitalist concept. It is seen as having firm boundaries, and a definite design within this fixed frame ... The open grid is predicated on a capitalist economy, and the conversion of

²⁵ Kostof, 1993

²⁶ Sennett, 1992

²⁷ Sennett, 1992

land to a commodity to be bought and sold on the market. The grid is left unbounded or unlimited, so it can be extended whenever there is promise of fast and substantial profit. In this state of affairs the grid becomes an easy, swift way to standardize vast land operations by businessmen involved in the purchase and sale of land. Public spaces, parks, and any other allocations that remove land from the market are clearly seen as a waste of a profit-producing resource.²⁸

The last step towards a fully capitalistic vision of urbanization is represented by the difference between Spanish colonial system in South America, which still presented different kinds of limitations on urban expansion, from the prohibition for settlers to sell their land to the inalienable public use of land devoted to “commons”, and the North American grid after the Land Ordinance of 1785. Kostof takes as example the shift from Spanish sovereignty of California to the time it became American territory after the Mexican War of 1846-48.

“Under the Americans, this enduring social structure of the pueblos was replaced by laissez-faire planning. ... Common lands ... could now be disposed of by the city fathers as they saw fit. ... Land taxes, unknown during Spanish and Mexican rule, facilitated the collapse of the rural aristocracy, and the acquisition and subdivision of its patrimony by the new ruling class of United States businessmen. All around the original city-form, the grid spread out unchecked.”²⁹

Grids started lacking the formal and coherent structure they had when they were delimited³⁰ and paradoxically became an “informal” geometry.

Significant is that the orientation of the land Survey of 1785, was decided by the committee to follow the magnetic north, since the frontier was already expected to expand toward the Pacific coast and to gradually occupy a larger section of the globe. In this way the grid of 1875 land survey is already potentially extensible to the whole globe³¹.

²⁸ Kostof, 1993

²⁹ Kostof, 1993

³⁰ “Open grids with laissez-faire planning cannot aspire to a coherent design. To achieve a formal structure, the limits of the town would have to be determined at the time of origin.” Kostof, 1993

³¹ “Comme l’*Ordinance* devait s’appliquer à la totalité du futur territoire et qu’il fut rapidement dair (ce l’était dès le début, en tout cas, pour Jefferson) que la frontière occidentale coïnciderait un jour avec la côte du Pacifique, il fut décidé que le réseau serait orienté astronomiquement en fonction des méridiens et

From “ciudad” to “urbanizaciòn”

This vision, when translated into approaches of urban planning, leads to a change in the concept of “city”. When the city becomes possibly extendible and dispersed over the territory, there comes an indistinction between the status of the city and the one of rural land. The city loses its ontological, political and juridical autonomy as symbol of a metaphysical or cultural order. The concentration of political meanings, of political life around an *agora* has become loose, its political connotations are dispersed. The city becomes a hybrid with the rural land, a “territory-city”.

This new hybrid forms of urbanization have been idealized by advocates of organicism in architecture and urbanism. “Città-territorio” is the term used by Bruno Zevi to define the ideal city of Wright: Broadacre City is a low density city, dispersed over the territory and crossed by traffic infrastructure. Here city and countryside constitute a single entity. In its representation there is no distinction between the design of agricultural land and the design of urban blocks. The ideal relationship between land and buildings is based on an organic dependency of the latter on the former. Again the orthogonal grid is in Broadacre City the privileged pattern. Wright accepts the given structure of American cities as best frame for his ideal combination of city and countryside.

“City” is no longer a proper term to define recent phenomena of urbanization. The shift to the city-territory is explained in the opposition between “ciudad” and “urbanizaciòn” in Ildefonso Cerdà’s work. He actually invents the term “urbanizaciòn”. This transition corresponds to the shift from a representational to a managerial role of the city. Cerdà is the first urbanist using statistics as planning tool, showing how urbanization becomes a system of “biopolitical” management - management of life in relations to political and economic principles - and defining the “city as embodiment of the biopolitical properties of human life”³².

des parallèles, aux quels correspondent à leur tour, fréquemment, les frontières des Etats. Jefferson voulait que le réseau fût orienté au nord géographique, mais pour des motifs pratiques le Congrès opta pour le nord magnétique. ... Il fallut inventer de nouvelles techniques d'arpentage pour tenir compte de la très grande dimension, c'est-à-dire de la courbure de la Terre”. – Corboz, 2001

³² Conference by Pier Vittorio Aureli

Why is the planned territory-city of Wright and of later examples gridded? The grid is often understood as a non-hierarchical system, seemingly free from cultural constraints, from historical connotations, a flexible structure which can host different identities, easily combined in a diverse mosaic of juxtaposed units.

A significant example of non-planned city-territory which also partly develops in a gridded pattern, is the *città diffusa* of Po's plain. Here urbanizations can easily and uniformly spread through the layout of ancient Roman centuriations, still existing in some areas and directing the movement and dispersion of a "diffused" city-territory.

Attitudes towards the territory

Two main and often opposite lines of planning approach in relationship with the territory and its local qualities are represented by the organicist ideology and the modernist one. Some intermediate positions can be found as well between the two poles of the ideological dichotomy.

The former ideology claims for a compromise, negotiation or synergy between plan and local qualities of the land, which are considered as important conditions and significant traces for a sensible further development of the territory. On the other side is the modernist tradition, which aims at a clear separation of cultural and rational expressions of society from nature and from patterns of supposedly spontaneous development.

The grid seems to mainly support the latter position, although a compromised use of the grid is accepted as well by the former. For instance, the American grid is understood by Corboz as the extreme of non-consideration of "land as palimpsest", while the use of the grid in Wright's Broadacre City confirms the grid as possibly flexible structure for an organic relationship between buildings and ground.

Different degrees of "compromization" of the grid with local qualities of a territory can be found throughout history, with various kinds and various principles of negotiation. The attitude towards the territory depends on the "sacred" or "profane" consideration of

it, depending on whether an abstract connotation or an idea of “genius loci” is attributed to it.

The “sacred” connotation is mainly given in organicist perspectives, which implied for instance the planning forms of the Garden City movement in early 20th century, of the more recent “New Urbanism” in 1980s and lately of Parametricism. On the other hand different expressions of modernism and neomodernism have adopted the assumption of a formal autonomy of architecture and urban planning with the idea of a “blank” territory or *tabula rasa*.

Below I will present an artificial dialogue between two texts: “The territory as palimpsest” of André Corboz and “The Generic City” of Rem Koolhaas. The aim is to identify and underline their stated or hidden position with regard to their ideal attitude towards the territory. In their dialectical comparison, the texts will reveal some issues which reflect a still developing debate in planning practices. The positions of the two authors collide on the terrain regarding the relationship between urban planning and the territories on which planning projects develop.

The texts run on different linguistic registers, whereas the former develops in the fields of geographical, historical, anthropological research, while the latter presents itself in the form of an explicitly ideological report about the concept and expressions of the “Generic city”. While Corboz’s ideology is implicit, veiled by an academic language, Koolhaas’s ideology is even exclaimed/proclaimed like in a manifesto, with similar intentions as in “Delirious New York”.

Corboz VS Koolhaas. The land as palimpsest VS the Generic City

R.K. 2. Statistics 2.1 The Generic City has grown dramatically over the past few decades. Not only has its size increased, its numbers have too. In the early seventies it was inhabited by an average of 2.5 million official (and $\pm 500,000$ unofficial) residents; now it hovers around the 15 million mark.

A.C. Le territoire peut s'exprimer en terms statistiques (étendue, altitude, moyennes de température, production brute, etc.), mais il ne saurait se réduire au quantitatif. Étant un projet, le territoire est semantisé. Il est "discourable". Il porte un nom. Des projections de toute nature s'attachent à lui, qui le transforment en un sujet.

R.K. ...what are the advantages of blankness? What if this seemingly accidental-and usually regretted-homogenization were an intentional process, a conscious movement away from difference toward similarity? What if we are witnessing a global liberation movement: "down with character!"

A.C. Le territoire, tout surchargé qu'il est de traces et de lectures passées en force, ressemble plutôt à un palimpseste. Pour mettre en place de nouveaux équipements, pour exploiter plus rationnellement certaines terres, il est souvent indispensable d'en modifier la substance de façon irréversible. Mais le territoire n'est pas un emballage perdu ni un produit de consommation qui se remplace. Chacun est unique, d'où la nécessité de "recycler", de grater une fois encore (mais si possible avec le plus grand soin) le vieux texte que les homes ont inscrit sur l'irremplaçable matériau des sols, afin d'en déposer un nouveau, qui réponde aux necessities d'aujourd'hui avant d'être abrogé à son tour.

R.K. To the extent that identity is derived from physical substance, from the historical, from context, from the real, we somehow cannot imagine that anything contemporary - made by us - contributes to it. But the fact that human growth is exponential implies that the past will at some point become too "small" to be inhabited and shared by those alive. We ourselves exhaust it. ... Identity is like a mousetrap in which more and more mice have to share the original bait ... The stronger identity, the more it imprisons, the more it resists expansion, interpretation, renewal, contradiction. Identity becomes like a lighthouse - fixed, overdetermined ... hyper-Paris, a polished caricature. ... Identity centralizes; it insists on an essence, a point.

A.C. Une prise en compte si attentive des trace set des mutations ne signifie à leur égard aucune attitude fétichiste. Il n'est pas question de les entourer d'un mur pour leur conférer une dignité hors de propos, mais seulement de les utiliser comme des éléments, des points d'appui, des accents, des stimulants de notre propre planification.

R.K. [The Generic City's] most dangerous and most exhilarating discovery is that planning makes no difference whatsoever... Nobody knows where, how, since when the sewers run, the exact location of the telephone lines, what the reason was for the position of the center, where monumental axes end. All it proves is that there are infinite hidden margins, colossal reservoirs of slack, a perpetual, organic process of adjustment, standards, behavior; expectations change with the biological intelligence of the most alert animal. In this apotheosis of multiple choice it will never be possible again to reconstruct cause and effect. They work - that is all.

A. C. Un "lieu" n'est pas une donnée, mais le résultat d'une condensation. Dans les contrées où l'homme s'est installé depuis des générations, a fortiori depuis des millénaires, tous les accidents du territoire se mettent à signifier. Les comprendre, c'est se donner la chance d'une intervention plus intelligente.

R.K. All Generic Cities issue from the tabula rasa; if there was nothing, now they are there; if there was something, they have replaced it.

A.C. Certaines régions, traitées trop brutalement et de façon impropre, présentent aussi des trous, comme un parchemin trop rature: dans le langage du territoire, ces trous se nomment des déserts.

R.K. The Generic City is held together... by the residual. ... On these "sites" (actually, what is the opposite of a site? They are like holes bored through the concept of city) public art emerges like the Loch Ness Monster, equal parts figurative and abstract, usually self-cleaning.

A.C. Certains planificateurs commencent eux aussi à se soucier de ces traces pour fonder leurs interventions. Après deux siècles pendant lesquels la gestion du territoire n'a guère connu d'autre recette que la *tabula rasa*, une conception de l'aménagement s'est donc esquissée, qui le considère non plus comme un champ opératoire quasi abstrait, mais comme le résultat d'une très longue et très lente stratification qu'il importe de connaître pour intervenir.

R.K. History presents and obstructs the pure exploitation of its theoretical value as absence. 14.3 Throughout the history... cities have grown through a process of consolidation. ...That is why archaeology is a profession of digging: it exposes layer after layer of civilization ... The Generic City, like a sketch which is never elaborated, is not improved but abandoned. ... it has no layers. Its next layer takes place somewhere else ... In exporting/ejecting its improvements, the Generic City perpetuates its own amnesia (its only link with eternity?). Its archaeology will therefore be the evidence of its progressive forgetting, the documentation of its evaporation.

A.C. Par ce biais, le territoire retrouve la dimension du long terme, fût-ce rétrospectivement. Cette nouvelle mentalité lui restitue une épaisseur que l'on avait oubliée.

R.K. The Generic City is the city liberated ... from the straitjacket of identity. The Generic City breaks with this destructive cycle of dependency: it is nothing but a reflection of present need and present ability. It is the city without history. It is big enough for everybody. It is easy. It does not need maintenance. If it gets too small it just expands. If it gets old it just self-destructs and renews. It is equally exciting - or unexciting - everywhere. It is "superficial" -like a Hollywood studio lot, it can produce a new identity every Monday morning.

A.C. L'histoire, surtout récente, a malheureusement façonné une foule de territoires incomplets dont la définition a entraîné des tensions parce qu'elle ne répondait pas à l'attente des ethnies concenées. Dans un petit nombre de cas particulièrement tragiques, on assiste à des phénomènes de "" double exposition" (au sens photographique du terme) : la meme étendue géographique est revendiquée par des groupes incompatibles, élaborant des projets contradictoires comme ceux des Romains et des Germains affrontés sur le *limes* rhénan.

R. K. The great originality of the Generic City is simply to abandon what doesn't 't work - what has outlived its use - to break up the blacktop of idealism with the jackhammers of realism and to accept whatever grows in its place. In that sense, the Generic City accommodates both the primordial and the futuristic - in fact, only these two. The Generic City is all that remains of what used to be the city. The Generic City is the post-city being prepared on the site of the ex-city.

A.C. Pour que l'entité du territoire soil perçue comme telle, il importe done que les propriétés qu'on lui reconnaît soiellt admises par les intéressés.

R. K. The Generic City is always founded by people on the move, poised to move on. This explains the insubstantiality of their foundations. Like the flakes that are suddenly formed in a clear liquid by joining two chemical substances, eventually to accumulate in an uncertain heap on the bottom, the collision or confluence of two migrations - Cuban emigrés going north and Jewish retirees going south, for instance, both ultimately on their way someplace else establishes, out of the blue, a settlement. A Generic City is born.

Chapter II

This chapter will be concerned with ideologies implied in the use of the grid, with political and social meanings given to the grid as formal structure. Some concepts previously developed regarding the relationship of the grid with the territory, the attitude of planners toward the features and cultural traditions of territories, will be taken here into consideration from the point of view of ideological meanings given to the grid.

According to Spiro Kostof, the urban grid can be considered as a flexible form. Thanks to its flexibility and non-hierarchical structure, it can gain very diverse sorts of connotations and meanings. “The grid is what you make out of it”³³. Therefore, the form itself is not strictly related to a single ideology or political principle. Nevertheless, throughout history, the form of the grid has been taken as symbol, as spatial translation of specific ideas, or expression of a social/political/cosmological order, according to a representational role of geometry.

Despite many differences in symbolic connotations, some analogies can be found among different historical and geographical contexts.

Grid as expression of order

Throughout history rectilinearity and orthogonality of spatial forms have been associated to human rationality, and supported as the most sensible principles for the design of urban fabrics.

Hippodamus of Mileus, whose plans of Greek cities were characterized by order and regularity in contrast to the more intricacy and confusion common to cities of that period, thought that a town plan might formally embody and clarify a rational social order. He considered the grid plan as an expression of rationality and civilized life.

³³ Kostof, 1993

Similarly, “in their military conquests the Romans elaborated the contrast between the rude and formless camps of the barbarians and their own military forts, or *castra*”.³⁴

Descartes in his “Discours de la méthode” used an example of urban planning practices as metaphor to introduce his analytical research method. He praised the *ouvrage* of a single planner inasmuch as it is a sensible and consistent project, opposite to those urban fabrics whose spontaneous development led to a less well laid out and imperfect structure. He argued that, in old cities, because of the way buildings are arranged and “the way they make the streets crooked and irregular, you would think they had been placed where they are by chance”, while the planned cities are finer and better organized, expressing the will and rationality of thinking men.³⁵

Then he translates this opposition into the juridical field, claiming that the civil order of a society is more efficient when laws are laid down by some wise law-giver. He states that “if Sparta was at one time very flourishing, this wasn’t because each of its laws was good (seeing that many were very strange and even contrary to good morals), but because they were devised by a single man and hence were all conducive to the same end.” So, translated into a scientific research principle, “since the sciences contained in books—at least those based on merely probable reasoning and not on demonstrations [= ‘strictly, logically, rigorously valid arguments’]—are put together and enlarged piecemeal from the opinions of many different people, they never get as close to the truth as do the simple reasonings that one man of good sense can naturally make concerning anything that comes up”³⁶.

A similar position is taken three centuries later by Le Corbusier. His first theoretical statement on urbanism in “The City of Tomorrow” starts with an eulogy of the straight line and the right angle as means by which man conquers nature. The first two paragraphs contrast man’s way with the pack-donkey’s way: “Man walks in a straight line because he has a goal and knows where he is going; he has made up his mind to

³⁴ Sennett, 1992

³⁵ “There is usually less perfection in works composed of several parts and produced by various different craftsmen than there is in the works of one man. Thus we see that a building started and completed by a single architect will usually be finer and better organized than one that several people have tried to patch up by adapting old walls that had been built for other purposes” Descartes, [1637]

³⁶ Descartes, [1637]

reach some particular place and he goes straight to it. The pack-donkey meanders along, meditates a little in his scatter-brained and distracted fashion, he zig-zags in order to avoid larger stones, or to ease the climb, or to gain a little shade; he takes the line of least resistance.”³⁷ Le Corbusier admires the urban order of the Romans and rejects our sentimental attachment to the picturesque irregularity of the medieval cities: “The curve is ruinous, difficult and dangerous; it is a paralyzing thing.”³⁸ Le Corbusier insists that “the house, the street, the town ... should be ordered; ... if they are not ordered, they oppose themselves to us.”³⁹

Besides the idea of the grid as expression of a rational order, there have been cases of symbolic connotations of the grid as representation of a metaphysical/cosmological order or expression of religious principles.

It is the case of the Etruscan and Roman cities, whose gridded layout, according to Rykwert, symbolized the cosmos’s order. The laying out of *cardo maximus* and *decumanus maximus* was part of the ritual act of city foundation. The ancient writer Hyginus Gromaticus believed that the priests inaugurating a new Roman town must place the first axis in the cosmos, for “boundaries are never drawn without reference to the order of the universe, for the decumani are set in line with the course of the sun, while the cardines follow the axis of the sky”.⁴⁰ In its origins the grid established a spiritual center. “The rite of founding a town touches on one of the great commonplaces of religious experience”.⁴¹

Kostof gives two examples of gridded cities laid out by religious confraternities, with a specifically symbolic intention to represent religious principles.

“The first is a late outcome of the great schism in the Catholic Church. After the repeal of the Edict of Nantes in 1685 over 200,000 Huguenots fled from France. They settled and founded towns and suburbs in Protestant Germany, and in England, Holland and Switzerland. All the towns had the same form: a regular street grid on a square site, uniform houses of identical shape, size and colour, a

³⁷ Le Corbusier [1925]

³⁸ Le Corbusier [1925]

³⁹ Le Corbusier [1925]

⁴⁰ Rykwert, 1963

⁴¹ Rykwert, 1963

small church, and identical manufactories. ... Here unequivocally the sameness was meant to express the social equality of all inhabitants.

So it was with the Mormons two centuries later. God informed these followers of the Church of Jesus Christ of the Latter Day Saints, through Joseph Smith, that the Second Coming would take place in America at a “perfect time and place”, and that their mandate was to prepare a fitting city for this millennial event. In 1833 Smith drew up a scheme for the ideal Mormon city, known as the “Plat of the City of Zion.” The Plat was one square mile in surface, divided by a grid of streets. The dimensions were ample. ... The plan would grow infinitely as the faithful increased. All property would be deeded to the Church, and one would then be assigned an inheritance or stewardship – a farm, a store or shop, a ministerial mission.”

This is the case of Salt Lake City, which “grew fast, around the Temple erected in one of the central squares. Beyond the monumental checkerboard ... stretched the garden and farm lots, also within the lines of an undeviating grid. ... The successor of the square city of the Levites described in Numbers and Leviticus, and of Ezekiel’s square city of Jerusalem, spread out in the Territory of Desert, in the primordial rockscape of Utah. The Latter Day Saints were ready for the Second coming”.⁴²

Nevertheless, besides a few cases of religious signification given to the grid, the American grid of the 19th century used to have a merely utilitarian purpose and was a means of neutralization and homogenization of space. “If the Romans saw the grid as an emotionally charged design, the Americans were the first to use it for a different purpose: to deny that complexity and difference existed in the environment. The grid has been in modern times as a plan that neutralizes the environment”.⁴³

Besides rational, cosmological and religious orders, the grid has been representing as well political orders. Egalitarianism as religious and social connotation of the grid’s geometry, had a political correspondence in the ideology of the grid as a democratic structure. This was the case of the 19th century American grid and later developments of it worldwide in the 20th century, whereas democracy is mainly associated with egalitarianism in land distribution or in land market participation:

⁴² Kostof, 1993

⁴³ Sennett, 1992

The most persistent belief that urban grids represent an egalitarian system of land distribution is expressed in the context of modern democracies, principally the United States. The point is made regularly that grids, besides offering “simplicity in land surveying, recording, and subsequent ownership transfer,” also “favored a fundamental democracy in property market participation. They did not mean that individual wealth could not appropriate considerable property, but rather that the basic initial geometry of land parcels bespoke a simple egalitarianism that invited easy entry into the urban land market.”⁴⁴

A further example of egalitarian ideology can be found in Ildefonso Cerdà's words. He called the blocks of his Eixample “the clear and genuine expression of mathematical equality, the equality of rights and interests, of justice itself” and considered the grid an expression of justice, which is always equal and uniform⁴⁵.

A seemingly opposite political connotation of the grid is its symbolic value concerning the representation of an absolutist power, which is the case of ancient Chinese and Japanese Empires, or the extensive use of the grid by Spain and France in their colonial enterprises.⁴⁶ During the Chinese Empire “the city symbolized power, and was in the service of the needs of power. The orthogonal urban plan froze the spatial structure to reflect an unalterable hierarchy: it put in isolated urban envelopes the palace precinct, administration, religion, and housing according to class. Trade was of secondary concern and was strictly regimented within the political grid.”⁴⁷

Nevertheless, a paradoxical analogy has been investigated between the political meaning given in democratic and absolutist regimes, and it is namely the role of the grid plan in the centralization of power, by creating a uniform, controlled and organizing (categorizing, partitioning) structure.

⁴⁴ Kostof, 1993

⁴⁵ La justicia demanda, exige, impone esa uniformidad e igualdad [alude a la uniformidad e igualdad en el trazado general en planta de una ciudad] que los necios llaman *monotonía*. La justicia es siempre y para todos igual y uniforme; y en *este* sentido no hay en el mundo *monotonía* mayor que la igualdad ante la ley, que sin embargo nadie se ha atrevido a combatir bajo el concepto de semejante *monotonía*. – Ildefonso Cerdà, [1867]

⁴⁶ Kostof, 1993

⁴⁷ Kosof, 1993

Farinelli explains about a metaphorical correspondence between the shift in ancient Greek urban forms from the *isonomic* to the *Hippodamian* city and the shift in the socio-political structure of the Greek *polis*. In line with Tucydides's critique of Pericle's democracy, Farinelli reveals the grid as being the spatial translation of what "was in theory a democracy, but in fact became the rule of the first citizen."⁴⁸

The ideal scheme of the *isonomic* city (described in Plato's *Gorgia*) is a circular, radial structure, where vectors of directions are countless. The rays represent the streets whose layout corresponds to the hypothetical route of citizens going towards the center, the *agora*. The covered distances between each citizen and the *agora* are identical to each other, while distances between citizens vary depending on their position from the center. Symbolically, the *agora*, the public space, represents the place where the multiplicity of *senses* is transformed into one meaning, and where relationships between citizens come to find their sense/signification.

On the other side of the presented dialectic is the *Hippodamian* plan: here the different spatial relationships between center and citizens and of citizens with each other are inverted. The distances between each citizen and the geometric center of the city are now different, while the distance between citizens is potentially identical, independent from their distance to the center.

With the *Hippodamian* plan the city scheme becomes completely spatial, the center loses its geometric and semantic uniqueness, while citizens lose their ability to actively participate in the political life of the city. The decision making is no longer collective.⁴⁹

The democraticity of Classical Greek grid plans seems to be the result of modern interpretations, probably a political connotation attributed to historical examples for the modern purpose of ethically justifying the use of the grid.

In "Politics" Aristotle did endorse the Hippodamean grid as a sensible structure for the arrangement of housing, but with any reference to a possible political role or

⁴⁸ Tucydides quoted in Farinelli, 2003

⁴⁹ Farinelli, 2003

correspondence of the grid plan to democratic or egalitarian principles.⁵⁰ Moreover, the proposal of Hippodamus of Miletus for a class-stratified social structure - although its relationship with the grid plan hasn't been proved - hardly reflects a democratic preference.

Kostof argues that "the political innocence of the grid in the West is a fiction". In the early Greek colonies "the grid, far from being a democratic device employed to assure an equitable allotment of property to all citizens, was the means of perpetuating the privileges of the property-owning class descendent from the original settlers, and bolstering a territorial aristocracy. The first settlers who made the voyage to the site were entitled to equal allocations of land both inside and outside the city walls. These hereditary estates were inalienable; the ruling class strictly discouraged a land market. The estates were huge... they were subdivided by the owner. Within the city, private land could only be used for housing"⁵¹.

In the same way could be interpreted the whole history of colonies and their gridded cities of foundations. The grid becomes a tool of control by the central power, and the subdivision and distribution of land to the colons can be read as a way of organizing and controlling the rising society and prevent any possibility for them to claim political autonomy. For instance, settlers of Spanish colonies in South America weren't allowed to sell their assigned land, so that the central government could keep control on the conquered land. The uniformity of land partitioning of the grid has thus a role in administrative control.⁵²

With the American Revolution and consequent independence of the United States, the administration of land started shifting to a market oriented approach, which often came to coincide with the claimed principles of egalitarianisms and democracy. The revolution actually rose on a complaint by colonists against taxation from the British government.

⁵⁰ "[T]he arrangement of private houses is considered to be more agreeable and generally more convenient, if the streets are regularly laid out after the modern fashion which Hippodamus introduced." Aristotle, Politics

⁵¹ Kostof, 1993

⁵² As Konvitz puts it, Spain's "legalistic, programmatic approach to city planning avoided particular distinction among cities and identified the functional aspects of city planning with its administrative control, and, so, with uniformity". Kostof, 1993

They claimed that, as they were British subjects, taxation without was illegal. As reaction, once independence was gained, land property was opened to market principles, and “when in 1785 the Congress decided, at the prodding of Thomas Jefferson, to conduct a national land survey... the ideal of equal shares of land as the guarantor of liberty and universal franchise became the true test of the American revolution.”⁵³

This transition corresponds to the shift for colonists from being subjects to being citizens, to the extent that their citizenship is bounded to their rights of land property and of land market participation.

“The Jeffersonian gridding of America was based on the notion of “freehold”, by which was meant property of a certain size or value, or that produced a specifies taxable income, this is to be distinguished from leasehold, which signifies a condition of tenancy. Freeholders had political rights, they were enfranchised: they could hold office or they could vote. Property is the key to citizenship and suffrage. In the Colonial period freehold qualification was about 50 acres. Jefferson wants Americans to have more. At the time of the Survey, most of the Thirteen Colonies had abandoned the literal sense of freehold for a tax equivalent. S o Jefferson was being conservative. But his dream was to make of all Americans (white males at any rate) citizens with voting rights on the strength of being landowners, the National Survey grid has been considered, in that sense, the equivalent of the Constitution.”⁵⁴

Despite the original intention to give the grid a political role in equal land subdivision, it began again to serve the interests of a few. The grid has been often criticized as merely utilitarian – being its parcels ““abstract units for buying and selling”⁵⁵ -, it becomes again a tool in the hands of the new ruling class for the preservation of its power and control on land. “The ordinary citizen gains easy access to urban land only at a preliminary phase, when cheap rural land is being urbanized through rapid laying out. To the extent that the grid speeds this process and streamlines absentee purchases, it may be considered an equalizing social device. Once the land has been identified with the city,

⁵³ Kostof, 1993

⁵⁴ Kostof, 1993

⁵⁵ Mumford, 1968

however, this advantage of “the initial geometry of land parcels” evaporates, and even unbuilt lots slip out of common reach.”⁵⁶

Who are those few who exercise the power in a democracy based on market principles? An analogy can be found between the ideal society of Hippodamus and Pericles and the American society which, according to Sennett, developed on Puritan social principles. Their common criteria for choosing citizens for office was merit and not wealth. The man who exercised power in Pericles’s city was the “one man, the best”, the *aristoi*, and the man of the modern American grid was the self-made man, the competitor. From Hippodamus came the earliest notions of patent law. Hippodamus proposed a society which rewards those individuals who create things useful for society. Similarly, the Puritan ethic ruling American society pushed for competitiveness in productivity and individualism.

The relationship between a certain conception of society, economic development and the need for neutralizing space is here evident:

The New York commissioners declared that “right angles houses are the most cheap to build, and the most convenient to live in.” what is unstated here is the belief that uniform units of land are also the earliest to sell. This relationship between the grid city and capitalist economics has been stated at its broadest by Lewis Mumford thus: “The resurgent capitalism of the 17th century treated the individual lot and the block, the street and avenue, as abstract units for buying and selling, without respect for historic uses, for topographic conditions or for social needs.”⁵⁷

According to Farinelli the rectangular – rectilinear and orthogonal – principle of the urban grid has been representing throughout history the attempt to conciliate the reasons of democracy with the functioning of the market, which finally reveal themselves to be irreducible to one another. This is why Erodotos used to “laugh” about the ionic circular maps: distances in a circular maps were not rectilinear and thus distorting real distances, which have always been the most important information for the organization of a functional market. Likewise the isonomic city – representing the actual participation of citizens in the political life of their city – and the Hippodamean

⁵⁶ Kostof, 1993

⁵⁷ Sennett, 1992

city – representing democracy, but through a purely spatial and market-oriented definition of egalitarianism – are irreducible to one another. The conciliation of democracy's and market's reasons is metaphorically translated by Farinelli into the problem of squaring the circle, of reducing a circumference to the perimeter of a square.

What relationship could be found to the anecdote of Thomas Jefferson, who in the Declaration of Independence draft originally called American citizens “our fellow subjects” and later scrubbed the word *subjects* to finally replace it with *citizens*? A rash prosaic interpretation is the idea that liberal democracy understands men as citizens of the newly independent state, but subject to the rising regime of the market, to which a real democracy is irreducible.

Implied societies

What is the social order implied in the use of the grid by urban planners and city administrations? The grid structure, for its homogenizing and framing principles could represent a certain kind of citizenship, which mainly develops along the tradition of colonial cities to lead into contemporary global society.

Colonies required from ancient time to rethink citizenship in more “cosmopolitan” terms, also in relations to the interests of the market. During Pericle's government, citizenship in Athens was restricted to male inhabitants whose parents were both Athens' citizens. The society was stratified into citizens with full rights, foreigners – *metics* – and slaves. On the contrary in colonies the distinction between citizens and foreigners tended to be cancelled. This is the case of Thurii, a Pan-Hellenic colony founded in 444 a.C. in Southern Italy in order to ensure the bond between Eastern and Western Greeks. Thurii, with its gridded layout, represented the exported exemplary model of the ideal Athenian city, and embodied an image of the world which was functional to Athens' imperialism and to its plan to create a common Mediterranean

market.⁵⁸ Antifonte witnessed in Thurii the blurring antithesis between citizens and foreigners, arguing that Greeks and foreigners were naturally all equal.⁵⁹

The concept of citizenship gained more flexibility with the expansion of the Roman Empire. Here citizenship, although still based on the *ius sanguinis*, allowed more exception and became more flexible in granting citizenship to foreigners or slaves who were liberated. This change in the political structure of society was required when the area of influence of the central power expanded on a larger scale, in order to maintain control on the conquered territory without keeping on colonies a military control.

Thus a flexible law regarding the criteria of citizenship becomes an overall structure to keep control on a large territory. The grid can be interpreted as the spatial correspondence of a flexible rule. It symbolizes the extension of political rights to the inhabitants of the whole conquered territory or, from another perspective, it symbolizes the (super)imposition of a new political order to all inhabitants of the conquered territory.

However, it seems that the more a state tends to expand to a larger territorial scale, the more it needs to reinvent and redefine its society in a flexible way, accepting and encompassing diversity.

Therefore an analogy can be found between the Roman “cosmopolia” and the contemporary “global society”, whereas the former is unified by the central power of the regime and based on a flexibly defined Roman citizenship, while the latter is unified by inter-national and even more flexible or diverse definitions of citizenship.

Modern global society started with the rise of modern culture, which praises the universalism of rationality as human character and value. In a way it corresponds to the process of abstraction and “universalization” of space. It sees its fulfillment with the American grid, oriented to the magnetic North and, thus, conceptually extensible to the whole globe. Moreover, going back to the idea of the grid as spatially neutral frame and coordinate system, it reveals itself again as the preferable spatial translation of global

⁵⁸ See the aboved mentioned role of rectilinearity in cartographic representations of distances for trade and market strategies.

⁵⁹ Farinelli, 2003

society, inasmuch as it needs a bonding, uniform and in a way neutral structure, which allows different degrees of freedom and diversification, despite the rigidity of its geometry.

It is the case of the Manhattan grid as it is read by Rem Koolhaas in *Delirious New York*:

“The Grid’s two-dimensional discipline also creates undreamt-of freedom for three-dimensional anarchy. The Grid defines a new balance between control and de-control in which the city can be at the same time ordered and fluid, a metropolis of rigid chaos.

With its imposition, Manhattan is forever immunized against any (further) totalitarian intervention. In the single block – the largest possible area that can fall under architectural control – it develops a maximum unit of urbanisitic Ego.

Since there is no hope that larger parts of the island can ever be dominated by a single client or architect, each intention – each structural ideology – has to be realized fully within the limitations of the block.

... The city becomes a mosaic of episodes, each with its own particular life span, that contest each other through the medium of the Grid.”⁶⁰

The society delineated in this ideological vision of the grid, is then made of singularities, Egos, separated and autonomous episodes, which are framed and interconnected by the grid as a medium. The grid is thus the most suitable spatial translation of a fragmented and diversified, yet ordered and controlled society.

It is fragmented to the extent that it no longer has a center, a focus on which political/public life of a polis concentrates.

The open grid doesn’t have a center. It only creates “nodes” at the intersections of the axes. The grid in general, having only two directions can’t create focus and concentration, meeting points of streets/directions, of meanings, like in a radial structure. Moreover, differently from the Roman grid, the open grid doesn’t have two main axes, which give the urban fabric a center from which the whole city develops.⁶¹

⁶⁰ Koolhaas, 1994

⁶¹ The Romans imagined from the sense of a distinct, bounded whole how to generate a center, at the intersection of the *decumanus* and the *cardo*, and then how to create centers for each neighbourhood by imitating this crossing of principal axes in each subsection. – Sennett, 1992

The Americans tended to more and more eliminate the public center, as in the plans for Chicago devised in 1833 and those for San Francisco in 1849 and 1856, which provided only an handful of small public spaces within thousands of imagined blocks of buildings. even when the desire for a center existed it was difficult to deduce where public places should be, and how they should work, in cities conceived like a map of limitless rectangles of land. ... The loss of a center is the second geographic way an urban space is neutralized ... in the development of the modern “megalopolis”, it has become more reasonable to speak of urban “nodes” than of centers and suburbs. the very fuzziness of the word “nodes” indicates the loss of a language for naming environmental value: center is charged with meanings both historical and visual, while node is resolutely bland.⁶²

The loss of the center corresponds to the loss of a common social identity among citizens in a society where there is no longer a common past to share or common cultural values given by a single tradition.

This loss of identity is identified by Rem Koolhaas in the Generic City, praised by him for its liberating and expanding power, in both social and spatial aspects: “The Generic City is the city liberated from the captivity of center, from the straitjacket of identity. The Generic City breaks with this destructive cycle of dependency: it is nothing but a reflection of present need and present ability. It is the city without history. It is big enough for everybody. It is easy. It does not need maintenance. If it gets too small it just expands.... it can produce a new identity every Monday morning.”

It is probably a grid Rem Koolhaas has in mind when he talks about the vanishing center of the Generic city: “Its tragedy is given in simple geometric terms. As the sphere of influence expands, the area characterized by the center becomes larger and larger, hopelessly diluting both the strength and the authority of the core; inevitably the distance between center and circumference increases to the breaking point. In this perspective, the recent, belated discovery of the periphery as a zone of potential value - a kind of pre-historical condition that might finally be worthy of architectural attention - is only a disguised insistence on the priority of any dependency on the center.”

⁶² Sennett, 1992

The open grid is the structure which can homogenize an urban fabric into a continuous periphery, omitting the importance of a symbolic center, and giving it a uniformly “bland and insubstantial character”.

A capital should reverberate with symbolic power, and L'Enfant imagined the regularities of the grid as empty of such reverberations.

The century after L'Enfant was to show, however, that grids would organize power precisely by stripping away the character of a place. A generation after L'Enfant, the young Alexis de Tocqueville's family... after the enthusiasm passed, New York began to disturb him ... no one seemed to take where they lived seriously, to care about the buildings in which they hurried in and out; instead the city was treated simply by its citizens as a complicated instrument of offices and restaurants and shops for the conduct of business. Throughout his American journey Tocqueville was struck by the bland and insubstantial character of American settlement. Houses seemed mere stage sets rather than buildings meant to last; there seemed nothing permanent in the environment. the reason was that these “new men” were too driven to settle, too driven for stone. they wanted nothing to get in their way.⁶³

These aspects of the developing American society and mentality are read by Rem Koolhaas as positive liberating principles of both spatial and social characters of the modern and contemporary metropolis, while the grid is read as spatial tool for the modernist plan of creating freedom for individual action and self-realization of the rational man, within the frame of a ordered/ruled system.

The society of the Generic City, increasingly diverse and rapidly changing, is difficult to be decoded, because, according to Koolhaas, every sociological categorization can be at the same time confirmed and denied by testing the Generic city. Only a taxonomy of varying categories is possible, and it reveals the Generic City's increasing dependency on statistics, which must constantly redefine social structures.

Inhabitants of this city have no common history and therefore can no longer share symbols and cultural values. What is shared by citizens in the contemporary model of the city, where the opposition city-countryside disappears, is just an “urban mentality”.

⁶³ Sennett, 1992

According to Corboz, the urbanized space is no longer defined by densely built environments, but the space whose inhabitants have acquired an urban mentality.⁶⁴

The “statistical” connotation of the city-territory is given by its managerial need for the organization of a growing and increasingly diversified population. In this perspective, the society of the city-territory is a biopolitical society, based on the managerial organization of bodies and of their citizens’ “bare life”. To consider inhabitants in statistical terms, as a quantity of bodies related to their specific localization on the city’s territory, is a signal of biopolitical management of the city.

Again the open grid reveals itself as an easy coordinate system and spatial structure for the control of a society of numbers, an easy form for taxonomic, non-hierarchical categorization, partitioning – interpreting statistics as discrete science - of society. The open grid enhances a taxonomic management/organization of life.

Territory-city is the condition of indistinction between city and countryside, between culture and nature, or where the exception, previously delimited and already included in the normal *nomos*, gradually becomes the rule, the new *nomos*. This is the condition in which, according to Giorgio Agamben, one loses as well the distinction between one’s “bare life” and “political life”, with a consequent weakening of the political power and autonomy of citizens.

The transition from the close to the open grid analyzed by Kostof, is a paradigm for this process towards indistinction. The ideal rural life in Jefferson or later in Wright is not a refusal of urbanity and urban mentality. It’s not a going back to nature but the increasing indistinction between culture and nature, city and countryside, public and private, political life and “bare life”. It represents the difference presented by Agamben in *Homo Sacer* between the Greek polis and the modern urban society: in ancient Greece, the public life of the *polis* and the private life of the *oikos* were strictly separated and the natural existence, the *bare life* of human beings was separated from their *political life* as citizens. Nowadays, the situation of modern politics, which influences the society of the

⁶⁴ “L’opposition ville-campagne cesse, parce que la ville l’a emporté. Dès lors, l’espace urbanisé est moins celui où les constructions se suivent en ordre serré que celui dont les habitants ont acquis une mentalité citadine.” Corboz, 2001

city-territory or Generic City, “is that, together with the process by which the exception everywhere becomes the rule, the realm of bare life – which is originally situated at the margins of the political order – gradually begins to coincide with the political realm, and exclusion and inclusion, outside and inside, *bios* and *zoē*, right and fact, enter into a zone of irreducible indistinction. At once excluding bare life from and capturing it within the political order, the state of exception actually constituted, in its very separateness, the hidden foundation on which the entire political system rested. When its borders begin to be blurred, the bare life that dwelt there frees itself in the city and becomes both subject and object of the conflicts of the political order, the one place for both the organization of State power and emancipation from it”⁶⁵.

⁶⁵ Agamben, 2005

Case studies - Comparison between OMA's "Mission Grand Axe" and ZHA's "Kartal-Pendik Masterplan"

This first chapter on case studies regards a comparison between a plan by OMA of 1991, concerned with a radical transformation of the office district La Defense in Paris and a plan of 2006 by Zaha Hadid Architects for the redevelopment of an abandoned industrial site into a new sub-centre of Istanbul.

Both projects make use of the urban grid as underlying structure. The connotations and ways of using the grid by the two architectural teams will be analyzed in terms of both conceptual and actual translation of planning principles, cultural values, or social, political and economic context in which they develop.

After the introduction and contextualization of the two projects, the comparison will develop into three parts which, starting from planning principles/values, will encompass diverse topics deriving from the previous research on the multiple meanings historically associated to the urban grid.

OMA's project, called "**Mission Grand Axe**" or "Tabula Rasa Revisited" in S,M,L,XL, is a proposal for a competition of 1991, regarding the re-development of Paris's office-district La Défence.

The plan consists of the gradual demolition of all buildings which reach the age of 25 years old, in order to create an increasing void for the rebuilding of the whole district. Being the district mostly composed by post-war modern buildings, within three decades from the time the plan was designed by OMA, the whole district would be emptied and leveled on a gridded *tabula rasa*.

The *tabula rasa*, supposedly *waiting* underneath the existing urban fabric, assumes the layout of a Manhattan-like grid. Koolhaas argues: “We propose to project a grid across the entire field of the competition area – over all that exists, including the present enclave of La Défense – and to gradually expose this new system as buildings meet their successive expiration dates. ...The grid proposed here is at the same time conceptual and operational.”⁶⁶ Within the homogeneous grid structure, differentiation in density and alternation of solids and void are proposed. Moreover, in the near future an increment in infrastructural connections is foreseen.

Context:

Paris La Défense is today the largest European business center. It developed from the post-war period to the beginning of 1990s in different phases, which saw the improvement of its connectivity to the infrastructural network of Paris and its metropolitan region. At its Western extreme a big transit hub has been built above and around an already existing railway station. The district underwent its first phase of rapid development, when in 1969 was opened the RER’s A line. With its completion in 1980, the *dalle* appeared as a continuous pedestrian plaza, and saw the building up of several high-rise office buildings. La Défense’s station today ensures high connectivity with Paris’s city center and with regional lines.

Kartal-Pendik Masterplan by Zaha Hadid Architects is the winning proposals for a competition regarding the re-development of a former industrial district on the east bank of Istanbul. It consists in the creation of a new city center with a differentiated program of business, residential and cultural activities. It includes “a central business district, high-end residential development, cultural facilities such as concert halls, museums, and theatres, and leisure programs including a marina and tourist hotels”.⁶⁷

The layout proposed in the project generates from a classical orthogonal grid, later modified into a curvilinear “soft” grid through parametric formulas. The parameters, translated into operating algorithms, deform a classical orthogonal grid into a fluid

⁶⁶ OMA, <http://oma.eu/projects/1991/mission-grand-axe-la-defense>

⁶⁷ Kartal-Pendik, http://www.arcspace.com/architects/hadid/kartal_pendik/kp.html

structure, reproducing and simulating transit flows of the infrastructural network of Istanbul and its surrounding region.

The urban fabric, differently from OMA's project is already defined into all structural and architectural details. The fabric is composed by both cross towers at the intersections of the grid's lines and perimeter blocks delimited by the grid. "Blocks are split into four quadrants allowing for a secondary, pedestrian path system. At certain network crossing points the block system is assimilated to the tower system: each block sponsors one of the quadrants to form a pseudo tower around a network crossing point".⁶⁸

The fabric is further articulated into a script of calligraphic blocks, "a third perimeter block variation that has been designed to both open up the interior of parcels and to cross parcels". The scripts, "that configure the perimeter blocks depending on parcel size, proportion and orientation", generate different typologies of buildings, with different levels of density and of openness/closeness of the block.

Combined with the calligraphic script, a continuous facade differentiation has been used, which "leads from the street-side to the courtyard on the basis of an initial distinction of external and internal façades". Here the seamless articulation of inner and outer façades corresponds to the soft articulation of public, private and semi-private spaces. "The articulation of the facades is a function of the location within the urban field. The exterior of the blocks is given a heavier relief than the interior. Where a block opens up and the public space flows into the private courtyard, a semi-private zone is articulated via the gradient transformation between the outer and inner articulation."⁶⁹ Moreover, Kartal-Pendik Masterplan incorporates a vast quarry that becomes the largest item in a system of parks that are spread throughout the urban field.

Context:

The site lies at the confluence of several important infrastructural links, including the major highway connecting Istanbul to Europe and Asia, the coastal highway, sea bus terminals, and heavy and light rail links to the greater metropolitan area.⁷⁰ These are the

⁶⁸ Schumacher, 2004

⁶⁹ Schumacher, 2004

⁷⁰ Kartal-Pendik, http://www.arcspace.com/architects/hadid/kartal_pendik/kp.html

transit lines which give the parameters to the fluidification of the grid. “Kartal and Pendik were small villages before the opening of railroad during 1860’s connecting İstanbul to Anatolia and Bagdat. Railroad, like all the other coastal villages along, had decreased the relationship of Kartal and Pendik with the sea. Untill the opening of E-5 (Europe-5) highway in the north in 1950’s, the inter-city highway connecting İstanbul to Anatolia had been passing through these villages. These two roads stretching parallel to the Sea of Marmara has brought liveliness to these villages and a new dimension to their relationship with the sea. Kartal cement plant was the first step into the industrial development in the region. This plant, in addition to speeding up the increase in population, has caused the enormous crater, created by the stone quarry in the north. Due to the growth of the settlement and increase in traffic, main coastal transport artery first moved to E-5 and later further north to TEM (Trans Europe Motorway). Today the cement plant is closed and stone quarry is abandoned. However, the area connecting the quarry to the plant along the road to the sea somehow continues to exist with abandoned smaller industrial plants, and businesses. This road is expected to exist as a strong link connecting coastal road and E-5”.⁷¹

Organicity

“Supremely inorganic, the organic is the Generic City's strongest myth”.

Rem Koolhaas

“The rhythmic flow of the urban fabric gives a sense of organic cohesion”.

Peter Schumacher

I will use organicity as first concept for the comparison of the two projects. At a first sight, Zaha Hadid Architects’ plan reveals follows this concept as planning principle, while OMA’s project doesn’t.

Organicity has been in the last century one of the most discussed principles for urban planning and architecture and is closely related to the debate about the dichotomy

⁷¹ [*Kartal-Pendik Design Brief*](#)

nature-culture analyzed above. *Organic* as feature is related to the biological being, to anything that develops naturally, to life processes. Therefore, it is associated to the temporality of life and to forms of spontaneous organization. It is opposite to artificiality, thought as cultural production and related to an abstract connotation of political life.

In an organicist interpretation of human activities, human beings tend to certain patterns of movement and occupation of space dictated by their nature, which in their spontaneity are more smooth than a rationally ordered space with sharp edges and rectilinear pattern. In this perspective, the grid is the least organic pattern.

Organicity in urban developments has been detected in long-term developments where supposedly spontaneous modifications have occurred, while it is not present in the abstract and a-temporal plan and in the rational logic of a single planner, like in the ideal urban organization of Descartes. Organicity is then interpreted as a natural logic, alternative to rational order, inasmuch as it organizes life.

Recently a new style in planning and architectural design has been developing in relations to organicity as planning principle. It is called parametricism, since the design is based on certain parameters which algorithmically define forms and development processes. It generally consists in identifying patterns of spontaneous development, defining mathematical formulas which describe the patterns, and finally applying them to a plan as simulation of the analyzed patterns.

Parametricism is the style used in Kartal-Pendik Masterplan to formally organize the whole plan from the distortion of the urban grid to all architectural details. The main parameter used in this project is that of “minimizing detour network” combined with a deformable grid and depending on the transit network of Istanbul and the surrounding region.

The result is a “gently undulating, dune-like urban mega-form” which “gives a sense of spatial coherence” and “lawfulness”. According to Peter Schumacher,

“this is the great advantage of working with a ‘natural’ geometry rather than with a strict platonic geometry. The form is ‘free’ and therefore malleable at any stage of its development while platonic figures (squares, circles, strict axes etc.) are too exacting and

therefore vulnerable to corruption and degradation by later adaptations. The morphology ... is much more pliant and resilient, always able to absorb adaptations into its characteristic and recognizable form – always maintaining its coherence and character”⁷².

Schumacher argues that in ZHA’s project “integration is achieved via various modes of spatial interlocking, by formulating soft transitions at the boundaries between parts and by means of morphological affiliation. ... A series of previously discrete elements are interarticulated by means of morphing them into a larger encompassing structure. In this fashion everything becomes literally continuous”.

Organicity is here always expressed in formal terms, by talking about undulating form, continuity, soft transitions, interarticulation, etc. The form of a “soft grid” obtained in ZHA’s plan depends on the external influence of traffic flows, which can be interpreted as the natural/organic manifestation of human activities and motion.

On the other hand OMA’s plan reflects an idea of autonomy of human rationality from nature. Koolhaas’s vision on the urban grid is a sort of revisited inheritance of modernism, which separates culture from nature, cultural rationality from natural spontaneity. In *Delirious New York*, Rem Koolhaas calls Manhattan’s grid “a conceptual speculation”.

In spite of its apparent neutrality, it implies an intellectual program for the island: in its indifference to topography, to what exists, it claims the superiority of mental construction over reality.

The plotting of its streets and blocks announces that the subjugation, if not obliteration, of nature is its true ambition.

All blocks are the same; their equivalence invalidates, at once, all the systems of articulation and differentiation that have guided the design of traditional cities. The Grid makes the history of architecture and all previous lessons of urbanism irrelevant. It forces Manhattan’s builders to develop a new system of formal values, to invent strategies for the distinction of one block from another.⁷³

⁷² Schumacher, 2004

⁷³ Koolhaas, 1994

Nevertheless the grid is what frames and then allows in the third dimension the liberation of individualities:

The Grid's two-dimensional discipline also creates undreamt-of freedom for three-dimensional anarchy. The Grid defines a new balance between control and de-control in which the city can be at the same time ordered and fluid, a metropolis of rigid chaos.

With its imposition, Manhattan is forever immunized against any (further) totalitarian intervention. In the single block – the largest possible area that can fall under architectural control – it develops a maximum unit of urbanisitic Ego.

Since there is no hope that larger parts of the island can ever be dominated by a single client or architect, each intention – each structural ideology – has to be realized fully within the limitations of the block. ...

The city becomes a mosaic of episodes, each with its own particular life span, that contest each other through the medium of the Grid⁷⁴.

Thus, OMA's plan gains a certain degree of potential organicity within the "rigid chaos" of a Manhattan grid. It is organic in its acceptance of rapid transformations and adaptations to continuously emerging necessities. It is visible in the representation of the gradual development of the tabula rasa in La Défense that the organicity of Mission Grand Axe is given in its temporal dimension.

Moreover, it seems less rigid for its character of flexible mosaic, where buildings older than 25 years are supposed to be gradually demolished. The underlying concept of the project is indeed the flexibility of the orthogonal grid, and the attempt to counter the European difficulty to accept rapid changes, demolitions and redevelopments. The "balance between control and de-control", between order and fluidity defined by the grid is related with the dynamics of capitalism and to the flows of the market, here accepted as the "organic" ruling force to which planning should adapt.

Thinking of organicity as organizing principle of space and life:

- In ZHA's project organization is given in an *"ordered complexity"* - geometricization of complexity into a grid or fluidification of the grid through a complex system of variables.

⁷⁴ Koolhaas, 1994

- In OMA's project organization is *framed complexity* - it allows the birth of a new mosaic from scratch, just giving the "neutral" conditions for it, through the laying out of an orthogonal grid.

Potentiality and actuality

The orthogonal grid of OMA can be interpreted as having a potential character. The soft grid of ZHA could be interpreted as having an actual character.

Parametricism seems to leave little freedom for future development, since the potentiality of spontaneous development has already been acted and exhausted at once.

The parametric plan is said to be "pliant", *adaptable* (Schumacher). In fact it is already *adapted* to a totalizing law: the inevitable algorithm. Its flexibility is purely formal, it doesn't perform temporally in the processuality of urban development. It seems impossible for later inhabitants to appropriate space and adapt it to their necessities because its adaptability has been exhausted.

The organic law of existing patterns has already been applied to the plan, which doesn't allow any further doubt or afterthought about the definition of human nature and possibly different necessities. Therefore, the parametric plan with its actualization in a soft grid, despite its formal fluidity, reveals itself more rigid than other planning systems.

On the other hand, the use of the grid by OMA in Mission Grand Axe reflects the vision of Koolhaas for a "new urbanism", based on potentiality:

If there is to be a "new urbanism" it will not be based on the twin bases of order and omnipotence; it will be the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential; it will no longer aim for stable configurations but for the creation of enabling fields that accommodate processes that refuse to be crystallized into definitive form; ...

Since it is out of control, the urban is about to become a major vector of the imagination. Redefined, urbanism will not only, or mostly, be a profession, but a way of thinking, an

ideology: to accept what exist. We were making sand castles. Now we swim in the sea that swept them away.⁷⁵

In this vision, the orthogonal grid, when thought in terms of framing structure, it acquires a neutral character and the potential of rapid change and individual freedom in the third dimension. In Koolhaas' perspective, the grid can probably be interpreted as the perfect tool for "the irrigation of territories with potential". In the case of Mission Grand Axe, the use of a Manhattan grid, combined with a process of gradual tabula rasa, aims to liberate the Parisian district from the "trap" of historical identity and to free its potential as a "theater of progress".

Temporality and processuality are part of OMA's project for La Défense. The combination of a gradual tabula rasa with an orthogonal grid is like a developing diagram which draws new potentialities at each step.

Relationality

Relationality of OMA's grid plan is conceptual. - "The grid proposed here is at the same time conceptual and operational"⁷⁶.

Relationality of ZHA's grid plan is formal. - "Our ambition is *deep relationality*, i.e. to integrate the building morphology - all the way to the detailed tectonic articulation and the interior organization"⁷⁷.

Another value of modern and post-modern architecture and urban planning is relationality, the power of creating relationships, connections. Relational is being interconnecting and interconnected.

In the case of urban planning this principle of relationality regards on one hand the spatial or social relationships of the plan with the territory and cultural context where it develops or with the surrounding fabrics, on the other hand it is concerned with spatial and social relationships within the plan itself.

⁷⁵ Koolhaas, 1994

⁷⁶ OMA, <http://oma.eu/projects/1991/mission-grand-axe-la-defense>

⁷⁷ Schumacher, 2004

In the case of OMA's project relationality regards the virtual relationship of La Défense with the city of Paris and its metropolitan region. The business district is interpreted as buffer zone for the development of Paris as world capital: "La Défense is a strategic reserve that has so far kept Paris intact, a privileged expansion zone that enables the city – even the country – to modernize itself constantly, to make the tactical adjustments necessary to compete with other world capitals. It is a theatre of progress. Its presence has saved Paris; each 'eyesore' realized *there* has prevented an invasion of the centre".

The goal of the project is to enhance this character of buffer zone, with the help of the tabula rasa and the grid as neutralizing and renewing principles.

To be an efficient buffer it needs on one hand to be elastic at its borders in order to absorb the shocks. This is the reason why "the grid proposed here ... will not subject everything in its way to its discipline but will act as a filter to absorb those entities whose right to survive is not contested – the University at Nanterre, Wogensky's prefecture, the new Parc André Malraux – accommodating the misfit of their anterior geometries. Along its entire perimeter it will generate a string of hybrids. To achieve its ultimate coherence, it will invest the so far isolated fragments with a premonition of identity."⁷⁸

On the other hand, despite transit connectivity is a central and important feature of La Défense, OMA's project is formally independent from flows. It need to be delimited, and its delimitation means a low degree of relationality and porosity at the spatial level between the district and the surrounding fabrics. It is quite evident in the representation of the plan, that the Manhattan plan laid out in La Défense has little to do with the surrounding Parisian fabrics. It has other dimensions; it is like an alien landed from another dimension. Nevertheless, this feature of spatial/formal isolation and juxtaposition ensures its relational role at the level of market flows and network of global cities.

Moreover, the idea that the Manhattan grid is easily transferable to La Défense depends on the fact that Manhattan and Paris are conceptually or virtually part of the same global urbanization and global society. It confirms the foreseeing of the Land Ordinance's

⁷⁸ OMA, <http://oma.eu/projects/1991/mission-grand-axe-la-defense>

Commissioners who in 1785 decided to orientate the rectangular survey of the United States to the magnetic North, in line with the globe's meridians and parallels.

Juxtaposition is a defining character of the orthogonal grid, which usually cuts space into sections and creates a mosaic. This is exactly what ZHA tries to avoid in its project: Schumacher argues that juxtaposition in the orthogonal grid of the American city supports visual chaos, while the principle of *relational field* used in the plan has an organizing/articulating capacity, in spite of the high level of formal differentiation.⁷⁹

Relational fields comprise mutually correlated sub-layers, for instance the correlation of patterns of occupation with patterns of connection. The growth-process of unplanned settlement patterns does indeed continuously oscillate between moments when points of occupation spawn paths and paths in turn attract occupation. The continuous differentiation of the path-network - linear stretches, forks, crossing points - lawfully correlates with the continuous differentiation of the occupying fabric in terms of its density, programmatic type and morphology.⁸⁰

In order to create spatial relations, space has to be conceived as force-field. "Modernism was founded on the concept of universal space. Parametricism differentiates fields. Space is empty. Fields are full, as if filled with a fluid medium."

And to achieve "deep relationality", the assumption is needed that "the urban massing describes a swarm-formation of many buildings whereby lawful continuities cohere this manifold of buildings. The systematic modulation of morphologies produces powerful urban effects and facilitates field orientation"⁸¹.

The parametric relationship of the plan with the regional transit network defines the role of Kartal-Pendik district in the connection of Istanbul to global city networks, as it was asked for in the competition's requirements.

⁷⁹ . The organising/articulating capacity of such relational fields is striking, e.g. in comparison with the grid of the American city. This modern grid is undifferentiated and therefore non-adaptive. Its "freedom" is now limiting: It leads to arbitrary juxtapositions that result in visual chaos. – Schumacher, 2004

⁸⁰ Schumacher, 2004

⁸¹ Schumacher, 2004

Istanbul's project, similarly to OMA's project, achieves this connectivity and high level of relationality to global networks, but by means of spatial/formal dynamics and through a conception of space as force-field.

At the scale of relationality within the district, considering again space as force-field, relationships can only happen in smooth transitions: going from closed to open spaces, from private to public spaces, from space of motion to space of occupation, transitions tend to be softly articulated.

Thus, thinking of possibly resulting social relationships, it seems again that forms are already acting and exhausting the social potential of space. The morphology of ZHA's project doesn't seem to create frames for social life, where inhabitants might be able to appropriate space and define it according to their necessity. It seems to only create visually cohesive and articulated space.

What kind of social relationships are expected by Zaha Hadid Architects to inhabit their plan? And what kind of society is expected by OMA?

The society which would come to inhabit the two districts of Paris and Istanbul, is neither mentioned nor represented in plans' reports and representations. Neither ZHA's project nor OMA's one seem to foresee a lifeworld for the space it aims to create. The role of spatial and formal structure of the district is never questioned in relations to the society it will host.

The images of both projects are mainly plans and diagrams, or in the case of Kartal-Pendik Masterplan also 3D renderings, which only represent the district from a bird's-eye view. Therefore, in both projects one can only inhabit a conceptual image of the district and have a purely optical experience of it.

Information and image have an important role in the definition of the projects' relationality: they create connections and relationships to the extent that they represent and design them on the plan. Thus, also social relationality of both projects is kept on an optical level and in a way defines their potential society as a *society of spectacle*. Both districts, with their commercial and business character, aim at an iconic role in the

development of their metropolis' contemporary identity and, in this perspective, their inhabitants can only be consumers of their image.

The subject and object of planning projects is not the citizen, but the market, and relationality is no longer considered in social terms, but only in terms of spatial connections and flows.

To conclude the comparison between the considered plans, an interesting find is that the formal fluidity of ZHA's soft grid can be also interpreted as rigidity inasmuch as it is a crystallization of flows, while the rigidity of OMA's orthogonal plan confirms its flexibility in other (3rd, temporal, social) dimensions, beyond its 2-dimensionality.

As Bauman would put it, "the present-day situation emerged out of the radical melting of the fetters and manacles rightly or wrongly suspected of limiting the individual freedom to choose and to act. *Rigidity of order is the artefact and sediment of the human agents' freedom.* That rigidity is the overall product of 'releasing the brakes': of deregulation, liberalization, 'flexibilization', increased fluidity, unbridling the financial, real estate and labour markets, easing the tax burden, etc"⁸².

On the other hand both projects, aiming at a high level of virtual or spatial relationality with external forces, reveal themselves formally and conceptually dependent on the contingency of their politico-economic context.

Case studies II - An introduction to the work of Dogma. The grid as paradigm of architectural autonomy

Dogma is an architectural office founded in 2002 by Pier Vittorio Aureli and Marco Tattara. Dogma has worked on the relationship between architecture and the city by focusing mostly on urban design and large-scale projects and is also active in offering consultancies to municipalities and agencies concerned with urban planning and architectural issues.

⁸² Bauman, 2000

The theoretical work of Pier Vittorio Aureli and the planning work of Dogma are deliberately influenced and concerned with the issue of political and theoretical autonomy of architecture.

In his book *The Project of Autonomy: Politics and Architecture Within and Against Capitalism*, Aureli draws the historical line of movements devoted to the research of a theoretical autonomy of politics and of architecture in particular. His objective seems to be the definition of a historical and theoretical framework, which would allow the revival of autonomy projects as answer to the present-day situation of architectural and planning practice.

The history of autonomy movements started in Italy during the 1960s with worker groups, whose goal was the reconstruction of a theoretical approach to politics, in order to achieve a real autonomy from capitalism and from the rising “technocratic ‘humanism’ of the welfare state”. A development of the autonomy movement within the architectural discipline occurred with the group “Tendenza” founded by Aldo Rossi, which called for a renewal of architecture in relation to the city. The principles defined by Rossi for this purpose were based on aesthetic detachment, refusal of “spatial humanism as a way of making the new forms of habitation more acceptable”⁸³, refusal of “new technologies as a way of distributing social equality” and refusal of the “coexistence between the old and the new as a way of manifesting an ethical pluralism”. He criticized the “trust in the continuing progress of democracy”⁸⁴, unable to identify the ideological representations of capitalism in the form of a rediscovered “humanism”. The alternative is a theoretical refoundation of architecture, a search for a rational language, liberated from the sequence of formal styles in the service of the dominant bourgeois institutions.

Aldo Rossi criticized as well the concept of city-territory, claiming that it affirms the modes of capitalist production, to the extent that it allows an instrumentalization of urban design, through the fragmentation and dispersion of the labor force throughout

⁸³ Aureli, 2008

⁸⁴ Aureli, 2008

the territory. Rossi understands the city-territory as “structure that organizes the totality of the urban territory in order to make it productive”⁸⁵.

Thus, a political alternative to capitalist technocracy is to think the city as a concrete geography of places, “irreducible to the totality and continuity of urbanization”. The planning alternative of Rossi is the idea of *Locus*, a geographic singularity and at the same time a universal structural condition. A geography of singular points, of autonomous satellites, within the overall framework of the city can give a “possible theory for spatial division”, can “assess the real dynamic of discontinuous events” and can allow an autonomous appropriation of space. For Rossi, it is important to retrieve the city’s immanent separateness, whose parts are not reducible to the common denominator of technological development.

His criticism to organic tradition in planning, could be used today as well as predictive criticism to parametricism. He argued that thinking the urban territory as constituted by the organic growth of flexible organisms evolving in relation to the technological development of the infrastructure were a deterministic vision, which made this model a natural representation of bourgeois class values and ideology. For Rossi the city’s technological advancement coincided with its political decadence. He proposed to oppose to the continuity of economic development the separateness of both society and the city, through a rigid grammar of forms, which don’t aspire to be anything else than themselves.

In line with the formal grammar of Aldo Rossi and with modern architecture in general, Pier Vittorio Aureli proposes for the present-day development of architecture and urbanism a non-figurative language, “an architecture essentially reduced to a public grammar for inhabitable space”, against the recent proliferation of formal redundancy and structural complexity. Aureli associates non-figurative forms to the concept of generic (city), defining *generic* as “the *common* character belonging to a number of persons or things” and considering it as fundamental expression of modernity⁸⁶.

⁸⁵ Aureli, 2008

⁸⁶ “Modernity has always stressed, as the core of its project, the possibility of an uprooted and reified subjectivity, it has elevated the generic attributes of life as the *common* political character of society. It is possible to argue that, by denying formal redundancy, the latent project of nonfigurative architecture was parallel to the reduction of inhabitable space to the common forms of the generic city. It is precisely for

Within Aureli's project of defining a non-figurative architectural language, the grid gains an important role⁸⁷, thanks to its low formal complexity and claimed neutrality⁸⁸. "Because of its approximation of an isotropic distributive order, the grid has often been used to convey the ultimate essence of neutrality, yet this neutrality – as its historical development in the arts, in architecture, and in urbanism makes clear – is far from being politically neutral". In relations to modernity and to the political significations of the modern grid, the common, the universality of human beings, the *generic* assume a programmatic value.

The nature of the grid and the forms that derive from its use as a structuring principle signal the essential consideration at the core of the project of modernity. Modernity's *promise* of a "public truth" based on universal values such as individual freedom and equality could only be conceived with the reification of the subject and its space of inhabitation. At first this reification was the result of the formalization of a universal reason, which made it possible to understand the process of human cognition as a concrete thing⁸⁹.

Modern formalization of reason was instrumentally redefined in the administrative logic and presumed rationality of capitalism, since the first modern Western city developed in the 15th century. Nevertheless, the reason why throughout modernity a great importance was given to simple forms and to the "paratactic logic of the grid", is that the grid is not a mere visual expression of the real, but a strategy, "an *idea* of formal reduction that can structure or simply help to map the complexity of the (reified) modern city"⁹⁰.

Therefore, Aureli proposes to rethink the *generic* in its "possibilities of political and cultural emancipation without a return to something like 'authenticity', 'originality' and

this reason that the idea of a nonfigurative architecture may point toward an understanding of what is *public* architecture within modern civilization". – Aureli, 2012

"In her canonical essay on the grid, the art historian Rosalind Krauss emphasizes that the nonfigurative form became a central theme of modern art precisely because its conventional geometric order was best suited for manifesting the nonrepresentative and antinarrative *ethos* of modernity". – Aureli, 2012

⁸⁷ "The grid and its derivative formal orders are the most important nonfigurative attributes of the city. Throughout history the grid has proved to be a powerful form of spatial indexing." – Aureli, 2012

⁸⁸ Historically, the grid is assumed to represent the least "complex" formal order. The grid has no directionality, no expressivity, and supposedly no symbolic content: *it is what it does*, and in that sense, claims for itself a formal logic of neutrality. – Aureli, 2012

⁸⁹ Aureli, 2012

⁹⁰ Aureli, 2012

‘authorship’ that in today’s extremely reified means of production can only exist as caricature of a lost aura”. The generic must be understood “with the awareness that any conception of public sphere that wants to address what today is *truly* common has to be formulated from within the reified nature of the modern and contemporary (generic) city”.

In the work of Jean-Nicolas Louis Durand, Aureli identifies the combinatory logic of the grid as a principle of flexibility, which was increasingly needed for the diversification of programs claimed by modern Western societies. The grid in Durand’s work is a simple compositional structure, which allows flexible combinations of architectural elements, and achieves the “reification of the city” and the “liberalization” of its space.

Another project praised by Aureli for its non-figurative and organizational character is Non-Stop City of Archizoom. The plan dissolves the built structure of the city into its constitutive basic elements and simply distributes. All differences and spatially dialectical categories are let collapsing “into one equipped surface that is extendable in all directions along the grid, the most generic order possible”. In Non-Stop City the grid is “neither a visual element nor a functional one, nor even a circulation system. It is simply the most conventional *ratio* possible in order to distribute the necessary elements of the city without resorting to any architectural gesture. *The city is what it does*”.

Moreover, Non-Stop city allows any formal gesture; “these too are integrated into the system, albeit as helpless arbitrary elements. Any formal difference is subsumed within the sameness of the city”. This is the potential of the grid in particular, when understood as organizing and at the same time liberating structure. “A nonfigurative form is no longer the demiurgical design of everything, but the limit that attempts to release everything from its design. For this reason, a possible postscript to the history of nonfigurative architecture is to no longer think of nonfigural form as a vehicle for its extension, but as a frame, as a limit of itself.”

According to Aureli, “today this attitude toward framing and limiting needs to be developed not only in the literal material form of architecture, but also as a political principle of design. In our desire for change, growth, and even emancipation in the

contemporary city, *limiting* should be conceived as a “mental-habit” that gives form to responsibility”⁹¹.

The above mentioned features and values attributed by Aureli to the grid, can be found in the work of Dogma, in which the grid can be read as a programmatic element for the political redefinition of architectural and urban design.

I will consider here two projects of Dogma. The first plan was presented in 2005 for a competition in the Republic of Korea, whose call was for the development of a new multi-functional administrative city. Dogma’s project is called “City Walls”, stressing the role of buildings as framing walls across the whole town. In this project it is indeed the buildings, no longer the streets, that are laid out on an orthogonal grid and come to enclose and frame open spaces. The classical grid is here inverted and through its architectural reification it strongly reveals its fundamental character of both organizing and liberating structure. Here the grid is acted in the generation of available open spaces, where diversity could proliferate. It keeps open the potential of space.

The town is clearly delimited within a gridded square which stops when it meets geographical obstacles. The meaning of a sharp and anonymous grid of framing walls and the architectural inversion of the traditional functional relation between the grid as distributive infrastructure and the blocks as closed buildings, has a correlation to Dogma’s theoretical definition of architecture as what frames life.

Architecture frames and supports what cannot be predicted: life. If we were to summarize life in a city and life in a building in one gesture, it would have to be that of passing through walls. ... Architects cannot define how program changes, how movement performs, how flows unfold, how change occurs. The only performance that can reliably be attributed to architecture is its specific inertia in the face of life’s mutability. Architecture is the definition of its boundaries rather than representation of its image. It is not the sculpting of an object or the shaping of a landmark, but the composition of parts through the framing of spaces. ... Architecture is the continuous tension between inside and outside, between what it includes and what it excludes. Architecture is at once an aspiration to unite and recognize its own limits. As such, it always defines itself in relation to, and in antagonism with, its context.⁹²

⁹¹ Aureli, 2012

⁹² <http://www.icif.ru/engl/prize/prize/dogma.htm>

The other project by Dogma I am presenting here is the development of the district of Spina in Turin, planned in 2010. The plan is called “Locomotiva 3”; its spatial focus is a big open area, from which all elements are installed. The limit has an important meaning in this project: the open area is completely and sharply delimited by architectural borders. The separation of this large open space from the rest of the city is a way to achieve the creation of a real piece of city, by spatially articulating its surrounding districts. The relationship between nature and urban fabric is here very different from urban parks of the 19th century, where the surrounding urban fabric was deliberately invisible. In this project, the walls delimiting the open area are always visible, reminding to the surrounding city and making aware that the city is composed of separated autonomous pieces, like in a mosaic.

On the Southern side of the open space a built-up area is conceived in the form of a small scale grid, hosting private villas on the floor ground, while large common spaces for working are planned underneath the residential layer. The architecture of these layered typologies aims at a flexible interpretation, use and appropriation of space and reflects on the current totalizing relationship between work and life. It critically accept the post-fordist condition and seeks for a suitable form of co-habitation and temporal dwelling. The grid here loses its character of separating principle between street and building, open and closed space, between public and private spheres. Here separation is achieved vertically, and is soften by a certain degree of porosity⁹³.

⁹³ <http://www.gizmoweb.org/2010/10/locomotiva-3-by-dogma/>

Conclusions

As seen throughout the research, the urban grid has witnessed a significant transition from pre-modern to modern planning approaches. The full reintroduction of the grid in planning practices after the Middle Age, has corresponded to the beginning of a gradual “opening” of the urban plan and to the development of the modern Western city as strategic space for capitalist production. Despite the utilitarian instrumentalization of the grid for the interests of the market, it often reveals itself as valid organizational structure, even in an autonomous perspective independent from the reasons of capitalism.

In regard with the cultural and social meanings of the grid, the question about a possible dichotomy between a “symbolic” and a “diabolic” character of the grid has been answered on different levels.

The modern grid reveals itself as a secularization of the city: founding a city and defining its limits is no longer a ritual and sacred act. The “diabolic” grid is the profane city, its values are mainly functionality and neutrality and it becomes an absolute abstract space, where occurs the overcoming of extension over locality.

A “diabolic” character has been noticed in modern uses of the grid, especially in relation to the development of the city-territory, whose fundamental features are indistinction, informality, neutrality. In the city-territory occurs a centrifugal dispersion of city’s meanings and the loss of city’s connotation as political center.

With the loss of its limits the grid feels liberated to a potentially infinite extension, while it loses as well its center, which previously defined the city as *polis*, as political space. With the city-territory only survives a “territorial” grid of fragmented urbanizations, which have replaced the city as it was.

The case studies of Paris and Istanbul confirm the “diabolic” character of the city-territory. Especially Zaha Hadid Architects’ plan doesn’t present any kind of delimitation, it is supposed to be highly connected with the external forces of the

territory, on which it strongly depends. In the fluidity and porosity of this soft grid, the meanings of a supposedly new center of the city might struggle and flow back into the regional network they come from.

The work of Dogma on the other hand attempts to regain a “symbolic” character, within the “diabolic” context of the modern metropolis, by creating sharp delimitations. By strictly separating and framing spaces, Dogma aims to reconstitute those important dichotomies which are at the basis of city’s political and representational role. Delimitations avoid the dispersion of meanings and give back the city its political potential.

Nevertheless, the present-day grid cannot recover a complete symbolic character, since all its diverse meanings can’t concentrate into a single center. The cultural identity of the city can no longer be based on unitary, common values; therefore, it needs to keep a certain degree of flexibility to still allow a multiplicity of meanings and uses, of interpretations and appropriations of space.

In this perspective the grid assumes a paradigmatic value: for its ambivalent character between its fundamental principles of organization and flexibility, of framing and liberating, uniformity and potential diversity, the grid could foster the creation of an articulated mosaic of meaningful situations.

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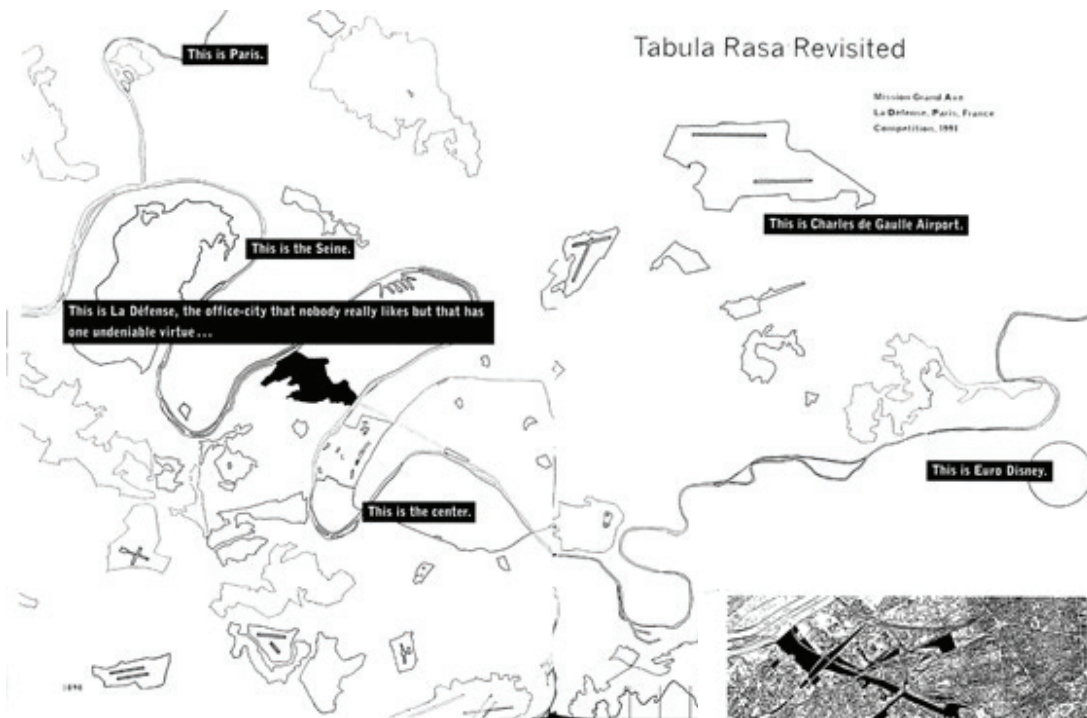
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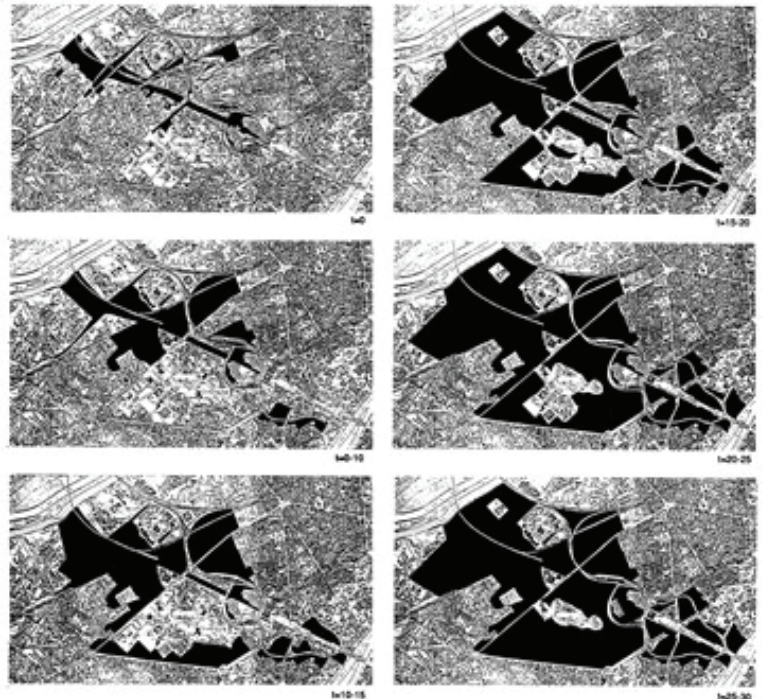
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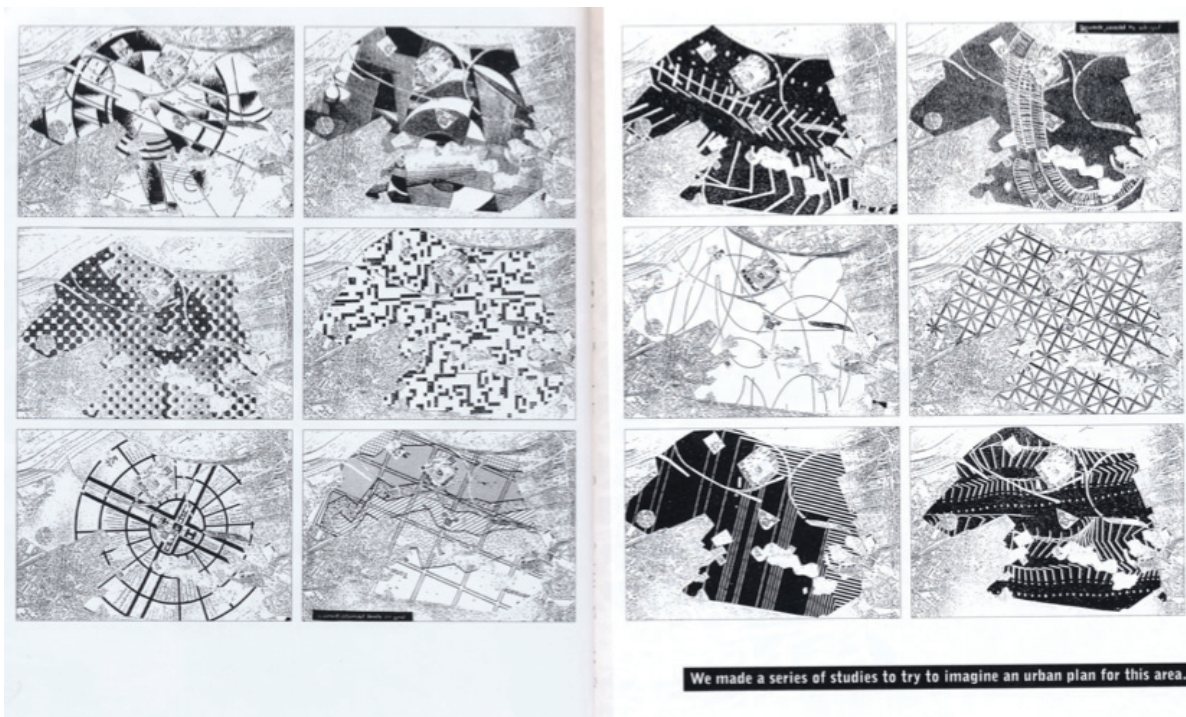


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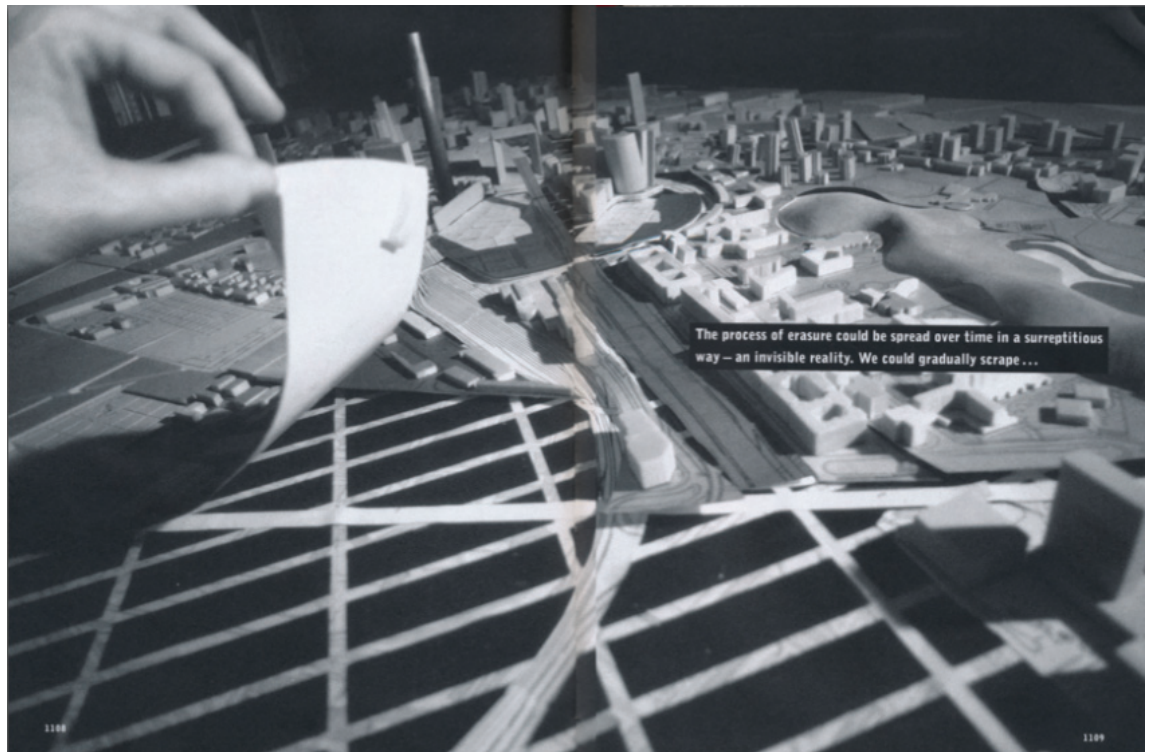
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PROCESSUS DE LIBERATION
L'AMENAGEMENT DE LA DEFENSE
1991-1992

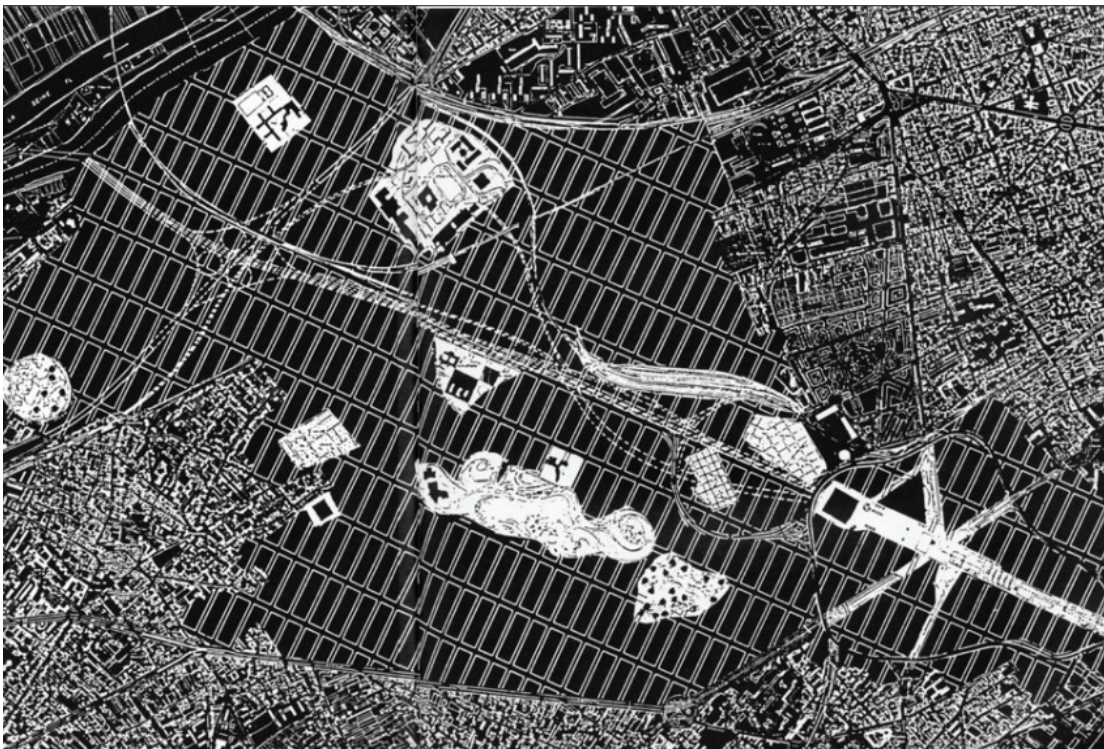


We made a series of studies to try to imagine an urban plan for this area.



Mission Grand Axe, La Défense, Paris, 1991 OMA

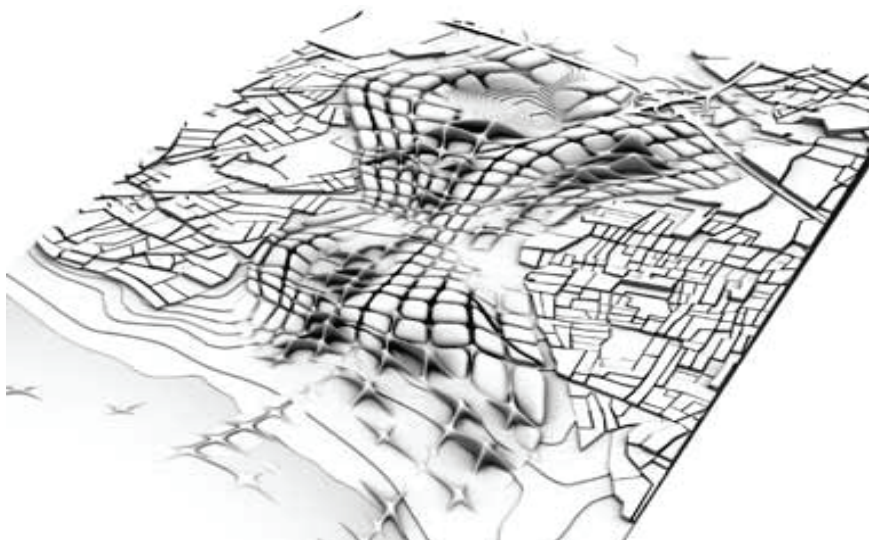
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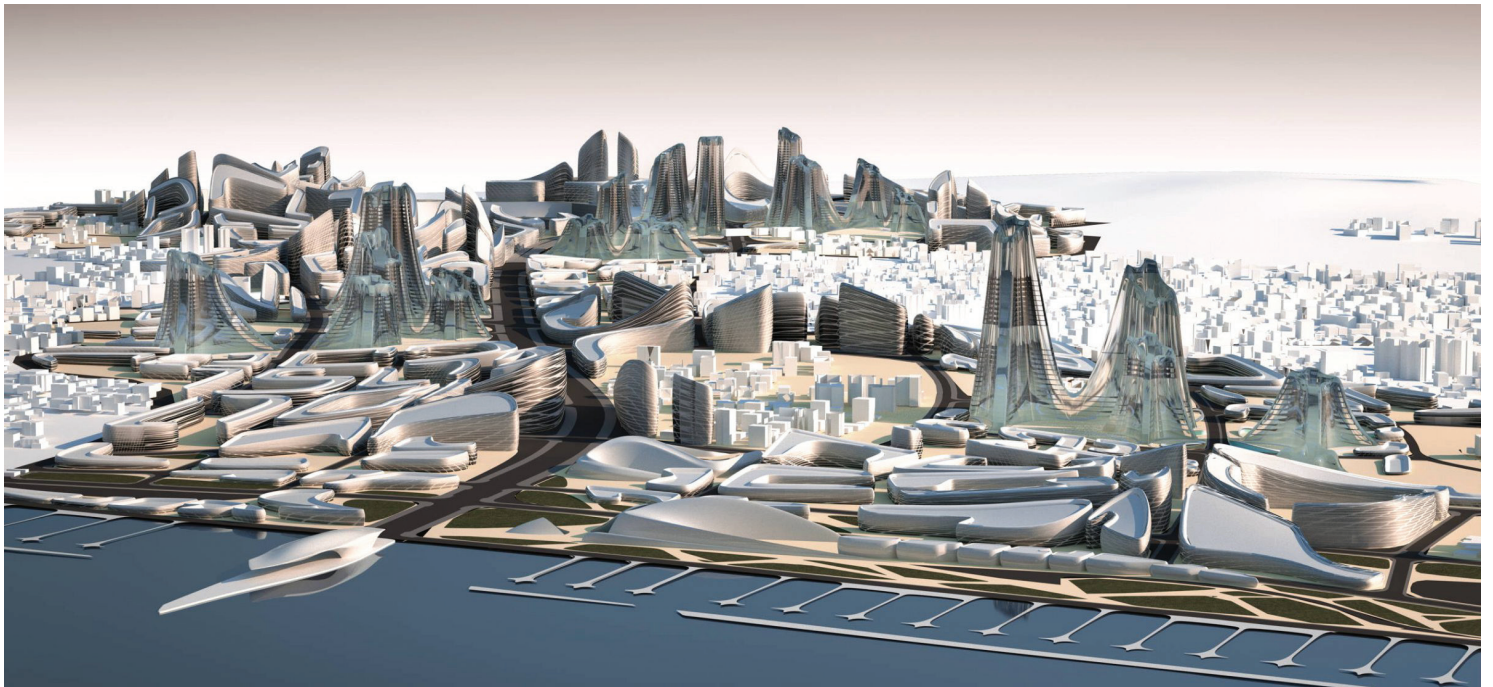




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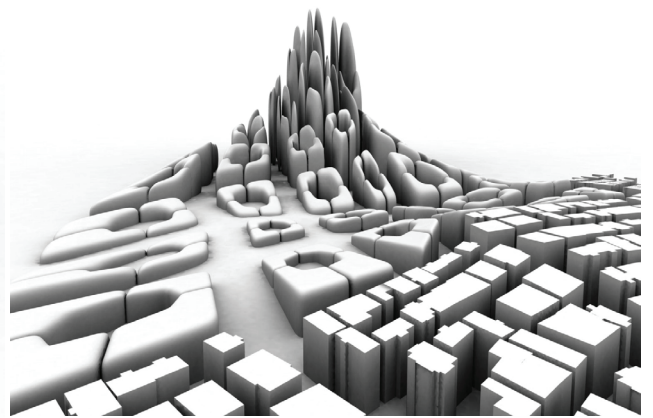
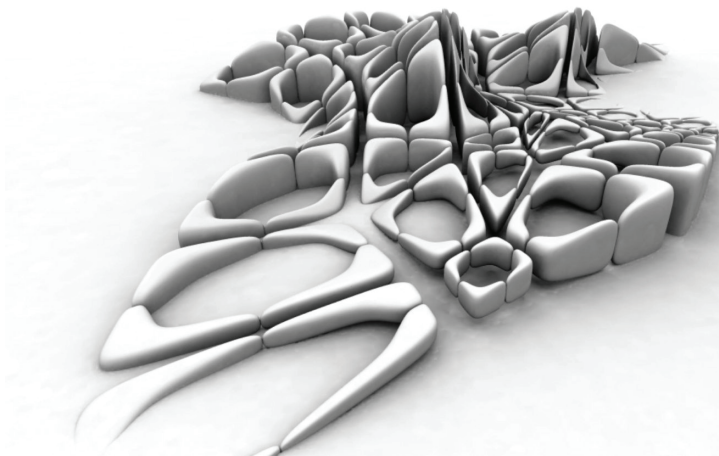
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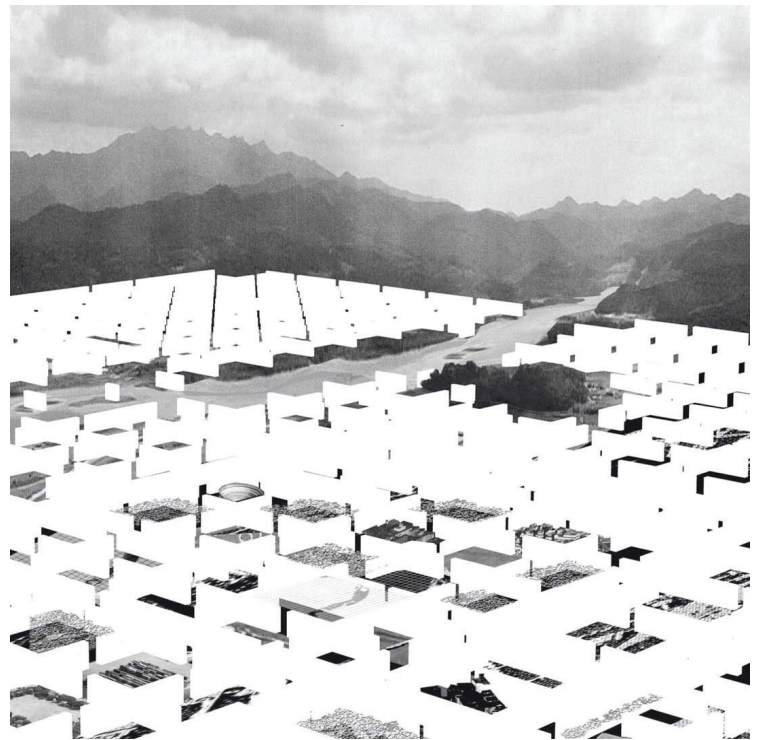
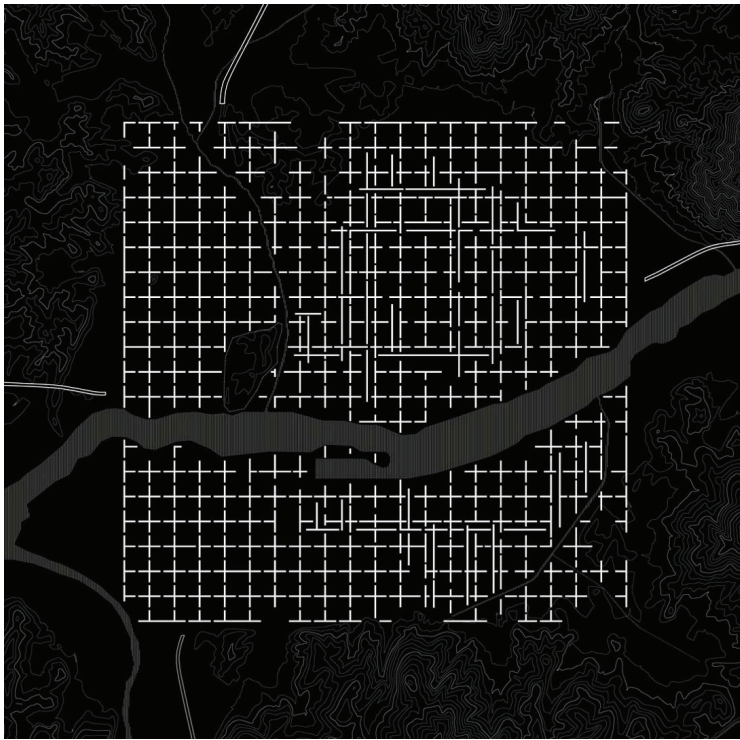




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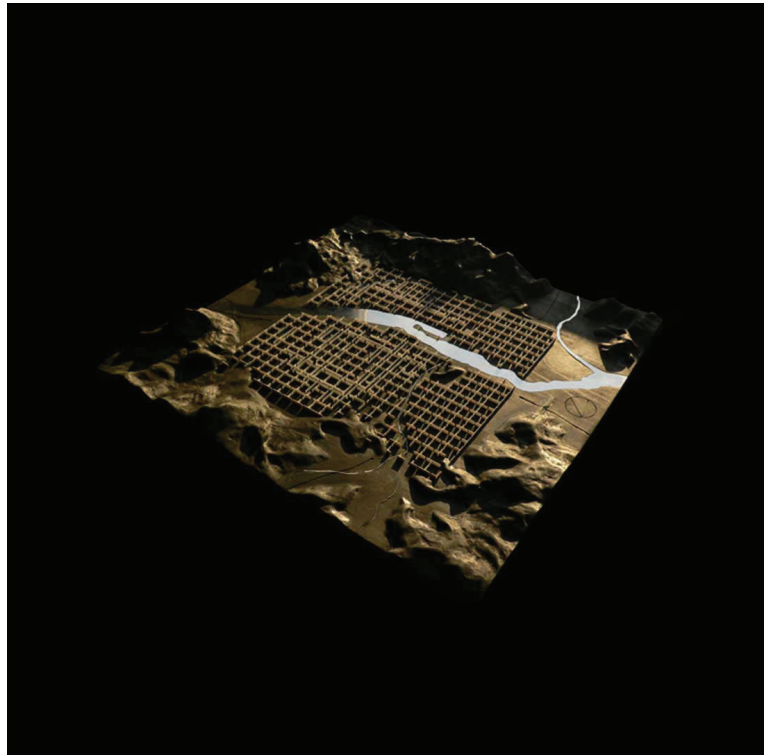
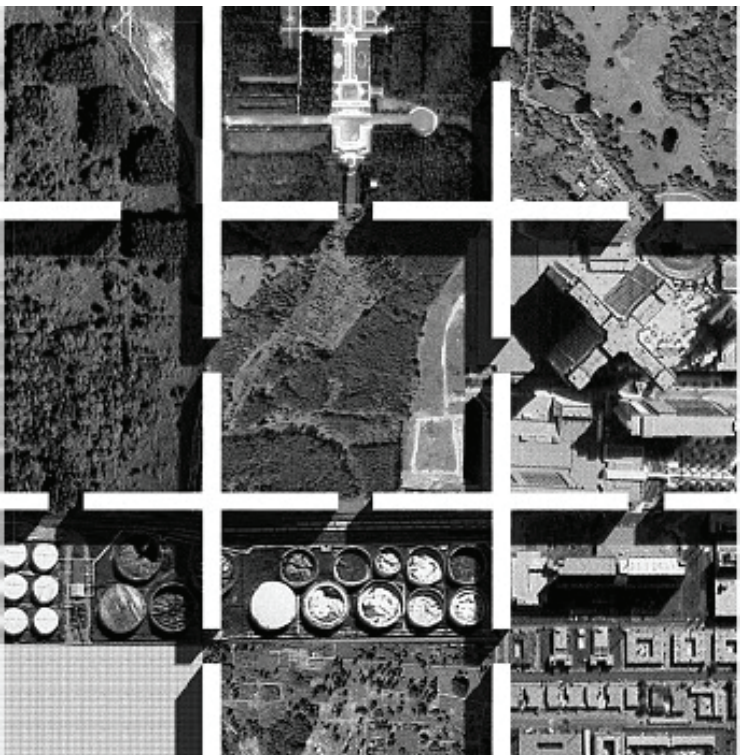
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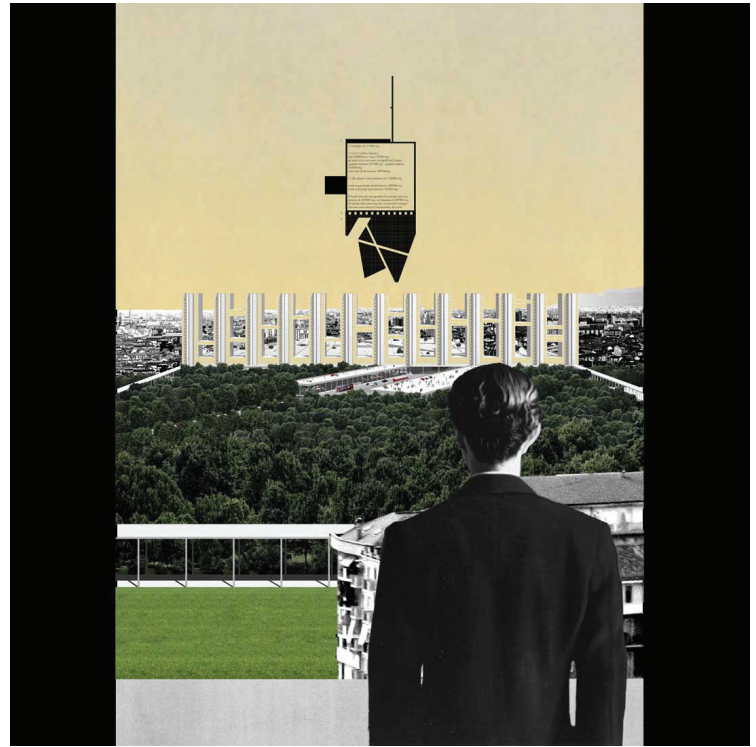
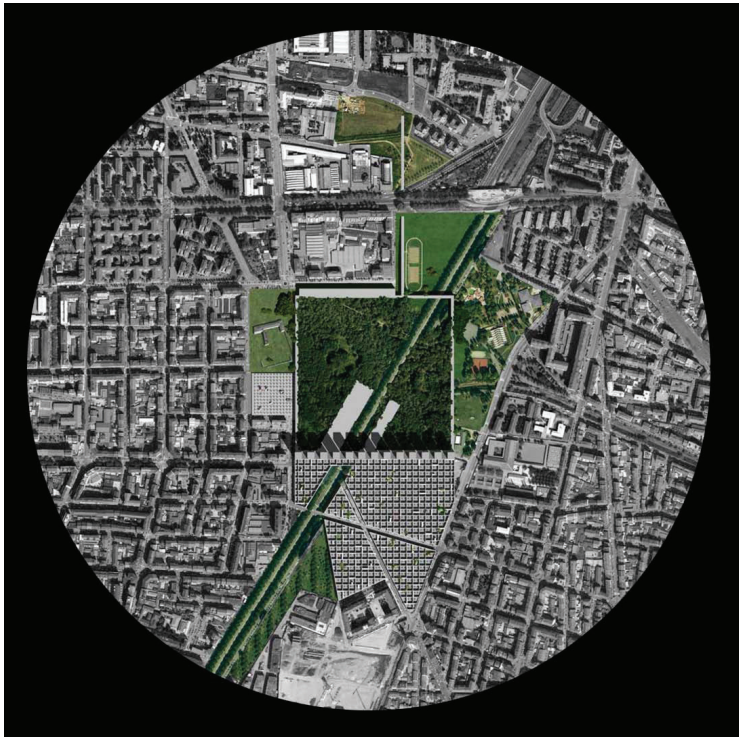




City Walls. Project for the New Multi-Functional Administrative City
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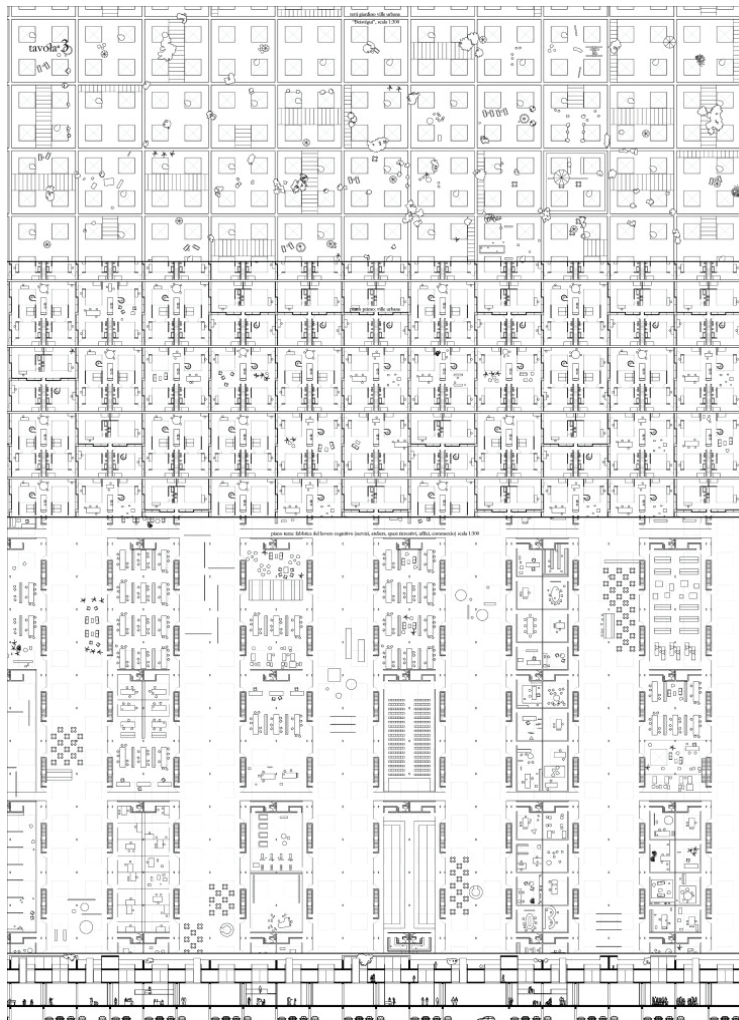
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Abstract

The thesis at hand is concerned with the different ideological and cultural meanings attributed to the urban grid throughout history and in recent projects. The research focuses on the shift from a pre-modern, closed city with its delimited grid to a modern, open, potentially infinite “city-territory”, where the urban grid becomes the means of secularization and neutralization of urban space.

The comparison of two recent plans of district redevelopment in Paris and Istanbul by the firms OMA and Zaha Hadid Architects has confirmed the modern character of the grid. On the other hand the analysis of the work of the architecture firm Dogma has revealed its attempt to give back the city its “symbolic” character, within the context of the city-territory and the open grid’s secularized space.

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	Other languages:				
		Understanding Listening	Understanding Reading	Speaking	Writing
	English	C1	C1	C1	C1
	German	C1	C1	C1	B2
	Spanish	C1	C1	B2	B1
	French	B1	B2	B1	A2