A piece of the earth’s surface specifically associated with an urban culture is what we call 
territory. Morphologically speaking, territories are the basic elements of the architecture of 
urban systems. The territory may comprise different types of territories, which combine to 
construct the larger whole of the earth’s surface and constitute a pattern of selected rules and 
their deviations: it is proposed the concept of “architecture of territory”. Territories are not 
just geometrically fixed surfaces, not merely the objects of surveying. The concept of 
“territory” summarize very complex circumstances of the earth surfaces. 
In the territories live the cities. The term city is closely linked with the settlements centers of 
an ancient farming culture and the industrial cities that evolved from it at the beginning of 
the 19th century. In the individual geogenic and anthropogenic subsystems, the urban system 
manifests itself as a large-scale urban cultural landscape in which there is no distinction 
between urban and rural spaces. The urban system is marked by a blurring of the boundary 
between city and country. The urban design make today possible generate a third city 
dimension (after space and time): the density and its flows. The design goals is to realize 
projects and a new urban characteristics. The urban project and the density flow represent 
complementary tool for steering urban development. 
Manhattan in New York is a particularly example of shifting densities: the relationships 
between water and land, solid and void (water, island and park are voids around which masses 
accumulate) occasion a new choreography of their hierarchical relationship. The serial 
street plan of Manhattan reflects the prominence of this part of the city.

Keywords: shifting density; city flow; urban system

Introduction
In the run-time which from the end of the nineteenth century leads to the early decades of the 
twentieth century, seem to have set guidelines that guide to the current complexity of the city: 
the breakdown of the traditional city and its aesthetic has become a prerequisite for the 
creation of alternative theories of urban settlement, which is starting to understand the 
aesthetic of the present city under new keys, to both identify the germinative matrix of the 
design errors that, too often condemned some space to accommodate the qualities of a "ugly 
"city.
In Europe rest the canons of historical culture, with plans based on the idea of extending a 
whole urban organism according to the prospective characters that govern the composition of
a building; often to the point that the structure that guide the composition of a city or of a neighborhood is based on the axes outgoing from the building; emerge the implied request that the set is geometrically regular, but also prospectively perceived (as suggested by the canons of projective geometry), biunivocal predetermined in correspondence between sets of structures, that will be placed in the design of the city.

Wishing to oppose this concept the possible lack of an immanent relation between objects and territory, it can think to the culture of the American plans, since there exists the correlation between the numbers and portions of it: it is not known in advance how many buildings it want to place in it, since it may vary continuously and freely to form, density and function, while the mesh remains predetermined, geometric regular and invariable (as suggested by analytical geometry), which draws the ground, according to a precise grid, open in each direction and indefinitely extensible.

The latest episodes of urban transformation flow through the historic texture of our territories, and design stratified, diffuse, sometimes controlled urban areas. Currently, it seems no longer possible to talk about mechanisms of growth already acquired and determined, because the perception of a city, that lives by evolutionary known phase, is dissolving in favour of more uncertain and variable evolutionary frameworks, whose formal designs can achieve a variety of possible scenarios; we are faced with a fluid city, a city which prefigures several swarms of likely future frameworks, it becomes certain only through the urban design that shapes the final configuration.

Reading and historical palimpsest of urban morphology

Formal transposition of germinative historic matrices advances gradually and in American cities than in Europe, following different reasons: in the first case, the formal rigidity reveals its inadequacy to the sudden impulses of urban development, in the second case, the functional rigidity of the urban design induce unexpected formal answers to requests for new features, in a structural substrate that lacks a clear flexibility. It is an interesting field of investigation aimed at two categories of principles, not opposing, but complementary and potentially synergic.

For American cities, the category of formal transposition is based on the concepts of retreat (folding), jigsaw (puzzle) and grid (criss-cross mesh): to the urban grid can sometimes contrasting the landscape component, and the city is studied and collected on itself, through the folding topology of the fabric and removing the items placed in it, to recreate an alternative vision of the place and of the lines that, projected to the outside, are constructing the texture of the city.

The urban orthogonal mesh allows to implement an almost infinite number of specific forms, related to the land settlement characters. The size of the reticular module becomes a study, analysis and design parameter of blocks and roads, that do not give up the location of functions in the urban fabric, but rather prefer to delay testing, separating into two different times the project decisions. The first time start the realization of the spontaneity of urban phenomena with their difficult prediction; this choice is devoted to the geometric design of the regular mesh, supported by a road network, wich is flexible and able to accept the subsequent adjustments and developments including centrifugal germination. The second time
aimed at a finest urban design, which is revealing in the architectural quality of the constructed objects and buildings, which live within the urban functions.

The initial stages of development of the city of San Francisco, for example, (from mid-nineteenth century to late nineteenth century) show that in this case is strongly present the first component design: grids regularly turn of Jon Volget, of Jasper O'Farrell and of William Eddy draw through next "translated" the expansion of urban characters, with repeated "add", "extensions", "rotations and translations", and "fracture" caused by the presence of the waterfront and new developments in infrastructure, which, especially at the beginning of that twentieth century, mark, with the introduction of new diagonal streets, a further formal transposition, which overlaps with the previous rectangular lattice mesh (as happened in the proposed plan of 1909 by Daniel H. Burnham in Chicago).

With the advent of the new century (1920-1940) there is an extensive development of urban mesh which, although based on the "translated" of the previous historical plots receives some abnormal changes, local interruption of the indigenous notion of undifferentiated reticulum. Only after the war, with the emergence of increased binding urban problems, will be required to overcome the rigidity of urban checkerboard, with the necessary structural metamorphosis: while leaving out the priority given to public spaces, a need to introduce specific duties and to qualify second point intervention the new growth inflexions. The presence of water near the city center offers the opportunity for reuse of sites and abandoned structures (the plan of I.M.Pei and Partners for the Mission Bay area, in the early eighties). This process of metamorphosis of the city introduces the morphological transition from seriality of the recently switched city to polyrhythms, understood as the overlapping of different series, second new binding principles.

For the Italian cities is the category of formal transposition based on the concepts of excavation (excavation), succession (series) and mimetism (camouflage): the process of excavating introduces an introspective journey, brings to light pre-existing structures and sedimentation, and to highlight the calibrations of the stripes of the Renaissance city based on subdivisions of the roman city.

Even in the case of Italian cities, and this applies especially for medium-sized cities, this is the track of a metamorphosis taking place, which exceeds the growth according to the urban "traslatum" of past eras.

In the cities of Verona, Mantua, Novara, Lodi is immanent the track of successive layers of history, while it is setting up in recent decades, a true metamorphosis, removed from the plots of the native tissue. Novara, for example, expresses its paradigmatic thresholds in conjunction with the set of three, foundation / wall-building / expansion eras, recognizable in the roman / medieval foundation, in the constitution of the seventeenth-century city wall, in the expansion of the nineteenth century; with it correspond a urban armour (in the background of the discipline of geometric drawing) that express, through organizing schemes, the immanent expression of urban quality. The verification of these schemes officers is detectable through the grids, that structure a juxtaposition of the historic fabric tissues to expand tissues, which will focus on the main routes of communication.

The urban models developed in Europe interpret the existing identities of places due to historical generative matrix (radius-centric mesh, for example), in this case a hierarchical germination principle is recognized, leaving guess that the only spontaneity is the location of
the city at an intersection of one or more paths, that forms the center. In ancient times the design of the city has for the most part the goal of establishing a plant layout with regular geometric shape, while already in the modern era there is the urgent need of a more urban structuring design, attributing to compositional scores of circular plot on specific functional aspects. Urban developments in the Middle Ages, but later in the Renaissance and Baroque, proceed according to two fundamental principles: the "traslatum" with respect to procedures for the expansion of urban form and the variety of plant germination, knitted orthogonal, radial or mixed, but in this case arises not finalized the division of land into lots, but rather seems related to the new functional requirements expressed and to the historical plots of origin, guaranteeing the identity of places. The urban grid grows, adapting to existing routes, connect the hubs, it expands as new functionalities, different routes and main roads, devoting ample attention to the facades of buildings and the perspective view, which establish the decorum of the city. During the twentieth century this principles follow an unusual evolutionary path, that leads to the well-known fragmented characters in the growth of urban form, that fracture progressive, according to the logic of repeated extensive movements, gradually nominating a true metamorphosis. Implementing the mixing of these two categories of urban metamorphosis, by extending the number of lines that spread beyond the core consolidated, may therefore suggest a reading of the possible trajectories of travels from the site to the city, promoting the cultural landscape in the vision of the future urban design.

The third urban dimension: slow fluctuations in the urban morphology
In different ways in which the city appears to our eyes, we realize that there are many cities as possible, alternative, by rapid transformation motion cross, above all, however, there are two categories: the compact city and the dispersed city.

These categories are still based on a reading of the city in two dimensions: space and time. Precisely this seems to contradict the founding principles of urban design, and especially the primacy of public space, which loses its spaces with slow and inexorable progression, won by unexpected new geographies, deprived of its roots, replaced by new functions or by the global urban voids; there is a single matrix, which serves as, perhaps, the backbone for many members of the spread city: it is the profile of the roads, which are freely dissipated through urbanized areas.

The morphological design of the city and the consolidation of its structure are the basis for the compact city, which for many centuries has nourished the urban imagination, with its layers throughout the history, to build the continuity of the fabric, to outline the identity and permanence; thus the planning action that has characterized the compact city has been developed with the continuity of the urban fabric.

History shows how the paths along which it disseminates its events, involve deep furrows in the territories, leading to a gradual change in the concept of physical space and time: for the first, unexpected textures urban are designed, which dissolve very easily gravitational relationships between internal and external, between center and periphery, between cities and terrain vagues, with a continuous temporal and structural modification and a eradication path toward the indifference of places; for the second, from the historic city to the present is
profoundly changed the perception of time, because at present lives the proliferation of rapid transformations. It comes as the need to introduce new plans of reading the urban morphology: the fluid criteria, that have the awareness to read a "fluid" city, which deforms indefinitely, which tends to overcome its past shape, that can cross and overcome transition phases, similar to a liquid crystal, in which are simultaneously present the structures of its historical texture and the forms of its current fluctuating anisotropic evolution. This terminology is based on the similarity with the fluids. A true fluid is by definition a material with no rigidity at all. Subjected to shear stress, no matter how small this stress may be, a true fluid is bound to flow. Within a true fluid which is in mechanical equilibrium the shear stress vanishes everywhere. A fluid is an effectively continuous medium characterised by a relatively small number of bulk properties, of which density, compressibility and viscosity. There is fluids which are isotropic, newtonian and classic (as opposed to quantum physics): water and air are undoubtedly isotropic, newtonian and classical, and so are many other fluids of common experience. There is, for example, liquid crystal which are non-newtonian: this complex fluids display fascinating phenomena, very similar to most recently city growth dynamics. To understand the roots of this fluid features, we detect that instances which give rise to the density changes, to the compressibility of urban tissues, to the city viscosity on the occasion of certain transitory events (supported by most modern computer technology), that go through the town. Firstly are the fluid criteria based on reading knowledge of spatial dynamics in place and of flowing activities, through a set of absolute size (minimum population threshold for the 'central city') density (location of residences and employment) and economic integration between the city center and surrounding units: 1) a first case is that the areas so defined by the U.S. Census, first known as Standard Metropolitan Areas (SMA, 1950) and Standard Metropolitan Statistical Areas (SMSA from 1960), which constitute, by more than thirty years, territorial units included in the Census national; to take account of urban growth and spread, and of the processes of welding between different urban areas, over 70 years was introduced, as an additional spatial aggregation, the Standard Consolidated Statistical Area (SCSA) which consists of the combination of two or more SMSA contiguous; 2) the second experiment, launched in the late 60s in England, took place mainly around the idea of urban area as "self space," as that is the territory within which take place the commuters movements on a daily reports (Urban Daily System). Secondly is the other major change, highlighted by these "liquefying" phenomena of urban zones, the residential dispersion. The geometry of the area has been changing, not only functional: the zoning of land use, but also in the morphological character of their own limitations, new signs have become territorial signs, new dividing lines that distinguish subtle transitions from one area to another, without it being possible to identify clear and well defined boundaries. The process of fragmented and dispersed areas employment is very advanced and involved the formation of urban "island", not occupied areas sometimes used for agricultural work, otherwise responsible, albeit indirectly, of the processes of urban dispersion.
The multiplication of divisions between the different uses and the various urban types have resulted in an immediate rise of the clutch between spaces of different kinds, non governed by the mechanisms of institutional organization.

The residential dispersion is configured according to various possible types: there is a real dispersion and fragmentation of built-up and parcelled-out lands, according to a clearly defined and settled urbanization, with proliferation of ever smaller areas, which were the same cause and effect of a road network capillarity on the territory; the process of filling and densification of already established urban fabric and of the interstitial areas, prostheses to the compact urban core.

Thirdly and lastly, appear on the scene of the urban dynamics the "third places", places of events, fairs and large events, released by the local urban identity and extemporaneous, viscous temporary fluid, with frequent innovative trends and able to trace across the material and immaterial territories.

The nature and the transformational potential of an event become new germinative tracks, especially if they increase the awareness, image and economy of a locality in the short and medium term, as if trigger appropriate synergies with the territory hospitality, even requiring an improvement of infrastructure and service and culture offerings.

The spatio-temporal course of events, therefore, defines the size of "third places", for which the project exists as ingrained with the event and not with the place, and, nevertheless, comes as plaintiffs in the city and live with it and transforms it.

Each event, small or huge, casts its presence in places large and small, but still represents a qualitative density of diversity, an incident within the viscosity of the city, that produces a local temporary de-fragmentation: the effects go back to all the various pre-existing identities, and define a new kind of identity, different from the sum of the previous components.

The event is the exploration of a material occurrence of content, themes, goals that meet several different companies, different worlds, frames and reassembled sequences that could lead to a new idea of the city.

The new vision of the dispersed city is able to influence new directions in evolutionary and change the phenomenology of metropolitan growth and transformation with a distribution of potential output in the form of scattering, and a more accessible location to specialized service, commercial and recreation centers; it promote a tendency to densify scattered urbanized areas, creating settlement situations of agreeable liveability.

**Growth of the city itself: building in**

The practice of building in involves the concealment of the outward effects of densification while revealing – in fact intensifying – its effects inwardly. This is accomplished through consolidation: making the same space contain more than it had before. One means by which this is achieved is in the recovery of un- or underutilized space. In the case of the interior, this involves making better use of often overlooked sites such as those in garages, under stairs, or overhead.

Outside, it may include the inhabitation of the underused spaces of suburbia such as the yard (whose principle raison d’être is that of establishing a psychological separation between dwellings), driveway and parking lot.
While the strategy of building in allows the outward signs of suburban densification to appear unchanged, it concentrates the perceptual effects of urban density within the preexisting interior (and to an extent, private exterior) rooms of the city. One of the consequences of this hyperefficiency is a certain “messiness” or complication that is caused by the various “props” of the interior (furniture, equipment, cabinetry) having to share a sudden and close proximity to one another. This intensification of relations between elements in a common space allows their otherwise discrete qualities to mix and interact, causing the space that remains to be read as a site “in-between”. No longer having the luxury of space to allow functions to stand clearly apart, experiences (solid and void, inside and out, public and private, dark and light) leak into one another and comingle. This quality of residuality, however, can be as a sign of resistance to density as much as it can be that of its encroachment. Seen another way, spatial openness or flow is an effective tactic in countervailing the sense of contraction and compartmentalization of space that often accompanies the building in of growth. By employing elements which instead only subtly define thresholds and more ambiguously differentiate spaces from one another, space of a more generous scale is suggested. The continuity of experience that is afforded by more partial or ambiguous distinctions between spaces (filtering, layering, overlap) surprisingly counters the expectation that density naturally leads to the delimitation of space into discrete rooms and the constriction of bodily movement.

One final consequences of the densification of the interior is the loss of longer and wider lines of sight. The reduction in physical and psychological distance between the subject and his/her surroundings instead forces and increased attention to detail in a shallow or flattened space. Such moments of intricacy take the place of the vista or panorama in serving as anecdotal points of visual focus. As a tactic of resistance, these also act as scalar ploys which give the illusion that the space which they elaborate, in order to be of a size commensurate with their exaggerated degree of articulation, is larger than its actual size.

A similar counteractic satisfies the need for visual extension and psychological release via the strategic penetration of the enclosing surfaces of the interior by apertures – or even their removal altogether – in order to reveal a variety of spaces beyond – some real, some virtual, others only imagined. Both traditional devices such as the alignment of doors enfilade, as well as new ones such as the layering of spaces upon one another and the contriving of vistas from the interior, “blind” openings.

**Tactics of augmentation: building out – building over**

Two tactics of densification which recover and utilize site public and visible are building out, which fills the underused spaces of suburbia; and building over, which adds, literally, upon that fabric. A complex relationship exists between the two, however, in that the values that underlie each are resistant to the other: building over transforms the texture of suburbia in order to preserve the distance between adjacent buildings, believing this to be the quality most critical to suburban life, whereas building out transforms the pattern of suburbia in order to preserve the low scale of existing structures whose modest height allows the spaces adjacent to them to remain more aptly characterized as yards (the spaces of suburbia) than as courts (the spaces of the city).
By having to make more efficient use of the outdoor spaces of suburbia – spaces whose principle purpose is often limited to acting as a margin of separation between adjacent structures – building out may ironically be seen as simply a form of building in applied at a neighborhood rather than household scale. However, as building in seeks only the higher use of the property belonging to the dwelling, building out means to make maximum use of the entire building envelope. By consuming the space between adjacent dwellings, building out also has the effect of removing the distinction between house and property altogether, diminishing – though never quite eliminating – the spatial interval that secures the psychological autonomy of neighboring structures to the point that the space (of the setback) still remaining is so constricted that the buildings can no longer be perceived as free-standing. Paradoxically, though the additional enclosed square footage results in more tightly proportioned exterior spaces and a fabric of denser consistency, the balance of solid-to-void never quite achieves the impacted density of such older American cities as New York or Chicago where, up through the first four or five stories, space is more figure than field, discretely defined by buildings standing shoulder-to-shoulder around it.

Conclusions
The built-up scene celebrate in the historic city the unity between architecture and context, and, through the perspective representation the designed and produced object appeared integrated with urban background.
It was in this way a balance between elements system connected to the fabric and to the functions, with the squares, the palace, the church, the market, as reflections of city life and point of social self representation.
The same mechanisms of urban growth interpreted the feeling of the community, deploying its creative force by means of almost orderly and often predictable patterns, which could identify the city in the past through solid criteria.
The era of modernity and mobility shatters this attitude, making the present city no longer able to define the local place: the space city is no longer an obvious relational context in which to recognize oneself; the neighborhood relations are disrupted by the breadth of distance relationships between a fragment and the other, so that breaks the presence of empty areas and replaces the non-place.
By maintaining as inevitable reference paths the historically consolidated tissue, from which to draw outlines of that design policy for the fragments to the interstitial spaces, for the pauses and the rests, and for all expressions of "differences" in the city, there are several ways of the city use, there are the "differences" in the tumultuous transformation, long stabilized places, high inertia and resilience zones, and places open to innovation and to various configurations and dynamics: the urban development moves towards the fluid city.
It is no longer sufficient to recognize the historic urban matrix with its readable lines of force of its systems, it is necessary to recognize the new models for the residential and manufacturing areas: central poles with intense phenomena of urbanization, settlement areas characterized by diffusive dynamics; polycentric and reticular structures; linear structures leaned to the main centrifuges infrastructure, which offer settlement terms of good quality and low spatial density, urban filaments, which constitute the evolution of the previous temporary settlements, against the direction of minor importance; settlements point, corresponding to an
isolated employment of agricultural land, which affect the expansive tendencies of the city flowing.

The concept of density suggests very different characteristics from that of compactness. It refers, for example, to a much more fluid and varied situation; it does not pose the problem of limits or confines; it accepts the heterogeneity of the metropolitan situation.

References