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Changing Cities II

Spatial, Design, Landscape & Socio-economic Dimensions

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FORWARD

The 1st international conference on *'Changing Cities'*, which was hosted on Skiathos island, 18-22 June 2013, had started as an idea three years ago. The initial concept was to organise an academic event creative, inspiring, stimulating, and above all, *international.* There had been a belief that such an academic event may contribute in revitalizing academia and promoting tourism in Greece - hit by the economic crisis of public debt in the Eurozone. Given that during the last years, both societies and cities in Greece have been dramatically changing, shrinking in economic, spatial and demographic terms, we have chosen *Changing Cities* as the main theme of this series of conferences. Our aspiration is to provide an international forum for transaction of ideas on cities and bring together architects, urban designers, landscape designers, urban planners, urban geographers, urban economists, urban sociologists and demographers, to investigate new challenges. This goal became a reality. The 1st Changing Cities conference had gained strong interest of academics and researchers from many countries and regions around the world; Greece and the Balkans, south Europe and Mediterranean countries, northwest Europe, Middle East and Asia, Far East, North America, Latin America and Africa. A total of about 460 abstracts and 320 papers had been submitted in the conference – most of them, about 60% from abroad.

The 2nd Changing Cities conference has also attracted the attention of scholars, not only from Greece, the Balkans and Europe, but also from far-away countries like USA and Canada, Brazil, Chile, Colombia in Latin America, and China, Japan and Australia in the far-east. We have received 510 abstracts and more than 350 papers. Among the scholars participating, there are about 192 Greek academics and researchers. This indicates that despite shortage of research funds, salary cuts, and broken morale, university teachers and researchers in Greek state universities try hard to keep a high-level academic status. Besides, the number of contributions by scholars from abroad (64%) shows the international character of the conference.

The strong interest for this conference allows us to have thoughts about organising the 3rd Changing Cities conference in one or two years' time, spatially hosted in a different Greek resort area.

I would like first to thank the Organising Committee, the keynote speakers, and the members of the international scientific board who supported enthusiastically the academic organization of this conference. I would especially like to thank those colleagues who have also pre-organized special sessions in this conference.

Finally, I would like to thank all the academic, political and scientific organisations which supported this conference: University of Thessaly; the Greek Ministry of Environment, Energy and Climate Change; the Greek Ministry of Tourism; The Regional Authority of Peloponnese; The Technical Chamber of Greece – Branch of Peloponnese; the Association of the Greek Landscape Architects; KTIRIO - Technical Publications; the Association of Greek Urban Planners and Regional Development Engineers; the Association of Greek Urban Planners; the Association of Greek Architects.

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MAIN THEME OF THE CONFERENCE

Resilient cities: "Planning and Designing resilient cities under economic and environmental uncertainty"

THEMATIC SESSIONS

Urban Design in Planning

Sustainable Urban Planning & Development

Urban Landscapes, Landscape Planning & Design

Architectural & Urban Design: concepts, instruments and practical implications

Urban Cultures & Public Open Spaces

Historical Centers & Built Heritage Management

Environmental Urban Planning & Design

Green Architecture & Urban Design

Transportation Planning and Policy in cities

Urban Planning Laws, Real Estate & Property Rights

Urban Economies & spatial impacts

Place Marketing & City Branding, tourism development

Shrinking cities

Smart cities

Multicultural societies, socio-spatial inequalities, place identity, & urban planning

KEYNOTES SPEECHES

Landscape and sustainable design in urban open spaces

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Abstract
The first moment of reflection and debate needs to clarify on the meaning of the terms through which it is possible to identify the research fields and their interrelations: landscape, environment and sustainability. Dealing with the first of them, the definition was clearly illustrated within the *European Landscape Convention,* despite the different meanings related to the linguistic differences. In many languages, instead, the origins of the term *Environment* evokes the idea of circularity. The environment itself represents, indeed, what an organism is surrounded and dealing with. The concept of sustainability is specifically linked with the skills of the ecology science, and expresses the main characteristic of an ecosystem: keeping alive the biodiversity and all of its ecological processes. Practically, it is possible to define a process as a sustainable one if it is able to exploit the natural resources, which are eventually naturally renewed. As a consequence, the community must control the consumption of the resources within the sustainable development. The relationship landscape environment is narrowly intertwined and interrelated. Concerning the architectural design, it can be argued that in the latest years the ecological principles for the sustainable development got familiar with the green building asset. The main goal, for both the design and the construction process, dealt with the energetic containment in particular, and more generally with the limitation on the environmental impacts. Even if, it is necessary to be aware that this is no longer possible nowadays. It's essential redirect towards wider and detailed cultural and scientific fields; moreover it is not even longer possible to conceive working only on the building itself. It could be necessary moving from the building to the whole city perspective, gathering the entire urban landscape. It's the right time. The *city* is going through a period of both crisis and evolution, sometimes involving severe, random and sudden transformation and variations. Actual transformations are enabling changes into functional assets and roles and pointing out new programmed and not connection nets. It is within this specific context, a very analytical and intentional one, that the public space gains a strategic key role for the urban planning, management and redevelopment. Independently from the functional aspects the public space, with all the different community places, gains fundamental position because of the place where they are located, the use of them, and because of the important contribute they share with the social and economical relationships. Day by day they are turning into reference points of the urban landscape. The themes connected to the sustainability, mostly related to the environmental issues, are actually present on the urban landscape and trying to recover lost elements and to provide new sources of innovation. Among the main factors, some of which need a deepened lecture and tests as well, on the front page stands the relationship between architecture and nature, taking charge of the role of the vegetation and the water above all. Considering this profile, trials on buildings have already provided a contribution to the tests on the effects they have on the environment. It can be useful to remind even in this case the necessary walk from the building to the city, but considering eventually a parallel approach: studies and researches on buildings and urban interventions. Coming to the open urban public spaces the procedures are now even more and more different. Every kind of intervention needs to be compared and integrated within the ecological system to be finally called "sustainable" and to reach the aim of contributing and collaborating for the completion and the whole working of the environmental system.

Keywords: Landscape; Environment; sustainable design; urban open spaces.

1. INTRODUCTION

The premise is first of all in the nomenclature that fixes the circles of search:
landscape and sustainability, but first of all landscape and environment.
As it regards the definition of landscape, by now, since over one decade the point of reference for whatever definition springs from the European Landscape Convention.
As urban landscape we intend the whole city territory:

- historical,
- consolidated,
- periurban

and everything else definable and discoverable: the architecture, the full and the voids ones, the whole context.
The architecture, in the humanity history, at times in symbiosis, sometimes also in opposition, with the natural elements it has constituted landscapes to be represented, remembered, symbolized.
Many urban realities are represented by their more representative architecture.
The concept of urban identity renters in a complex circle, with different meanings and finality, inserting to its base the concept of perception, also brought by the European Convention.
Kevin Lynch has written: “At every instant, there is more than the eye can see, more than the ear can hear, a setting or a view waiting to be explored. Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences.” [1]
The historian Antonello Folco Biagini has written that: "The landscape is an integral part of the history of a country and a population because its image describes the fundamental characters both as it regards the physical-geographical aspect that as it regards the economic-productive level and the social component." [2]

2. EUROPEAN LANDSCAPE CONVENTION AND PERCEZIONE

Coming back to the European Convention, we must bring the other fundamental concept that has been introduced: the perception one, that directly connects the man to the landscape.
A man considered as single, as a member of a collectivity, protagonist of the urban landscape, of whatever natural or anthropologic landscape.
The definition inserted in the article 1
“Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" [3] clearly introduces the concept of perception.

2.1 The Perception

The perception is not circumscribed to the images, but it is actually the whole of all the perceivable data to appraise the individual and collective quality comparing the perception of the comfort in base to the individual and collective expectations. The landscape therefore it is a priority factor for the comfort and the quality, surely reporting itself to the physical aspects, but also cultural ones.
To clarify the amplification of the concept of ample, articulated and complex perception is necessary to recall the Gestaltpsychologie, [4]
inside which also reenters the visual perception, suitable as first moment of the Landscape reading.
The visual perception theory that imagines itself as the result of a process of unconscious inference, with structural descriptions of the external world, has been developed by Irvin Rock, adjunct professor of psychology to the University of California, Berkeley, until his death in 1995.
"The environmental image is the result of a two-way process between observers and his environment.
The environment suggests distinctions and relationships, the observer, with great adaptability and specify intentions selects, organizes and attributes meanings to what he sees. The so developed image still, limits and accents what is seen, while it is tried in comparison to the perception." [5]

2.2 The Gestalt Principles

Inside of a same 'scene', the near elements are perceived as unique; the elements among them are similar for form, color and dimension are perceived as connected. Lines and family forms are perceived as dams and complete, even if not graphically.

The usually brought example is a not complete image, perceived as if it were.

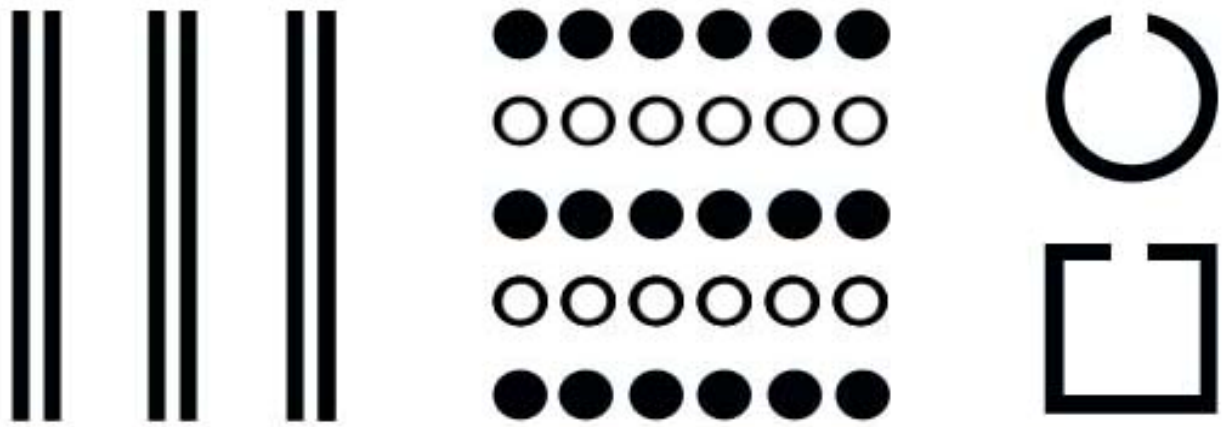

Figure 1. exemplified graphs scenes within the Gestalt principles: proximity, simile, closing

2.2 The runs system

In the landscape, the perceiver, is usually not immovable, but it stirs in the territory. The runs system, therefore has a fundamental role, through the different runs of circulation the different perceptive possibilities spring.

It takes to underline three possible differences of perception: limited and rapids from a speed vehicle, with a sequence of serial images; from a slow vehicle as a bicycle, with an ample and complete perception, that can also stop, to look and to observe. We remember that in Rotterdam, in the fifties of last century, Van den Broek and Bakema planned the first pedestrian island: The Lijnbaan.

Figure 2. the Lijnbaan today

Premising that the perception in urban circle is three-dimensional, the citizen always identifies a spatial circle in relationship to just left one and therefore subsequently in relationship with what is about to go.

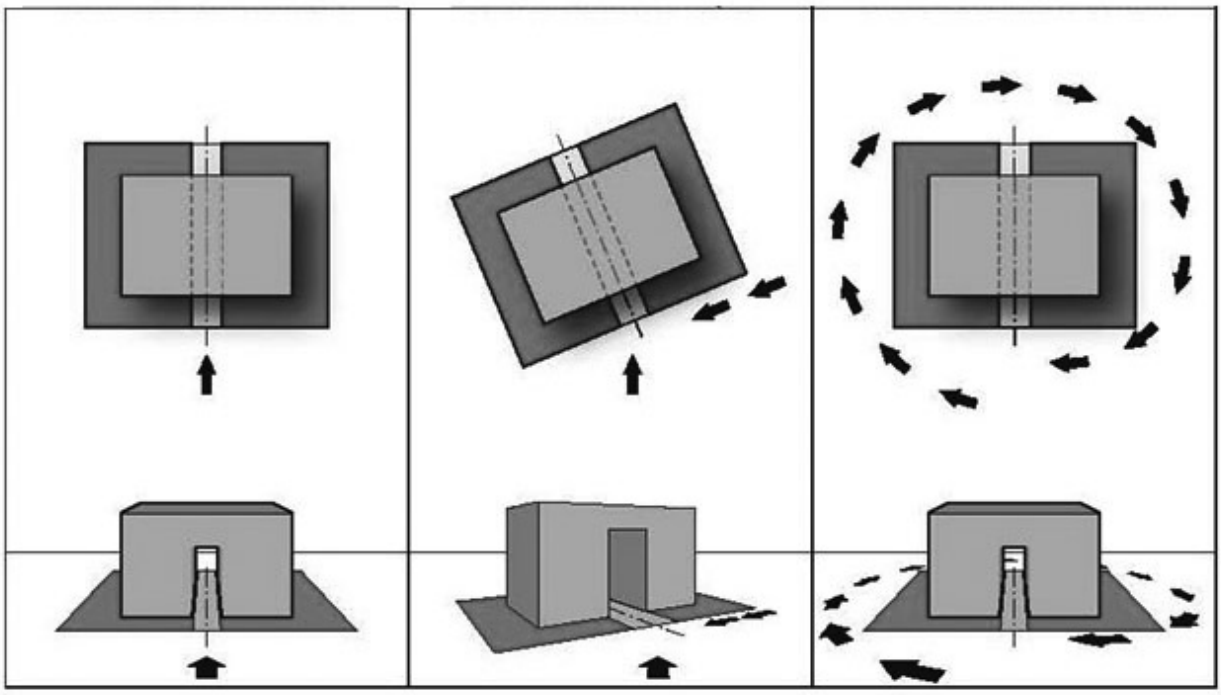

Table 1. building formality approach, with the consequent different perception: frontal, oblique, spiral [6]

3. DEFINITIONS

Before the Convention furnished definitions and explanations, the terms landscape and environment, were interchangeable.
In this optics the relationship landscape environment is tightly connected. Kevin Lynch, surely in a different scientific context, spoke of "environmental images" explaining that "are the result of a two-way process between the observer and his environment. The environment suggests distinctions and relations, and the observer—with great adaptability and in the light of his own purposes—selects, organizes, and endows with meaning what he sees."
Bernardo Rossi Doria has written in 1978: "many people think that landscape is synonymous with aestheticism and evasion and this is the reason that this word is often replaced by <environment> , which is able to remark the concept of globally problem that relocates the analyzes and the insights in a coordinated context , whether we speak of urban areas, or natural areas." [7]
Definitely, especially when we speak about perception, about well-being and quality of landscape and environment there are relationships and connections, but the thematic, scientific and cultural difference is quite obvious.
By the FAI Italian Environment Fund introduction document: "In ecology environment is defined as the set of external factors that affect an organism 's life. The term is also understood as the complex of natural elements and resources that surround a particular organism and, in particular, humans." [8]
The concept of sustainability is within the responsibility specific ecology, denoting the ability of an ecosystem to remain in possession of all ecological processes, purposes, productivity and especially biodiversity.
In practice an ecological process is defined sustainable if it uses the natural resources that are naturally regenerated.
It follows that the community must control the consumption of resources within a sustainable development.

In this framework falls within the architecture, it becomes sustainable when it helps to control the consumption of resources.
In the recent decades, about architecture, the ecological principles for the sustainable development essentially concern the green building, including design and work construction that limit environmental impacts.
The green building, regarding all building types, bases its operation method on the belief that it is necessary to limit the use of energy transformations.
Even the use of renewable resources should be monitored, to avoid their regeneration rate exceeding, while the use of non-renewable resources should be gradually reduced to be suspended and substituted from renewable resources.

4. FROM THE BUILDING TO THE CITY

This science and culture approach , is now no longer possible. We need to move from the building to the city .
It is the right time, because the city is undergoing transformations and radical changes, sudden and often unexpected. They are changing structures and functional roles, creating new connection networks.
It is the time of a no territorial expansion, but of internal transformations. This involves a fundamental change in the internal relationships: between suburbs and central areas, including different fields.
Some parts become nodal, other collapse and need revitalization, redevelopment and reuse.
Putting together these assumptions we further understand how the public spaces take a strategic role of attention and planning transformation, regardless of functional aspects.
The public space, all the new places of urban public, are urban strategic spaces for placement and use, also because they are often the main nodes of the social and economic relationships.
Even in the absence of special symbols, take on a symbolic role.
They become, especially at a time of transformation, the pins of a sustainable planning, expanding the concept beyond the green building .
The assumption is that a new alliance between architecture and nature has to wonder about the future of the city and how to implement a planning program able to generate a systematic set of consistent and sustainable contribution to the city regeneration.
One of the main factors becomes the relationship between architecture and nature, with the role of vegetation and water, in particular.
It deals about works connected to the urban forestry and the ability to insert in a systematic form and therefore to expand the presence of agriculture in the city.
The goal is a substantial demineralization of the urban landscape.
For the first it should be noted that the positive effects are transmitted to the urban environment, improving the microclimate.
"Vertical Gardens: a new challenge for Patrick Blanc. The concept of Vertical Garden: a trend, a fashion or a need for a new sustainable architecture." [9]
The vegetation on the buildings fronts or roofs contributes to the CO2 absorption, limiting the formation of smog and of urban heat islands, while also reducing radiation received along the roads.

4.1 Positive effects on the environment

The presence of vegetation on the buildings facades improves the microclimate limiting the formation of urban heat islands; contributes to the CO_2 absorption and improves the amount of light perceived along the roads.
The energy savings also leads to lower pollution released into the atmosphere. The use of parietal vegetation can also compensate any lack of urban vegetation.
The main positive effects are: improvement of the building thermal behavior - soundproofing and air purification.

In the winter the screen plant is a barrier to the wind and keeps heat inside. The foliage, finally, is an excellent acoustic insulation and purifies the air both through photosynthesis, CO_2 absorption, and limiting the formation of photochemical smog.
"The energy savings produced by the trees in the urban and periurban environment is a factor that has a higher incidence in the CO_2 breaking, compared to the direct effects of the tree vegetation, as the absorption and the carbon storage". [10]

	Dollar savings for each tree $/t	kWh/t spared for each tree	Kg C/t reduction
Energy savings	9	92	15
Shading	6	60	10
Evapotranspiration	3,2	32	5
Carbon removal	0,1 (n/t)	(n/t)	4,5

Table 2. single tree impact on the reducing use of air conditioners and CO_2 atmospheric referring to the carbon removal (by Rosenfeld et al., 1998)

Gas exchanges among Atmosphere - City - Urban Forest: the pollutants produced in the urban environment and the CO_2 located in the atmosphere can be absorbed by the Urban Forest, that could enter VOCs able to interact with the pollutants by increasing the concentration of pollutants themselves.
Coming back to the urban public open spaces, the operations are many and varied.
It is necessary to plan and implement appropriate and functional spaces, maintaining active the relationship with the natural elements.
To be sustainable must be confronted and integrated with the ecological network in order to contribute and collaborate on the completion and operation of the environmental system.
It could be useful to set an example, typical and characteristic, even if not recently, of a city exactly realized on the urban sustainability principles.

Figure 3. Mendoza, Argentina - Independence square

The city of Mendoza, in Argentina, was re-founded, after a violent earthquake, in an arid region, being very careful to environmental requirements favoring the natural elements in the urban planning. Water and vegetation characterize the open spaces and the entire urban layout.
It is a unique experience, made to be taken as a reference. There are numerous city parks, realized at the foundation time and recently. The city is designed just like the derivation of a large urban park: the Parque San Martín, designed by Carlos Thays.
It is characterized by a vegetation contingent system with particular irrigation channels.

Figura 4 Stockholm, district of Hammarby Sjöstad, Lugnets allé

Another one urban example, but in this case, current and contemporary is the neighborhood model Hammarby Sjöstad in Stockholm, designed just as a sustainable city.
The building doesn't break the connection with the existing environmental systems, from the lake to the inland forests, emphasizing the continuity.
In the setting conceptual operation there is a wide and complete attention about the entire environmental system of the area.
It has also been expected, at the same time for the remediation of contaminated areas from industrial activities and for the purification of the lake water with natural systems, the recovery of wetlands as habitat for native flora and fauna.
Sweden is, definitely, in this area an important point of reference.
Studies and achievements have remote origins, but with a continuous evolution. In the early years of the twentieth century were already made new urban settlements in a direct relationship with diversified presence, attentive to environmental system.
It is a neighborhood based on the integration of environmental strategies at the urban scale.
A compact district based on 11.000 housing for about 25.000 inhabitants and 10.000 workers in productive activities, made with the aim to reduce the environmental impact below the 50% compared to nineties Swedish residential construction.
The closed-loop model of using resource as energy, water and RSU, known as "Hammarby Model" was here experienced as a urban design support that has integrated about sustainability all the various systemic components involved: mobility, green, residences and services.
The fabric is mostly made up of open courtyard buildings that allow the continuity of the urban space and of the green system. The system of public and private mobility, is based on the reduced distances between public transport and residences, as a result the significant reduction of the private vehicles used by road. Internal mobility is essentially pedestrian or bicycle. The connection to the public transport network is entrusted to the metropolitan rail and road lines that run through the

central axis of Hammarby Allee. Within the district the use of private cars is strongly discouraged. Most crossroads overlooked by the residential courtyards are dead-end.
Other basic urban systems, are: the heating system, coming from the central water and waste treatment; the automated recycling system of municipal solid waste; the widespread capillary system of local and commercial production services, and of the public facilities.
The "Hammarby Model" considers the settlement as a kind of ecosystem in which the various components of waste are reinserted in a virtuous cycle that allows almost nothing is lost, and is instead re-used for the support of the district.
The initial waste separation allows that the reusable fraction is sent to facilities recycling (glass, metal, paper) . The not reusable fuel is sent to the incinerator to provide heat and power energy to the neighborhood. Organic wastes are composted to be used as organic fertilizers for crops no food. It can be so produced the biofuel that powers the heat central for district heating.
Hammarby Sjöstad is conceived as a green city where the built doesn't break the connection among the pre-existing environmental systems, the lake in the north and the hinterland woods in the south.
The biological continuity is maintained through several strategies:
- recovery of riparian wetlands as habitat for native flora and fauna;
- decontamination of polluted surfaces by industrial activities;
- purifying lake water with natural systems;
- green corridors and channels network for the rainwater collection running through the public and private neighborhood spaces connecting the wooded areas to the lake moist environment.
An important instrument, established by the Hammarby Sjöstad Management Company is made by the information service to the public which has its headquarters in the prestigious "Glashushet", a glass innovative design building, a true Landmark in the neighborhood landscape.
Some specialized communication experts, provide to the residents and to the visitors all the necessary information on the district services, based on the correct methods for the use of energy and water, waste collection and transports. We organize meetings and events for communication to the public. The building itself is a transparent house where exhibits and interactive installations explain the use of services as a support of sustainable living in the cities.

4.1 Urban open spaces

In this contest we include the urban open spaces. The comparative analysis of other numerous urban cases at different scales, allows to enlarge the issues on environmental sustainability to the more connected ones to the landscape, connoting the elements for a sustainability operation in the urban fabric.
The first step concerns the analysis of the context and thus the innovative relationship that is generated. We mean the environment, anthropogenic and natural, but also the cultural context, with the identity of places to maintain, or to be given in reference to the history and to the characteristics.
At the beginning of each operation is, however, the interrelationship among the different systems, in particular: the natural, the functional and the mobility ones; the all in close connection with the different components. Obviously all the parameters that come from green building appear in a field of environmental urban sustainability.
Finally, just for listing, the social and economic contributions, which are often perceived independently, but fall within the scope of the urban landscape planning.
The urban parks, considering they are within the open public spaces, are part of it, but also privileged part. The privilege is in the relationship with nature, even if contrived by man. The privilege is in the differentiation and in the uniqueness of each one, considering the strong relationship context.
In the Rotterdam Museums park, for example, the natural system characterizes it, but the environment system is closely connected with the context and with the social and cultural aspects.

5. CONCLUSIONS: PARAMETERS

Finally, in line between analysis and design are proposed parametric arising by the analysis of various cases. These parameters are examined by different topics relevant to the reading of the urban space, in a planning vision.

- Inclusion strategies in the urban context: the sustainable planning has to take into account the existing structures and to exploit them in strategic terms; the ratio of public space with the urban context, with particular reference to the regeneration to the degraded areas: the access, the interconnections and the relationships between public spaces and urban functions;
- Background and cultural site identity: related values to the memory of the place, to the history and to the ways in which the project has intended to recognize, protect and valorize them, the protection and the construction of an identity character of the site provides greater permanence and acceptance of a new urban intervention by the collectivity;
- Overlapped structuring systems, that can play an important role in terms of well-being and subjective and collective perception, promoting the way finding and the orientation in the site. The natural system includes the role of vegetation and of all the natural elements, water at first. The functional system mainly refers to the ratio among functions that belong to the public spaces. In this area you can also measure the space use level even in quantitative terms: the frequency of people depending on the day or the night, dimensional organization of space for parking, for pedestrian flows in connection with the system mobility, involving all the types of routes, with particular reference to slow, pedestrian, bicycle mobility and public transport. The components system includes all the compositional aspects with specific reference to the flooring, the lighting, the meetings, the furnishing elements, various equipment and urban design components.
- Environmental sustainability, proposed in a physical and wide-ranging planning sense. This parameter may include: the respect and the reconstruction of natural ecosystems, the optimization of the thermal humidity comfort about open and closed spaces; the minimization of energy and materials consumption; the use of renewable energy for lighting and everything else needed, the use of low environmental impact materials, the rational use of water through rainwater harvesting, the noise and atmospheric pollution minimization and mitigation, the optimization of management and maintenance interventions, the waste and emissions management.
- Social sustainability in general terms includes all the other aspects, in a way that a community can't bear the cost of an intervention not properly inserted in an urban context, not sustainable in environmental terms and in which the city does not recognize itself. In particular, however, it has to be considered the participation in planning processes, an appropriate and correct use and the accessibility for disabled and disadvantaged groups in general, including old people and children, with the complete elimination of any possible cultural and architectural barrier. For the participation, overcoming old ideological concepts, it is necessary to involve the community in the identification of needs during the planning phase and to prime initiatives to promote integration and social inclusion.
- Economic sustainability examines the intervention costs, but also the maintenance and management costs. The costs should not be considered in absolute terms, but in a relationship with the intervention size, the economic environment, the use level, at a balance between costs and benefits that could evaluate the economic sustainability in general terms, about the investment proportionality than the objectives. [11]

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Multicultural city and region identity: Cross-border connectivity and multicultural cooperation-effort or political conflict?

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Abstract

The crucial question of the title attempts to describe the controversial condition of cities and regions of multicultural historical layering or multicultural present reality. Such a hybrid physiognomy, we remark, may be accepted as a reason for common cross-border economic and cultural development, for common cross-border branding effort that surpasses ethnic and nationalistic discrimination, in favor of cross-border cooperation. This proposal refers to the first, 'safe', part of our presentation. However the deepest essence of our proposal has not only to do with the indication of initiatives concerning touristic and economic interest, but moreover it may be accepted as an effort for a strategic reply addressed to the contemporary reality of political, cultural and religious conflict, concerning not only polemic antitheses between neighboring states but also living conditions of contradiction, internalized in the majority of the Western developed contemporary countries and cities.

Keywords: multicultural identity; cross-border connectivity and co-operation; cross-border branding; areas in conflict; contested identity.

1. INTRODUCTION

1.1 From landscape natural "innocence" to the notion of political-cultural identity of landscape

The subject presented initiates through an original 'innocent' realization. What we usually describe as 'national landscape' is scarcely limited by conventional borderlines. On the contrary, natural landscape characteristics usually surpass borders, indicating a common natural ground for multinational and multicultural references. In a similar way an extremely large number of cities, all over the world, appear to be the product of a multilayered past, or of a non-uniform contemporary multicultural and multi-religious existence. Thus the crucial question of the title appears to describe a controversial condition for cities and regions of multicultural historical layering or multicultural present reality; or regions nationally differentiated that share, in contradiction to their national separation common place and culture qualities.

Such a hybrid physiognomy, we remark, may be accepted as a reason for common cross-border economic and cultural development, for common "cross-border branding" effort that surpasses ethnic and nationalistic discrimination, in favor of cross-border cooperation Adversely, multicultural population and place identity may be accepted not as a negative controversy but rather as an identity asset, important to be preserved and promoted.

The above proposal refers to the initial, 'safe', part of our presentation. However the deepest essence of our remarks has not only to do with the indication of initiatives, concerning touristic and economic interest, but moreover it may be accepted as an effort for a strategic reply, addressed to the contemporary reality of political, cultural and religious conflict, concerning not only polemic antitheses between neighboring states but also living conditions of contradiction internalized in the majority of the Western developed contemporary countries.

1.2 Reference to the "national" landscape as a constructed nationalistic argument

We have to admit in advance that the development of our presentation, of its subject as well as of its corresponding conference session, was not an initial decision of the speaker. On the contrary, his first volition was to continue on the subject to which we referred during the last 2013 Changing Cities conference (Moraitis, 2013); we mean that at first, we had decided to continue discussing subjects concerning contemporary landscape design or "landscape urbanism".

However in a rapidly changing world, the feeling that landscape concerns both a natural and a cultural condition appears stronger than ever. It seems to concern a political condition par excellence that refers not only to environmental policies but also to questions of general social formation; as those correlated for example to social homogeneity or to social difference. Therefore landscape subjects and moreover "cultural landscape" interrogation, appear to concern not only "technical" replies but also a general demand for political awareness.

A first consideration relevant to landscape identity and therefore relevant to city or region identity refers to the realization that what we usually present as "national landscape", is an ideological construction. A construction having usually abstracted many similarities, existing between the landscape physiognomy of a given country and the physiognomy of its neighboring countries, in order to create a place prototype, of nationalistic reference.

In a certain way reference to "motherland" or "fatherland" seems to be one of the most important ideological arguments, used together with the reference to the common blood relation of the inhabitants and to their common ancestral war victories, in order to support nationalistic claims (Hobsbawm, 1992 – also - Hobsbawm and Ranger, 2004). However such a politically and culturally expressed interest for common land origin indicates landscape imagery, cultural landscape "eloquence", rather than a "mute" natural earth substratum.

1.3 Cross- border resemblance of landscape and culture

Thus the first realization that undermines our previous landscape naivety, concerns the cross-border resemblance of landscape, in relation to the cross-border cultural and, we dare remark, anthropological similarity. In this way what we initially wanted to present as a "place branding initiative", the effort for the promotion or creation and promotion, of the unique identity of cultural landscape in a given place, in a given city or region, its unique identity presented by economists and touristic management, as a "weapon" for economic antagonism could be reversed. It could be reversed by the indication of common identity as means of cross-border connectivity and multicultural cooperation.

2. CROSS-BORDER CONNECTIVITY AND MULTICULTURAL COOPERATION

2.1 The political value of place identity and the positive challenges of cross-border connectivity and multicultural cooperation

It is easy but at the same time extremely hard to speak about cross-border connectivity and multicultural cooperation. It is easy and in the same time extremely hard to speak about cross-border connectivity in Balkan or in eastern Mediterranean area. Landscape, all sort of customs, music, food habits, natural land characteristics and cultural similarities transverse in an apparent way the impasse of the imposed governmental disarticulation. They tend to reveal a crucial feature of the region and city branding efforts, usually concealed under the marketing oriented instrumentality. They reveal the political value of the place identity; the fact that place consists such a politically elementary product that it cannot be treated in a similar way to a branded pair of shoes. What for example Greek population may need nowadays, under politically and ethically difficult historical conditions, is the emphasis on the certitude that it lives in a culturally and environmentally valuable piece of earth. In excess, what it could also need is the remark that it shares, in correlation to other neighboring states, a biggest part on earth, equally high-valued, and that cross- border connectivity would be a decision of political wisdom on the extended ground-floor of contemporary geopolitical relations.

We shall not refer to the fact that recently, on April 9th 2015, the first transnational discussion for the construction of the Russian-Hellenic gas duct, also described as "Greek Stream", came to offer a hope for amelioration to the prolonged, rather negative climate of Greek-Turkish international political and geostrategic relations. Such a duct would be connected to the Russian-Turkish gas-duct, also described as "Turk Stream", and it could contribute to the positive differentiation of Greek-Turkish policy (Theocharidis, 2015).

2.2 The heterogeneous, multicultural identity of cityscapes: Historical paradigms

We are not serious political analysts so we shall not continue to walk on the dangerous, slippery field of geopolitical theorization. Thus we would rather return to the more familiar subject of landscape or cityscape references, by insisting on the cultural heterogeneity of urban landscape. Though modern neoclassical origins of urban design proposed the uniform "clarity" of the geometrical formation of urban structures, established on the basis of an equally "pure" cultural formation, the past, but more emphatically the present of our cities, in Greece or in the majority of the Western world, present a much different social composition.

In contrast to ethnic and cultural homogeneity, we may hence speak about ethnic and cultural "informality" and, in many cases, urban and architectural design controlled formalism has to be replaced by our interest for "informal" urban conditions.

Thus we could remark that if for the construction of Athens, after the liberation of Greece, part of its byzantine or ottoman past had to be eliminated, in order to offer free space for the creation of the neoclassical, western identity of the Hellenic capital, an equal contemporary cultural purism could mean a huge "pogrom", against all different minorities, constituting the contemporary Athenian mosaic.

However it is sure that even the ideological and urban design "Schematism" of neoclassical Athens had not been produced by uni-national, uni-ethnic impacts. In a certain way the neoclassical identity of Athens referred to the Greek origin of modern Western civilization and, in a more precise way, to the ancient Greek origin of the Western European political regimes. Thus neoclassical Athens, as neoclassicism in general, or as the specific neoclassic association to the idealized Greek landscape, were related to ideals surpassing border and extended to a much broader ideological realm concerning European and Western cultural and political superiority in general. Consequently, they were related to a transnational condition, which though attempted to homogenize specific conditions of peripheral cultures and local traditions under the control of an overall, centralized "rational" civilization, it was associated to the values of social and political respect for every single citizen, to the equality of all individuals being applied as a universal "ethos" of egalitarianism.

It is paradoxical that the above tendency for political uniformity, is the very one that may contribute to a free acceptance of cultural and religious difference, if sincerely applied, and hence to a free presence of cultural difference in the cityscape and landscape context.

We have no reason to abolish the splendor of Enlightenment neither to react to the primacy of the democratic governance. On the contrary what we insist on is the key political opinion, according to which democracy means acceptance of difference, in principal. Has a democratic landscape or cityscape to refer to its multicultural origins or, even more, to its multicultural present? May even an economical effort for the promotion of urban identity refer to cross-culturalism? May it use the polychromic cultural evidences as branding promotional images?

3. IMPORTANT CRITICAL QUESTIONS

3.1. Possible political implications of the place "branding".

Then a critical question appears. Do we have the right to use the term "branding", initiated in the controversial realm of marketing techniques and politically insensitive economic approach, in

order to refer to politically conscious thinking, to place identity as related to the centralized political status or to its negation, to the conditions of possible political conflict?

What we propose is finally a kind of reversal, insisting on the fact that the creation of space identity, in the case of branding strategies, has either to admit social heterogeneity and informality and open its eyes wide, to an extended political state of thinking or to camouflage the existing state of conflict and thus work on the political directions of political, social and cultural reconciliation. Moreover our proposal may insist on the fact that even if our creation efforts for a place-identity, concern conventional economic practices, even then, trans-cultural international orientation could be tremendously positive.

Our principle argument refers to the crucial remark that cultural production is scarcely homogenous. On the contrary, it usually emerges as a synthesis of many different "ingredients"; multi-cultural, multi-religious, multi-ethnic. What may be described as the "purest" Greek or Roman cultural product, as the "purest" donation of those ancient civilizations to modern European and Western societies seems to be, par excellence, as we already stated, a multicultural formation. It refers to the interpretation and ideological reconstruction of Greek and Roman antiquity by modern European scholars of different national origin and differentiated cultural and political orientation. Renaissance reference to classical antiquity is related to the cultural splendor of the ancient predecessors, certifying that political liberal similarities could guide Italian society of 15th and 16th century to equally important success. On the contrary, Baroque classicism of 17th century retained, under the authoritative control of Counterreformation and Catholic European kingdoms, only the elements of the "theatrum politicum", of the political promotion of the papal and royal sovereignty, as presented in the political branding of the baroque urban formations and gardens.

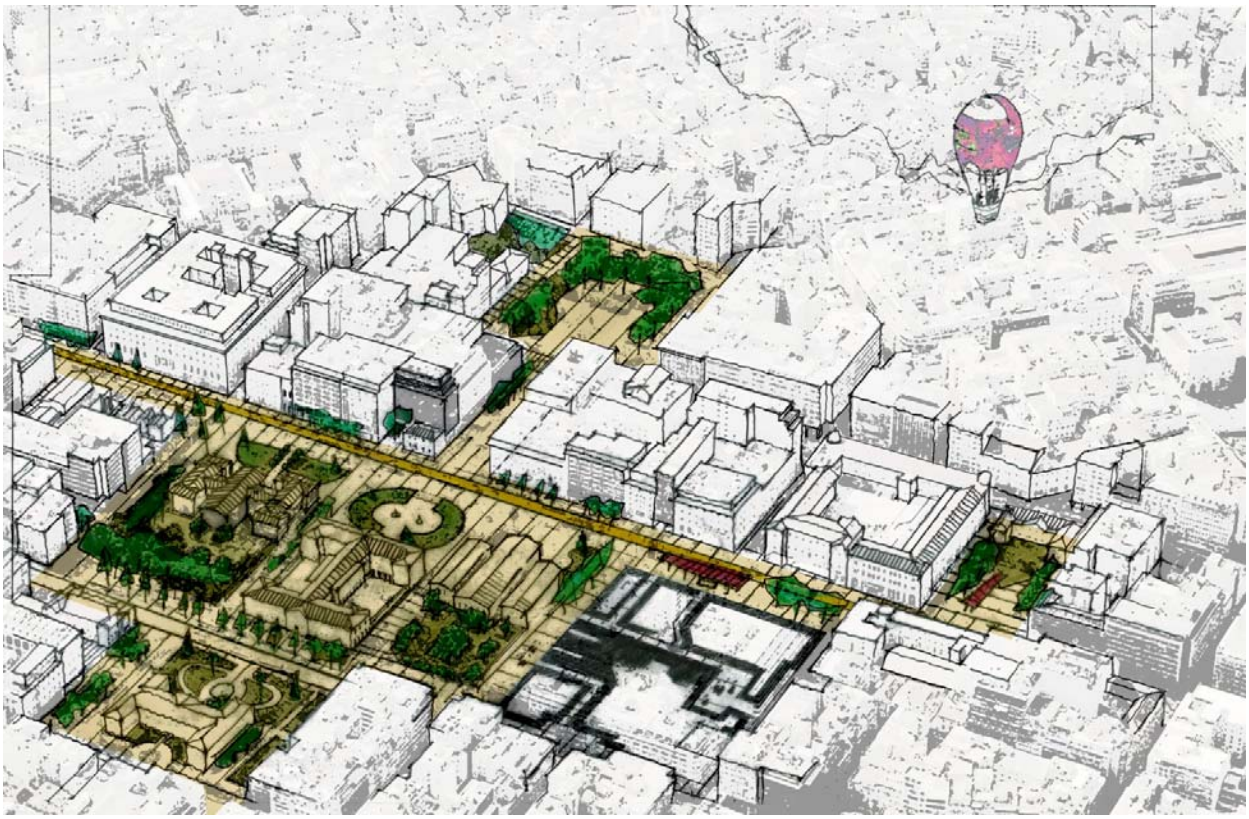

Figure 1 (previous page)**:** A proposal for the central area of Panepistimiou Avenue, in Athens; in relation to the three emblematic neoclassical buildings of the National University of Athens, in the center, of the Academy of Greece, on the left and of the National Library, on the right. Author's sketch as part of the Research program "Changing Characters and Policies in the Center of Athens and Piraeus", organized by the Ministry of Environment, Energy and Climate Change in collaboration with National Technical University of Athens (2010-2012). The research consisted the preparatory stage of the international architectural competition "Re-Think Athens", concerning the redesign of open public spaces in the central territory of the capital.

3.2. National and cultural uniformity or multi-cultural and multi-ethnic validity?

It would be wise to continue our historical itinerary, presenting the neoclassical urbanism, the architectural cityscape and the landscape architecture of 18th as "emblems of political Reason" (Starobinski, 1979), as emblems of an upcoming European bourgeois class and a triumphing bourgeois democracy. It would be wise to emphasize this impressive paradigm of political branding, through architecture, urban and landscape design, through furniture design and fashion, through art and social customs in general, not only because of its relation to the prevalent modern and contemporary political ethics. Moreover it would be wise to emphasize it, in relation to the modern history of the major Hellenic city, to its effort to establish a western identity after an extended period of Ottoman occupation; or to remind in addition to Western nations its contribution to the formation of their civilization and their modern democratic political governance. It would be also wise to emphasize it in relation to a recent city branding effort, concerning the urban design "Re-think" proposal of the central territory of Athens [Figure 1].

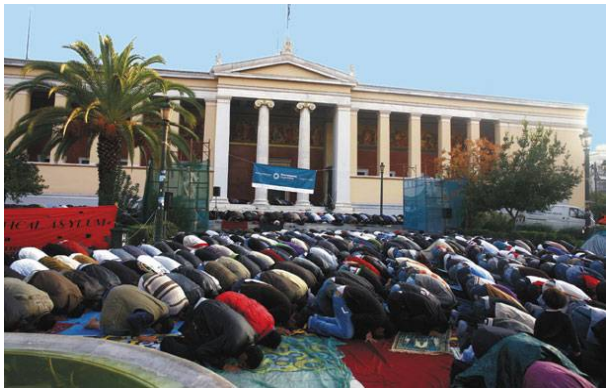

Figure 2: The central building of the emblematic neoclassical Athenian "Trilogy"; the central building of the National University of Athens (left).
Figure 3: In front of it, the Muslim community of Athens celebrates the festivity of the end of the Ramadan (2010).

Do we have the right to propose illustrious urban design projects in a state of economic crisis, in a state of thorough impoverishment of the population? Moreover, do we have the right to propose a "purist" vision of the city in a state of multicultural social transformation? Which could be the positive reaction to the threads of social exclusion and marginalization, related to the growing differentiation between minorities in the contemporary European societies? In which way a "Re-think" proposal could promote Hellenic capital not only as the natal place of modern Western identity but also as a nodal city for the multiethnic reference of the Eastern Mediterranean and Balkan area? Is Salonica trying to establish such an identity of a multi-ethnic, multi-cultural Balkan capital through decisive decision steps?

We shall not respond to each one of the prevalent queries in detail. A crucial lateral response however has to remind the reader that the Muslim community of Athens chose to celebrate the festivity of the end of the Ramadan in front of the central neoclassical building of the National University of Athens [Figures 2 and 3]. It was in front of the same emblematic building that the actual prime minister of the Hellenic Republic pronounced his winning word the night of the 25th January 2015. Both actions declare political statements. The second one refers to the positive recognition of the democratic identity of the modern Hellenic state and to its emblematic material formations, symbolizing for the last one and a half century its political status. There is no reason to argue the Western references of this emblematic relation and deny its historic validity. It would be useful however to correlate it with the first statement, that of the Muslim community of Athens. Western countries in general have to stop the age long conflict in the interior of their states and their cityscape may promote this new democratic multicultural image.

3.3. Who is the agent of the urban historic narration?

Let us continue our provocative rhetoric interrogation by asking "to whom finally history belongs?" An equally provocative answer could emerge; "to the groups in political power that may conceive, interpret and 'construct' it according to their narrative political or cultural volition". This of course is the case of the demolition of the pre-modern part of Athens, in favor of its neoclassical urban redesign and the promotion of its ancient classical monuments. It is also the case of the neoclassical public buildings constructed during the British colonization of Cyprus, or of the neo-medieval references of public architecture, during the Italian colonization of Rhodes.

We may judge the above proposed examples in a different way, according to our political criticism; however there is always a partial "construction" of the historic narration in accordance to the political and cultural volition of the narrator. Thus we have to proceed to a second level of response. Cultural landscape, its impartial historic preservation or the impartial presentation of its actual synthesis may be presented as the precious archive of the past or its actual continuum, offered to the totality of the possible future interpreters. In this way cultural landscape is a common possession; it belongs as historic past or as actual present, to the totality of the universal population, as a premise of critical knowledge or as a promise of actual welfare. This is probably the most prudent way to consider the promotion of the past cultural heritage, or to refer to the present identity of social groups and places; not as an economic strategy only but as a simultaneous effort for global political conscience.

Figure 4: Neoclassical formalism as an urban design and social control approach. Urban design proposal for the city of Athens, by Stamatios Kleanthis and Gustav Eduard Schaubert, both students of Karl Friedrich Schinkel (1832).

Figure 5: Surrounding natural landscape informality and urban Athenian sprawl; the metropolitan area of the Hellenic capital, and the important natural elements of its cityscape. Plan by architect S. Mouzakitis as part of the Research program "Changing Characters and Policies in the Center of Athens and Piraeus", organized by the Ministry of Environment, Energy and Climate Change in collaboration with National Technical University of Athens (2010-2012).

3.4. Final queries on social, urban and epistemological "informality"

The more our essay was developed, the more we realized that we had to face, in the case of the touristic as well as in the case of political branding strategies, a central epistemological problem; the effort for the "schematization" of social behavior and social history as well. An effort that seems finally to describe not only a ruse of political control, a political cunningness, but also an epistemological inadequacy, having to do with an out of date past approach.

What we accept as Western Rationalism has clearly to do with an Euclidean stabilized perception, extremely well illustrated in the "purity" of our design proposals, neoclassical or even modern. It was through post-modernism that the collage informality of urban development, a positive evaluation of what we nowadays describe as "urban sprawl", first appeared, still in an

immature theoretical approach (Rowe and Koetter, 1978). However it is only recently that "informal" thinking, as continuous state of transformation seems to be apprehended as central epistemological attitude. What we extensively described in our presentation could be equally well described as the "topology" of the continuous social and urban transformation, a condition of constant "informality", or rather of constant "trans-formality", which classical thinking desperately tried to eliminate.

CONCLUSIVE REMARKS

What we abstractly accept as uniform cityscape or landscape identity is scarcely a unicultural product. On the contrary, in the majority of cases social formations as well as habitable space production is the result of an additive process of many different cultural historic 'ingredients'. Not only modern and contemporary cities have been produced on the foundation of preexisting cultures of different origin but moreover modern and contemporary nations appear to be, in their majority, multi-ethnic, expressing in their polychromatic appearance besides the possibility of positive synergy, of positive interaction, conditions of problematic coexistence. What contemporary global society has produced is by no means an homogenous condition of transcultural synthesis, a global 'village' of universal political innocence, uniformly extending across involved population. It is rather an accumulation of heterogeneous components claiming, in many cases, their aggressive singularity. It would be a matter of political theory to propose a number of amelioration tactics, of effective ways to secure a promising future. However this dream for better multicultural future societies involves for sure, habitable space proposals, descriptions of future 'multicultural landscapes'.

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Alternative pedestrianization options for Nikis coastal avenue in Thessaloniki, Greece

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Abstract
The emblematic Nikis Avenue in Thessaloniki, the "old seafront" of the city, is a road artery with great historical, urban and traffic significance. Being essentially the facade of the city towards the sea, it could constitute a smooth transition, and a bridge connecting the dense urban complex of the city center with the water element and the open horizon. Instead, it exists today as one of the main road axes of the city, serving a traffic flow of over 60000 vehicles daily. The potential for its full or partial pedestrianization is investigated, the traffic impacts on the adjacent road network are examined and a series of measures and arrangements to address these impacts are proposed. The conclusions are methodologically based on field traffic and parking measurements, the evaluation of the existing level of service in the broader area and an extensive road user stated preferences questionnaire survey.
Keywords: Pedestrianization; urban seafront; urban traffic; urban regeneration; sustainable mobility.

1. INTRODUCTION

Thessaloniki, after a period of rapid economic development and improvement of the living standards, now hosts more than one million inhabitants requiring modern transportation and appropriate urban mobility infrastructure. The urban development of the city, due to its geographical characteristics, extends along a rather narrow zone between the coast in the south/west and the mountainous area to the north/east. This results in the formation of a basic network, comprised of 4-5 parallel-to-the sea main arteries crossing the city from east to west, having to serve the majority of Thessaloniki's daily traffic volumes (Fig. 1). It is obvious that the city needs infrastructure and urban renewal projects that will contribute to sustainable development, ensuring social cohesion and enhancing its urban and environmental standards and promoting its cultural identity.

Traffic is one of the main problems of Thessaloniki, occurring as a combination of congestions on major roads during peak hours and illegal parking throughout the whole urban road network, having multiple traffic and environmental impacts in urban activity: traffic delays, increased fuel consumption, pollution and noise, increased accident rates, occupation of public space and an overall urban degradation.

Pedestrian ways constitute an important matter for cities and the debate for them is continuous and interesting in many ways, since it includes three major urban issues: the proper selection of the appropriate road axes, the land-use control after the installation and the consequent measures to deal with new traffic assignment. The first battles concerning the subject of pedestrianization in Greek cities were won during the recent decades, since a series of historical road axes were turned into pedestrian ways. Thessaloniki is such an example; after decades of absolute private car dominance in the city center, in the 1980's segments of the central road network was given to pedestrians as part of a newly introduced pedestrian space.

Figure 1. Nikis Avenue and its adjacent parallel road axes [1].

Although incomplete and immature, it was the first step towards a transition to a more sustainable urban traffic network including alternative means and mass transportation. The history of pedestrianizations in Thessaloniki shows that the road segments are usually selected having a direction towards the southwestern seafront, intersecting vertically the major urban road axes that serve traffic moving in an east-west and vice-versa daily pattern. One of the main road arteries holds an exquisite place among the central road axes: the emblematic Nikis Avenue, the "old seafront" of the city, is a road with great historical, urban and traffic significance. It summarizes the recent history of the city, being the most recognizable part of its identity and, therefore, the discussion for its pedestrianization is constantly attracting the interest of both citizens and the local authorities.

2. CONFIGURATION AND HISTORICAL EVOLUTION OF THESSALONIKI OLD SEAFRONT

The connection between the city and the sea is undoubtedly one of the major components of its urban environment, having historical, economic and functional dimension, since the main commercial access of the city was through the sea for a series of years. The current seafront configuration is relatively new, being the result of the existence of surrounding city walls that formed an artificial boundary until 1870. Thessaloniki, contrary to many other Greek cities was never a mainly naval one. But its close relationship with the sea was always in the framework of commercial and transit activities. Ever since its construction, the space of the waterfront served as an extension of the existing port transportation and storage activity. The demolition of the sea walls of Thessaloniki in 1870 led to a change in the financial operation of the port. The harbor and waterfront became the site of the city's most important economic activity, and thus the contact point with the contemporary world of the time. The seafront artery was gradually converted into a housing, commercial and entertainment space; banks, shops and modern hotels, and, in more recent years luxurious houses, were being built in a notable architectural style attracting business and social activity.

The first construction of the waterfront in 1870, accompanying the demolition of the sea walls established the opening of the city towards the sea, facilitating the movement of ships and freight to and from the city, the connection of the port area with the railroad and the improvement of the urban core conditions. A second extension of the waterfront width, that exists until today, followed in 1896, from 12 to 20m, with the benefits being many; serving as a main artery, a tramway line was installed along the waterfront in 1892, and attracted various activities turning the adjacent area into the most vivid part of the city [2].

Figure 2. View of the waterfront during the early 20th century [3].

Nikis Avenue was called Begilaz Kule until the liberation from the Turkish occupation in1912, King Constantine Avenue until the recent years and Nikis Avenue the last 3 decades. Since its opening, from the early 1870s to the present day, the coastal avenue of Thessaloniki has a cosmopolitan past including lots of interesting stories written by Ottomans, Young Turks, Jews and Christians, soldiers, generals and kings, conquerors, rebels and merchants, porters and captains, and, more recently, by ordinary town people and active citizens.

Nikis Avenue is located in the center of Thessaloniki, crossing the entire coastal front from the White Tower to the Port, it is (together with Egnatia Str.) the main west entrance of the city, comprises three traffic lanes and it is one-way street, with a direction towards the east. There is no public transport service along the road, whereas a bicycle lane exists along the pavement of the seaside.

3. CONTEMPORARY PROPOSALS – PEDESTRIANIZATION ATTEMPTS

Being, essentially, the facade of the city towards the sea, Nikis Avenue should normally constitute a smooth transition, and a bridge connecting the dense urban complex of the city center with the water element and the open horizon. Instead, it exists today as one of the main road axes of the city, serving a traffic flow of over 60000 vehicles daily, moving from the east to the west. Proposals for partial or total pedestrianization of Nikis have been discussed for more than 20 years, while occasional pilot pedestrianizations of the street are being tested, without any provision for traffic and other impacts on the rest of the road network, and no final and permanent decision.

The first contemporary attempt towards its pedestrianization was made by Thessaloniki Citizens' Union for the Environment and Culture during the summer of 1996, in the context of a broader campaign for the protection of pedestrian rights. The urban seafront worked that day for the first

time as an ideal promenade, offering a compelling experience for thousands of people with all the comfort of space, calmness and safety, away from the pressure of motorized traffic. At the same time, though, one should note the wrath of distracted drivers, the despair of the Traffic Police and the incredible jams that occurred along the adjacent roads, since the project had not been prepared, organized and supported properly.

It is worthwhile mentioning that, one year later, in 1997, the year Thessaloniki was the cultural capital of Europe, the old seafront was closed again for two full months, for a radical renewal of the street pavement. After a few days of disruption, traffic adjusted smoothly to the necessary diversions, with the help of strict policing and control of illegal parking in Mitropoleos Str., the adjacent parallel road artery.

Figure 3. A recent (temporary) pedestrianization of Nikis Avenue.

A careful assessment of traffic assignment showed that from the car flows of Nikis Avenue, then ranging between 50000-60000 vehicles daily, a 25-30%, i.e. 15000-20000 vehicle movements were transferred to the other modes (bus, taxi, walking), or did not occur at all. The remaining traffic was distributed in the network of parallel road axes that have the same direction (east-west): Mitropoleos Str. served the major part (approximately 30%), while Ermou. and Egnatia Str. served another 20% each and the remainder was diverted to the ring road. The continuous presence of traffic police helped the smooth flow of vehicles, while road users accepted the new measures and uncomplainingly adjusted after a few days.

Today, after the occasional efforts made, citizens and local authorities seem more mature than ever to embrace a permanent pedestrianization of Nikis Avenue. In order to achieve this goal without major problems and complaints, a series of prerequisites are required, starting with the detailed dialogue between the different stakeholders (pedestrians and car drivers), and the careful design of various and measures that should be taken to support the proposal. The most important of these measures is the shift of the existing buses from Mitropoleos Str. to the parallel Tsimiski Str., with the introduction of a contra-flow bus lane. This way, the faster movement of buses will be improved, without any loss of functional space of Tsimiski Str., which is now permanently occupied by illegally parked cars. At the same time, after the shift of bus routes from Mitropoleos, the release of one more lanes will be able to serve the main part of the traffic volume currently using Nikis Avenue. The rest of the diverted traffic will be automatically allocated along the parallel road network and to other transport modes according to the assignment patterns of 1997.

4. CURRENT TRAFFIC CONDITIONS AND USERS' STATED PREFERENCES

Nikis Avenue is characterized by high accessibility, i.e. high traffic and pedestrian volumes and, as a result, commercial and recreational uses were developed forming a linear and continuous commercial corridor. The existence of dense traffic favors the existing activities, but also causes negative effects in the area: car speeds are very low, pedestrians are obliged to move between parked or double-parked vehicles, the supply of stores is problematic, sidewalks are occupied by tables, chairs, garbage bins, power poles etc. The movement of vehicles is another reason preventing the unhindered and sustainable operation of the commercial and recreational use of the seafront, both because of the occurring pollution and visual intrusion and the potential accident risk to pedestrians. It seems obvious that the two distinct functions of the road (commercial/recreational and part of the transportation network) should be considered as conflicting, and, therefore, since the adjacent land uses can hardly been changed or displaced, a viable solution requires the traffic to be transferred to other links of the road network.

In order to assess traffic conditions, a series of on-site traffic measurements was conducted during May 2014 in the study area. Measurements took place during morning, midday and evening peaks at selected segments of Nikis Avenue, Mitropoleos Str. and Tsimiski Str., three major parallel one-way road axes crossing the city center; in Nikis Avenue and Mitropoleos Str. the traffic flow has a direction west to east whereas in Tsimiski Str. the opposite. Additional traffic measurements were conducted while Nikis Avenue was temporarily closed for motorized traffic and used as a walkway, during the above-mentioned occasional pedestrianizations.

Figure 4. Current traffic conditions along Nikis Avenue.

These measurements showed clearly that traffic volumes are high during peak hours, since the results present the intensity of the problem during morning, midday and afternoon (Table 1).

Table 1. Traffic volumes along parallel road arteries in the study area.

Road	Traffic Volume (PCU/hour)		
	Morning	Midday	Evening
Tsimiski Str.	2718	2536	1869
Mitropoleos Str.	538	686	678
Nikis Ave.	2303	2261	2386

In addition, and in order to examine the options for the pedestrianization of Nikis Avenue, an extensive questionnaire survey amongst the citizens of Thessaloniki was conducted, to analyze and understand the public opinion concerning the issue, This survey was conducted in the broader area of Nikis Avenue in Thessaloniki, from April 25 to June 30, 2014. The questionnaire included 23 relevant questions, it was completely anonymous and the sample consisted of 1297 subjects, 643 women and 654 men. Respondents were mainly Greeks but also foreigners (tourists or immigrants). The questionnaires were distributed to passengers, shopkeepers and employees in the region, as well as residents and it was available in various local websites to answer online.

Summarizing the results, it is observed that almost all respondents, regardless of gender, age, educational level, living area, etc. are not satisfied with the quality of life conditions along Nikis Avenue. The importance of the problems was widely recognized and numerous comments on the existing issues were made, concerning mainly the limited extent of the available pedestrian and cyclist space, the lack of pedestrian safety, the usual traffic jams, the high noise levels and the suffocating illegal parking. Also, regardless of gender, educational level, relationship with the region and destination, everyone traveling by car faces problems in finding parking space and therefore contributes to the growing problem of illegal parking. The traffic and spatial problems of the region accompanied by the lack of policing and control lead to a chaotic situation in one of the most vital areas of Thessaloniki.

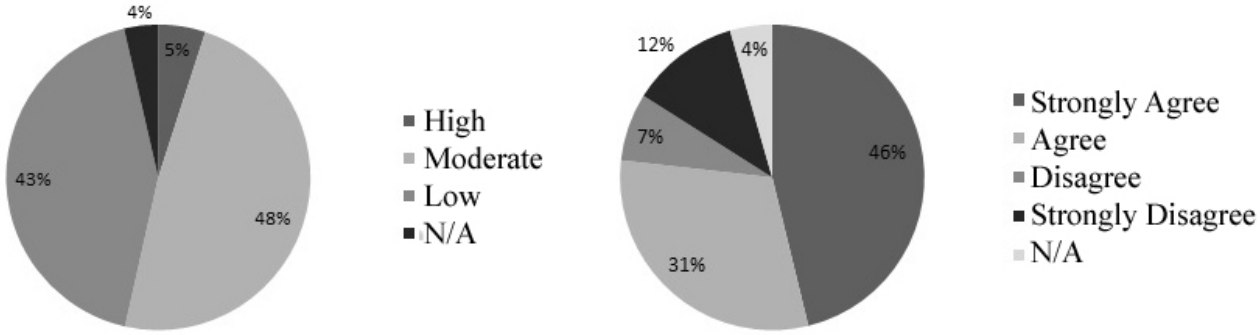

Figure 5. Acceptance levels of current conditions and permanent pedestrianization.

Moreover, the majority of the respondents stated that they strongly agree with a permanent pedestrianization of the Nikis Avenue, considering that such a decision would lead to the upgrade of the city center, the improvement of the overall environmental conditions, the increase of pedestrian mobility and the financial support of the surrounding commercial uses. It is widely believed that in the case of a pedestrianization many movements will shift to walking and cycling, a fact that depicts a very optimistic view on the future life of the road, an image completely fitting the idea of a potential urban regeneration (Fig. 5 and 6).

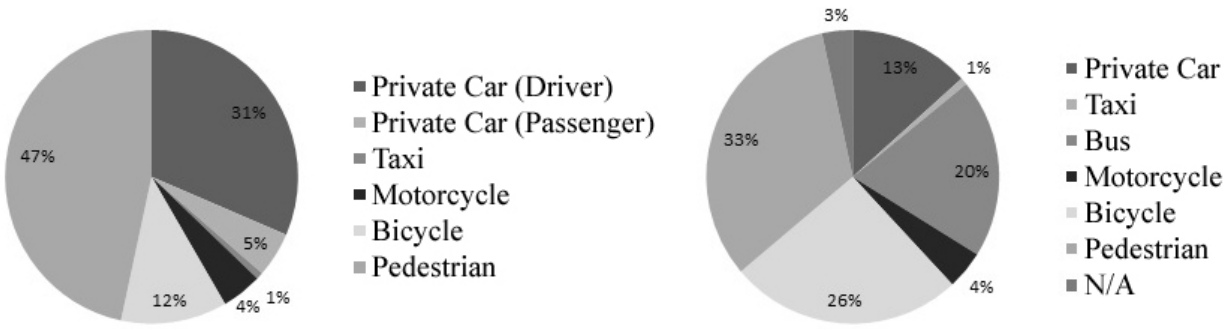

Figure 6. Modal choice before and after the proposed pedestrianization.

5. ALTERNATIVE PROPOSALS FOR PEDESTRIANIZATION

In this study, two different scenarios for a full or partial pedestrianization of Nikis Avenue are investigated. These are the case of complete pedestrianization and the case of a partial pedestrianization, with the conversion of the road to a traffic-calmed street. More specifically, the traffic impacts on the adjacent road network are examined in each case, and a series of measures and arrangements to address these impacts are proposed. The conclusions are methodologically based on field traffic and parking measurements, the estimation of the existing and future levels of service in the roads of the broader area and the results of the questionnaire survey with the stated preferences of road users. These conclusions, if used properly, can contribute to a more rational and long-lasting decision of the municipal authorities on the subject.

Scenario 1 refers to the possibility of partial pedestrianization, by maintaining one functional lane for local movements, connection with the perpendicular streets, and commercial service of Nikis businesses.. With this reconfiguration, the removal of illegally parked vehicles is ensured. Also, the traffic volume of one of the two traffic lanes continues to be served, while the traffic volume of the second lane could be easily channeled to the adjacent streets. More specifically, the remaining volume will be mainly be diverted to Mitropoleos Str. with the removal of buses from it and hence the release of an additional lane. The bus lane will be transferred to Tsimiski Str. operating at the opposite direction to existing traffic (contra-flow bus lane). Another important advantage is the fact that the existence of a traffic lane will eliminate the possibility of the tendency of cafes, bars and other recreational land uses to extend strongly towards the sea (Fig. 7 and 8).

Figure 7. Nikis Avenue partial pedestrianization

Figure 8. Proposed Tsimiski Str. (top) and Mitropoleos Str. (bottom) configuration.

Scenario 2 describes the possibility of full pedestrianization. In this case several measures need to be taken, the main of which is the reallocation of the exclusive bus lane from Mitropoleos to Tsimiski Str. with a direction opposite to the current traffic flow (as in scenario 1). In this case, the lane that will be released in Mitropoleos Str. would eventually absorb about half of the current Nikis Avenue volume. The remaining traffic volume will be automatically redistributed to parallel routes and other modes of transport. In order to avoid excessive tables extension of the adjacent land uses, a bicycle-way may be designed next to the existing pavement at the city's side (Fig. 9).

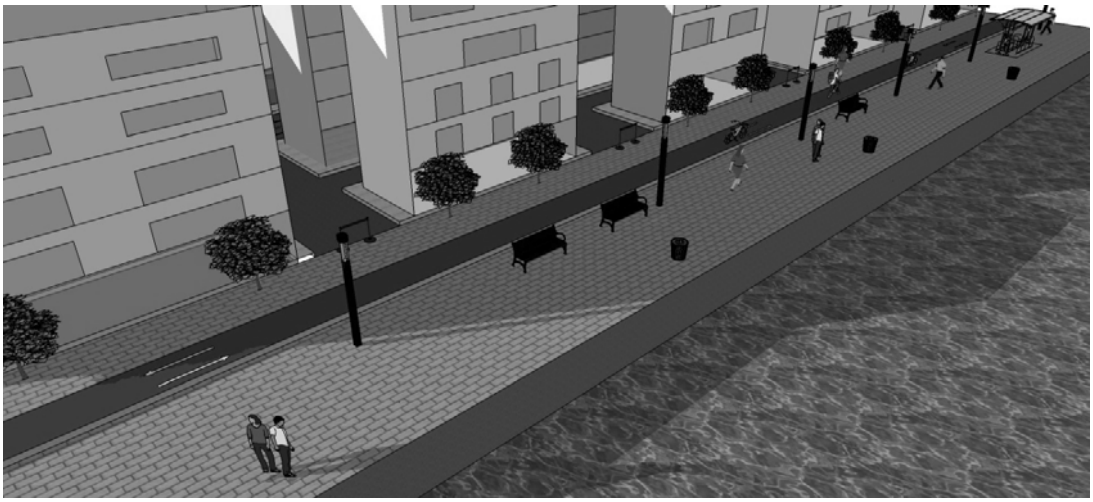

Figure 9. Nikis Avenue complete pedestrianization.

The calculation of the traffic capacity was based on Equation 1, where *s* is calculated traffic capacity (PCU) and *w* the lane width (m), taking also into account the correction factors regarding the number of lanes, lane width, presence of illegal parking, traffic signaling presence and timing [4].

$$s=525w \quad (1)$$

The changes in traffic capacity of each one of the affected parallel road arteries of the study i.e. Nikis Ave., Mitropoleos Str. and Tsimiski Str. for each of the proposed scenarios are presented in Table 2.

Table 2. Road traffic capacity for each scenario.

Road	Road Capacity (PCU/hour)		
	Existing	Scenario 1	Scenario 2
Tsimiski Str.	4155	4155	4155
Mitropoleos Str.	1528	2072	2072
Nikis Ave.	2989	1225	0

6. CONCLUSIONS

The comparison of the data of the two tables presented above shows that the extra road capacity required for the transition of Nikis Avenue to a pedestrian way already exists in the adjacent parallel road axes. An approximate 1000-vehicle capacity available surplus in Mitropoleos Str. will serve the shift of the majority of the vehicles now using Nikis Avenue, especially in the case of scenario1. In the case of scenario 2, all the system of the parallel roads moving towards the east must be used, (Mitropoleos, Ermou, Egnatia, ring) in order to tackle with the converted traffic.

A series of prerequisites are absolutely necessary for the successful pedestrianization of Nikis

Avenue and the maximization of it positive impacts on the urban landscape and activity. These are the understanding of the importance of this intervention for the city's urban character and identity and the restoration of its relationship with the sea, the persuasive justification of the necessity of this intervention to all citizens through extensive dialogue and marketing, and the support and protection of its implementation by using the necessary law enforcement, especially during the first critical period after its introduction. Finally, it should be noted that the proposed traffic measures in the parallel streets should definitely precede the construction of the pedestrian (and bicycle) transformation of Nikis, the design of which must be made after an international architectural competition.

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PRE-ORGANIZED SPECIAL SESSIONS

Self-organization in urban change: concepts, instruments and practical implications

Organized and chaired by

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Changing Spatialities of Istanbul: From a Bottom-up Informal Development Towards a State-Led Flexible Urban Transformation[1]

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Abstract

Informal Settlements, referred as *Gecekondu* in Turkey have been a bottom-up and self-organized solution to housing since the 1950s. These settlements that were initially being condoned and even encouraged by the state, through legalizations and provision of urban services, as they settled the housing issue transformed over time in line with the changing political, economic and social context. As a redistributive mechanism that provided economic gain to low-income groups over urban land during the 1980's it turned into a commodity through the amnesties enacted by the governments. However, since the 2000's, the consolidation between the urbanization and capital backed up by a state-led transformation shaping the cities according to the needs of the investors positioned *gecekondu* as the 'unwanted' populations that needs to be eliminated as they occupied valuable land becoming a hindrance to the further development of the city.

Keywords *Informal settlements, self-organization, urban transformation, globalization strategies, neoliberal policies,*

1. INTRODUCTION

Since the 1980's Turkey witnessed an ever-increasing presence of neoliberal policies that aspired to articulate the country's economy to the global system. This era was marked by a policies seeking export oriented growth and global capital entailing the growth of a more flexible service sector driven economy. In such context Istanbul was envisaged as the city to lead this change integrating the Turkish economy with global markets.

The transition from pseudo-Keynesian policies to a neo-liberal regime that extended market forces to all spheres of social life had important repercussions on the production of urban space and the redistributive mechanisms previously employed. First and foremost among the targets of this new regime have been the self-organized informal settlements, namely *gecekondu,* which have become the major mode of housing production for the rural masses that flocked into the city since the 1950s. The state did not have the capacity or the willingness to resolve housing need of the migrants who provided the necessary labor force for the rapidly developing industry. Instead, it kept an atmosphere of uncertainty regarding these informal areas in the sense that prohibitive regulations were never fully

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enforced, which encouraged further development of unplanned *gecekondu* areas establishing to a great extent the urban macro form and the future expansion of Istanbul. The acceptance, support and encouragement of the central government concerning the informal settlements manifested itself through urban service provisions and amnesties partially legalizing the status of the dwellers and turning *gecekondu* into the dominant mechanism of low-income housing provision.

The populist and clientelistic mode of governance continued until the 2000's while the country was being opened up for foreign investment and Istanbul was being reshaped to become a global city Correspondingly changes have been made in the legal framework to promote a new urban development model, highlighting the finance, tourism and cultural sectors alongside the large-scale projects and to attract the volatile global capital that would invest in the city's development. In this context, *Gecekondu* settlements standing in the way of including the valuable urban land in the regime of capital accumulation based on real-estate development became one of the prime targets of the new urban policies. With the coming into power of AKP, the will to form new alliances with major league capitalists to shape up the city became evident through large-scale investments and the eradication of informal settlements via urban transformation process. This paper explores the spatial transformation of the city and the changing alliances between various actors in different periods from a political, economical and legal perspective while focusing on the shift in the official discourse towards self-organized urban formations.

2. EMERGENCE OF *GECEKONDU* AS A FORM OF SELF-ORGANIZED HOUSING IN A PSEUDO KEYNESIAN CONTEXT: 1950 TO 1980

Similar to Europe's restructuring after World War II, 1950s is a significant era of transformation for Turkey marked by substantial industrialization attempts. At the same tame the Marshall aids (the introduction of tractors, fertilizers, irrigation systems and new agricultural products) initiating a modernization process in agriculture invoked a massive migration from rural areas to the major cities [1][2] Yet, unlike the general welfare state policies taking place in the rest of Europe that attempted to solve the housing problem due to rapid population growth and urbanization, social housing policies never really made it to the political agenda of the state in Turkey. Instead, an improvised and bottom up solution came from the incoming migrants mostly from the rural areas in form of informal housing built in precarious conditions on public or private land around the city.

Starting with the 1950s, in line with the national development policy, capital was invested in services and industry and Istanbul became the location of large-scale industrial companies established by government subsidies. Industry and production promoted by the market-oriented governmental incentives, assigning the private-sector an expanded role in the economy, induced a high rate of migration to urban areas creating a significant housing need for the newcomers who provided the main workforce for the expanding industry. The lack of policies oriented towards sheltering newcomers and urban poor led those groups to improvise their own solutions to the housing question. Consequently these newcomers settled around the industrial establishments in the periphery, producing informal residential neighborhoods, which become the prominent mode of housing production and constituted a major component of urbanization as well as an important issue on the political agenda for many years to come [3]. An important feature of these informal settlements was that they were built in terms of use value, shaping the dwellings to meet the immediate needs of their users and reflected the mobility and flexibility of the positions of the newcomers in the labor market [4]. Although, there were attempts to regulate the *gecekondu* settlements, the first serious regulatory act, The Act on Informal Settlements #775, regarding exclusively the *gecekondu* areas was not enacted until 1966. The lack of governmental

policies and the reluctance to take action resulted in an increase from 8 239 to 61 400 informal houses between 1950 and 1959 [5][6]. And in 1963, 35% of Istanbul's population lived in *gecekondu* [6].

Yet in the course of the 1950's the substantial changes in the urban form initiated by the growing industry and the informal housing areas around it obliged the government to take action. During this time, regulations were passed concerning (public) housing production by the municipalities and in order to regulate the future development and satisfy the needs of fast developing cities through master plans on a metropolitan scale under the power of the central government. However the prescriptive, rational and top-down planning approach of the period lagged behind the requirements of rapid urbanization. The inflexible, close-ended planning process impeded fast urban interventions [7]. At the same time, with the shift towards import substitution models in most of the developing countries including Turkey starting in the 1960's, the increasing need for the unskilled cheap labor force provided by the squatter population secured an upper hand for these communities, justifying and guaranteeing their presence in big cities. These two phenomena might be analyzed as the reason for the reluctance of public policies to resolve the informal settlement issues, however in 1966 the Informal Settlements Act #775 was finally passed as a first step to address the growing problem in major cities. The Act, anticipated the regulation of *gecekondu* areas; it was aimed to ameliorate houses which were relatively in good condition according to health regulations - bring infrastructure and services to these settlements - demolish those which were dilapidated and to prevent further *gecekondu* formation by holding the municipalities accountable for the creation of housing for people living in these areas in line with the pseudo Keynesian attitude of the state, still being the provider of public services to some extent, that prevailed in the 1960's. As a result, starting in the late 1960s, many informal settlement areas turned into established low-density residential neighborhoods with infrastructure and certain services. Still, the issue of legal title remained unresolved making the population vulnerable to government action [8]. In fact, land profiteers appeared subdividing and selling private lands on the urban fringe to new settlers[2]. This way "*what the government could not provide was undertaken by the private sector and the people themselves*" [9].

In the 1970's the failure of the modernist urban planning to eradicate poverty and inequality problems ongoing especially in urban areas was heavily criticised. Its repercussions on the squatter housing issue has been the introduction of a new positive perspective, spearheaded by the World Bank, on 'underdevelopment' problems targeting the resolution of such urban problems through public policies [4] This also resonated in one of the public speeches of the prime minister of the period:

> *"This issue has become a big problem for the lower and middle income population. We believe that the ideal solution preventing land and housing speculation is social housing. Yet, it would be romantic to suppose that it would be resolved immediately. Our people have creative personalities. We can see this in gecekondu dwellings. There are informal settlements in many developed countries of the world. But they are very much different than what we have here. We can see creativity in gecekondus built by our people. If municipalities take action in cooperation with the creative power of the people and states support we would see that the Turkish people has the power to resolve the housing problem by themselves* [10].

[2] These subdivisions are referred as *'hisseli tapu'*, meaning shared title deeds. They were unplotted large tracks of land which carried restrictions on housing construction. What made *hisseli tapu* developments different than the *gecekondu* was that in *hisseli tapu* ownership of land was legal, but its subdivision and construction of buildings on it were unauthorized; whereas both the land ownership and the buildings were unauthorized in case of the *gecekondu* [3][9].

Nonetheless, in this period the state never approached this improvised, bottom-up housing mechanism which could have provided a flexible planning model as a permanent solution that could be improved and incorporated in urban plans. The central approach to urban planning and the regulatory practices failed to seize these self-organized settlements as an opportunity to implement a kind of a planning approach that could adapt to the occurring phenomena in major cities rather than the top-down, centralized and rigid model of the period. Still, as the numbers of the squatter population increased they became a considerable political actor for the politicians following populist policies and generating clientalistic and patronage relationships [8][4][11].

To sum up the period between 1950's until the 1980's we could say that the socio-economic policies placed greater importance on restoring economic growth leaving the urban development to take shape through its own dynamics with minimum regulation and intervention. The national funds were being directed to industry and large-scale infrastructure - such as roads and bridges – which were seen as steering forces for national development, supposing that economic development would create better life conditions for everyone- whereas spatial development was handed over to spontaneous processes. At the same time, as a bottom-up buffer mechanism, *gecekondu* provided housing for the cheap labor power essential for the growing industries causing the state to turn a blind eye to the phenomena. Moreover, as the underprivileged labor force in big cities couldn't attain the surplus created from the national growth policies, the economic gap created between different social groups was substituted via lax land policies targeting informal housing market and the low-income migrants. The period until the 1980's was marked by a "you scratch my back and I'll scratch yours" alliance between the state and the populace, though it is highly debatable which side benefited the most from this implicit arrangement. Subsequently *gecekondu* served as a redistribution strategy concerning the surplus value created through arrangements made over urban land to underprivileged groups bridging the lack of welfare state provisions - such as housing - with economic advantages.

Nevertheless, the impact of these initial policies of the '*populist modernity*' period, as Tekeli [12] puts it - aiming to boost the low turnover rate of the capital through investing in industrial development in one hand, and implementing populist legal arrangements to facilitate surplus gain for lower classes on the other- was a self-organized urban morphology increased in density due to the legalization of the previously unregulated and unplanned developments with an uncontrolled macro form and growth pace.

3. THE ALLOCATION OF URBAN RENT THROUGH AMNESTIES AND THE COMMODIFICATION OF THE INFORMAL SETTLEMENTS: 1980-2000

During the 1980's in a similar line with the global order Turkey followed the trend towards a neo-liberal economic model. Import-substituting industrialization strategies implemented between 1960-1980 were replaced with strategies of export-oriented, privatization-based growth opening up the market to foreign investment and deregulating the economic structure. Respectively, Istanbul was being conceived as the primary driver of development that can compete on a global scale to attract the fluid global capital and its growth took shape according to this ideal. At the same time the state withdrew its resources from industry and privatized production facilities while directing its investments to large-scale projects in energy and communication sectors. As the industry was drawn to the background, tourism, finance and investment on urban land became the prime areas where the private sector was headed [13]. Large-scale projects to attract multinational companies, finance organizations and the global capital to Istanbul became a priority in the political agenda. And accordingly, just like the economy the urbanization process was deregulated and re-modeled through a series of adjustments. The planning laws during this period granted to certain institutions privileged development rights

independent of the limitations of the existing local urban plans and strengthening the possibility of making flexible and piecemeal interventions according to the needs of the investors. At the same time local authorities were bestowed with more decision-making powers and were positioned as the facilitators of the new phase of the capitalist system functioning via accumulation through built environment and urban land. With this new process, local authorities were reshaped according to the concept of 'urban entrepreneurialism' in which new coalitions with capital groups started governing the urban development [14][15].

In the meantime two major developments opened up a new era for the informal settlements. The first was a set of amnesty laws passed[3], especially the Amnesty Act #2981 (1984). The amnesties granted to the squatter settlements during this period, did not intend to resolve the informal housing problem like the previous act # 775 – implying physical improvements as well as social housing provision- but only aimed to settle the property issues through the legalization of informal areas and initiate a spatial transformation [4]. With these amnesties illegal constructions were authorized and were given title deeds, hence unplanned and uncontrolled development was legitimized. Having secured the property rights through these amnesties, many squatters turned their houses into multi-storey apartment buildings acquiring new sources of income through flats and rent from the land they formerly occupied. This triggered a fast and massive verticalization as well as an unplanned and low quality urban fabric [16][17]. Hence, *gecekondu* housing that was seen as an owner built and owner occupied low-income solution to housing [18] commercialized and became the subject of land speculation [3]. Consequently, informal settlement areas close to the city center were redeveloped by big construction companies, the ones in the periphery were transformed through the build-and-sell[4] model and un-built areas were opened up to new informal settlements by new migrants coming to the city.

The second major development was the foundation of the Mass Housing Administration (TOKİ)[5] whose purpose was to meet the housing needs of especially low income groups, to open credits for housing cooperatives and mass housing developers; that is to say "to encourage the housing production sector and to meet the rapidly increasing housing demand in a planned manner." Yet, the MHA served mainly for middle, upper-middle income groups as it was designed to function within the framework of a free market economy, and it became a tool of "government encouragement of private initiative in housing construction." [19]. Another important aspect was that through MHA, the state not only provided resources to finance the housing sector but also got involved in the sector as a developer. Furthermore the regulatory changes allowed municipalities to collaborate with public-private partnership companies since the beginning of the 1990's to produce housing for the market, eliminating the initial purpose of the administration, which was to produce low-cost housing. The funds generated by the Mass Housing Administration were used as policy tools for re-structuring the big cities making the housing sector the locomotive of economic and social development of Turkey form the 1990s onwards. In this period, regeneration of city centers, revitalization and gentrification projects emerged [1]. Towards the end of the 1990's, a new conception of the city emerged with a new CBD aiming to

[3] Laws No 2805, 2981, 3366, 3290, 3414. Laws 2981 and 2805 are amnesty laws opening *gecekondu* areas and areas suitable for further informal construction to the land market. The rest of the laws enlarged the scope of the amnesties to include industrial, commercial and public buildings.

[4] This model means that landowners who usually don't have enough capital to constructs and contractors who don't have enough capital to buy land teamed up to re-build the houses with increased density and the profit is shared among the two partners. This form of housing production is another form of self-organization albeit within the formally planned sections of the city and geared towards the middle classses. For more information see [3].

[5] TOKİ will become one of the prime actors in the transformation of *gecekondu* areas after the amendments made in the law granting the administration extensive authority after the 2000's.

turn Istanbul into a finance and business center alongside a wide span of strategies including mega urban transformation.

Finally the period from 1980's to 2000 was marked with a shift towards a neo-liberal economic model, though in the 1990's the economic conditions deteriorated, pushing the unskilled workers out of the labor market and generating increasing unemployment and creating a widening gap between the rich and the poor. The amnesties, similar to the redistribution policy of the previous period provided economic gain for the disadvantaged strata who suffered the most from the liberal policies [8]. At the time the incapacity of the industries to create enough surplus value directed the investment in the built environment and secondary circuit of capital accumulation [20]. The policies implemented during the period oriented the capitalists to invest on the urban land by easing up the regulatory frameworks and preparing the favorable conditions for surplus gain over urbanization not only for the well off but also for the urban poor. Thus an urban process that turned the cities into means of surplus accumulation emerged as the earmark of the neoliberal era whereas the regulations implemented a logic of profit making through housing in society at large. As Erder [21] states, already settled mechanisms of informal networks combined with the rates of speculative urban rent in a commercialized environment led to the assertion of formal capital to the domain of informality from the "back door," presenting a particular mechanism for the intertwining of the formal and informal sectors in the housing market in the post-1980 period. During this period not only the clientelist alliance between the state and the people was reinforced but also alliances between the public and the private sector as well as private actors and the *gecekondu* population transpired.

4. INFORMAL SETTLEMENTS AS AN OBSTACLE AGAINST THE CAPITAL'S CONSOLIDATION WITH THE URBANIZATION PROCESS AND THE STATE-LED URBAN TRANSFORMATION: 2000'S

The 2000's onwards the increasing importance of globalization, international competition between leading cities and neoliberal market logic and large-scale and strategic planning took a toll on urban agenda as the global capital's choice of location started steering the spatial development of the cities. Subsequently the aspiration to make İstanbul a 'world-city', the engine of socio-economic change and a locus for flows of capital, goods, labour, technology, culture, information, tourism and skilled services gained precedence [22]. Furthermore, urban land speculation and construction that emerged in the 1980's fully developed as the tools of capitalistic accumulation through urbanization. On the other hand, instead of holistic and comprehensive plans that would lead the urban development, project based and partial interventions continued to prevail in urban policies. Transformation projects in the historical centers of Istanbul, gated communities, residences, luxury entertainment and shopping spaces, sports and congress areas sprouted all around the city without the guidance of overall and upper-scale plans.

During the 2000's, the 'eager neoliberal policies' pursued by the government during the previous two decades became increasingly aggressive and hegemonic. This shift manifested itself foremost in a new juridico-political framework and the discretionary authority exerted by the government, particularly in urban planning. The new policies implemented hastened the integration of housing sector and finance by preparing the legal conditions and *ad hoc* decisions that facilitated certain lucrative projects for the big investors to shape the urbanization process. On the other hand, with the rapid expansion of the city, increasing land prices and the initial legal steps to facilitate an urban transformation on the city scale, the tone of the official discourse on informal settlements occupying valuable areas changed towards a much more sweeping and exclusionary one implying the central government's take on the matter aiming to discharge these *gecekondu* areas to open up more space in the city for further lucrative development.

A series of laws 're-shuffling' the legal framework and re-centralizing the urban planning institutions facilitated the top-down and relentless process to expel the obstacle that *gecekondu* settlements created against the urban transformation in Istanbul on a large scale. The earlier discourse that regarded the *gecekondu* population as a necessary actor in the economic development as the cheap workforce and thereof condoned their presence in the city turned into an approach placing them as the 'undesirable' element that needs to be eliminated.

On the local level, municipalities were given authority to produce housing in collaboration were bestowed with powers to determine urban transformation, imperiling the informal settlement areas under their jurisdiction. On the other hand, the Renewal Act # 5366, passed in 2005, and later on the infamous 'disaster law", the Transformation of Areas Under the Risk of Disaster Act #6306 passed in 2012 paved the way for the implementation of renewal projects in historical or natural protection zones as well as areas under the risk of earthquake. Most of Istanbul's historical peninsula and old neighborhoods with great urban rent potential, inhabited mostly by low-income groups as well as squatter settlements that were claimed to be risky zones were being transformed in cooperation with big companies, resulting in highly contested projects that commodified these areas and aimed at driving out the urban poor from the city [23][24]. The 'disaster law' also annulled the former Amnesty Act #2981 placing the *gecekondu* areas under risk by ruling out the possibility of legalization and acquisition of land titles for these settlements.[6]

Moreover, two important institutions, the Ministry of Environment and Urban Planning and the Mass Housing administration – which is under the direct ordinance of the prime ministry, hence of the central government – acquired the power to make plans and plan revisions of all scales and types and approve them ex officio in urban transformation areas as well as mass housing and squatter areas, including the power to expropriate *gecekondu* areas, to take over the land belonging to the Treasury under the name of "*gecekondu* prevention zones", to approve the borders of *gecekondu* rehabilitation, clearance and *gecekondu* prevention zones, and to prepare and approve all kinds of development and rehabilitation plans. This way the decision making power was not only taken from municipalities and handed over to the central authority but also these public lands were cleared up for further investment.

Together with the structural changes made in the public institutions and ministries such as MHA and the Ministry of Environment and Urban Planning and regulatory changes giving vast authority to the central government as well as the possibility to finance the investment through public-private partnerships, numerous transformation projects started to take place in informal settlement areas of İstanbul using mainly the disaster law as a pretext for the transformation of informal settlements that could not be transformed or demolished earlier, such as; Zeytinburnu, Sarıgöl-Yenidoğan,Tozkoparan and Derbent to name a few. However, as many academics and professional chambers criticized, the decision to declare these areas risky most of the time did not have scientific justification showing the arbitrary and coercive character of these top-down projects. Apart from the disaster pretext, some of these areas were transformed – ie.Küçükçekmece-Ayazma neighborhood- in order to realize large-scale projects such as those geared towards the Olympics. These projects either displaced the populations outside the city to buildings constructed by MHA with inadequate services and inconvenient living

[6] Although, through public manifestations and resistance coming form the *gecekondu* dwellers the annulations of the amnesty act was postponed for another 6 years. See the Article 38 of the Omnibus Bill # 6639 on the Amendments to be Made in Certain Acts and Decree-Laws, disclosed in the Official Gazette on 15.04.2015.

conditions or proposed housing in the newly built estates which are far from being affordable for the population of these informal settlements[7].

The period starting from the 2000's onwards witnessed the consolidation of the link between urban space and the capital accumulation, deepening the commodification of the urban space and its exposure to expropriation processes in the name of enabling the capital's intervention in the cities and urban land. At the same time the re-shuffling of the legal system ensured the distribution of the surplus value created through urban land speculation and piecemeal projects to regulate the relationship between the government and the capital.

Furthermore, through the structural changes in MHA which is a public institution but yet one that has the privileges of a private company, the state entered into the construction sector in the role of a developer opening the public land to capital and triggering the production of housing for the market as well as organizing the urban space with neoliberal policies which transfers the rent through strategic alliances to multinational companies and giant investors – local and global.

The urban-transformation centric development ideal of the central government and the profit-oriented destruction of the city also redefined the physical and social position of the urban poor excluding them from being part of the new alliances to extract urban rent through housing, construction and urban land inversely to the policies followed by the former governments until 2000's. The changes being made in the urban planning regulations in this period also provided the central government a power to bend the rules in order to provide conditions adaptable to the needs of public and/or private actors commanding greater economic resources shaping up the city. Finally, we could conclude that the top-down urban planning approach exerted by the authorities eliminated for good the bottom-up and self-organized processes of the previous periods and played direct causal roles in the making of the new markets and in the transfer of the (informally owned) property of certain groups to private actors leading up to a state-led flexible urban transformation process.

5. CONCLUSION

The changing approach to informal settlements reveals important economic, social and political changes since its emergence in the 1950's until today. As a bottom-up and self-organized mechanism that served as a solution to the housing need of the arriving workforce that was needed to sustain the industry-based economic development model of the time, its proliferation was condoned and even encouraged by the public authorities. The informal housing solutions served as a redistribution strategy for the surplus value created over urban land substituting for the lack of welfare provisions at the time. On the other hand, 1980's onwards, with the neo-liberalization and the opening up of the economy to the global market the urbanization process started to be deregulated encouraging private entrepreneurialism. Over time, through amnesties rehabilitation plans and legalization processes due to the changing clientalistic approach of the governments, the alliance between the state and the *gecekondu* dwellers, that encouraged an unplanned urban form, spread to wider populations including land profiteers and entrepreneurs making use of the lax policies and including them to the profit made from the urban rent. Thus, the informal housing turning into a commodity whose exchange value replaced the initial use value leading up to the assertion of formal capital to the informal housing market. Henceforth the urbanization process was opened up to the market actors market shaping the urbanization. Yet, in the 2000's, the aggressive neo-liberal policies implemented by the central government turned the tide over for the *gecekondu* settlements. The urban policies started taking a

[7] In this content, between 2003 and 2011, MHA had 169 projects transforming 233 055 *gecekondus* in Turkey [25].

more and more arbitrary form to facilitate the conditions for the realization of lucrative and large-scale projects in collaboration with big investors and shape the urban form according to their need. *Gecekondu* areas established on valuable land from this point on started being represented as the 'unwanted' and illegal zones and top-down and arbitrary transformation projects started under the guidance of the public authorities in these areas. The 2000's witnessed a state-led urban transformation process in the name of the integration between the capital and the urbanization process imitating an eradication operation against the informal settlements.

On the other hand, with the amnesties the "*gecekondu*" model improvised to solve the housing problem by self-organizing, bottom-up initiatives was transformed into a tool instrumental in re-distributing urban rent resulting in a switch from use value to exchange value in the production of space in "*gecekondu*" areas. Yet the local administrations that were granted the authority to make rehabilitation plans for the informal settlement areas implemented top-down, rigid and cookie-cutter plans missing the opportunity to make use of the flexible, intrinsic and self-managed character of these settlements turning them into areas immune from restrictions of holistic urban plans and planning regulations, in an unhealthy and unplanned manner. This experience shows that the process of self-organization has been shattered by top-down planning decisions and no room was left for negotiations and mediations between self-organizing, spontaneous systems and dictates of rigid, top-down imperatives due to the political clientelism and populist approaches of the political administrations.

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Multicultural region and city physiognomy: Cross-border collaboration and contested identity

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Urban identity through the attributes of the urban body network configuration

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Abstract
The methodology presented here is grounded on the analysis and relational relocation of mixed attributes of the urban body, deriving both from the reconstruction of the urban body as a network configuration as well as from geometric, economic or social urban attributes. Cluster analysis is applied in an attempt to restructure those attributes of the urban body which emerge from the position of each element (node) in relation to other elements of the network and not from the Cartesian topology. The urban body is defined as the part of the urban tissue which distinguishes itself from the whole of the urban landscape, either because of constructed boundaries, or because of the strengthening of a specific attribute, which would result in a kind of an immaterial boundary, or, in other words the formation of an identity. What is more, being able to represent material and non-material elements as nodes (Hillier, 2007), counter-bodies of mixed proprieties emerge, including physical presence and their attributes. In contrast to the hierarchical constructions, network constructions allow for multiple connections between elements (Alexander, 1965), therefore being closer to the complexity of the associative forces found in the structure of the urban body.
Keywords: Attributes; Mutation; urban body; cluster analysis; network.

1. INTRODUCTION

The methodology towards urban cohesion focusing at the spatial, social and economic attributes of the urban body, evaluates the importance of certain supra-local nodes, inscribed on the Attic peninsula in Greece, as being well-connected nodes or as being the nodes though which other nodes or groups of nodes interconnect and finally describe a proposed set of actions that would result in the self-adaptation of the urban body in a way that would re-evaluate its processes towards a structure of a coherent whole. Through application of community detection (Blondel et al., 2008, Rosvall et al., 2009), centrality studies (Newman, 2010) made possible through the application of certain algorithms measuring the different types of centrality (betweenness centrality, degree centrality, closeness centrality) the real-time self-adaptation of the urban body is revealed, on the basis of the alteration of the nodes' connections or the differentiation of the attributes and the identity of the nodes themselves (Figures 1,2).

In order to reveal further relationships between network and urban body structures supra-local nodes are regarded as multidimensional objects and the attributes emerging from the network configuration appear as a set of values (dimensions), allowing for a clustering methodology of objects and their attributes, based on similarity studies and made possible through the application of different distance and linkage functions (Hastie, Tibshirani, Friedman, 2003). This results in a relocation of each node/attribute to an hierarchical tree, where the position of each element reflects its relational similarity following a gradual procedure of selection of two sets of elements based on the strength and the direction of their relation.

The application of a similarity function on the attributes of the urban body network configurations allows for the detection of relations between the network-based attributes and those that reflect geometric, economic or social attributes of the urban body, as well as the reflection on whether

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clustered attributes reflect urban identity through mixed properties consisting of material and non-material components (Bateson, 1972).

Figure 1

The network configuration describing supralocal nodes and their connections. Figure 2:Community detection based on modularity class (Blondel et al., 2008). Colouring of communities reflects the differences in communities compared to mapequasion method (Rosvall et al., 2009).

2. ATTRIBUTES REFLECTING NETWORK STRICTURE

Supra-local nodes are treated as objects whose attributes' values reflect the different qualities of the network structure. The application of the distance and linkage functions results in a data tree where nodes, as well as their attributes, are visualized in a color mosaic which captures the proximity of data values to each attribute's lowest and highest extreme values (Figure 3).

Through mapping of the gradual procedure of nodes' union into clusters and being able to trace the distance function results at each step, the visualization of the proximity of nodes in terms of similarity is made possible, as well as the schematic plan of these relations at the resulting hierarchical tree, where the length of the branches reflects the similarity value between objects.

The interrelation of attributes resulting from the structure of the network configurations allows for the estimation of possible divergence or convergence of other attributes in relation to one known attribute. In the case where we find, for example, that a node's value has a proximity to a lowest/highest value of an attribute, in what concerns its relational position at the network and defined by the application of algorithms which measure certain qualities of the network structure, other qualities could be estimated beforehand through association. It is therefore possible, through the application of similarity/linkage functions and through the production of scattergrams showing convergent/ divergent relations between attributes, to shape the structure of network attributes' association.

The methodology adopted is considered as a schematic representation of the structure of network attributes' association and a resulting dimension decrease when dealing with the inquiry of distinctive characteristics which aids in the interpretation of clusters' function. Using similarity

function and being able to further explore interrelations between things through values which result from given network structures (Figures 4,5), it is possible to acquire an overall understanding of the network attributes' association, as well as to retrieve a cognitive structure which provides the frame of interrelations of the properties of things.

This approach suggests the transition from a clear perception of an object/urban site to the ambiguity of multiple properties of things, a set of data values rendered in the form of scattergrams, color mosaics and dendograms, or in the form of a network of one or more levels. Among the possibilities originating from this approach is the witness through visualization and understanding of the concurrent alterations taking place in a given network construction among all node's characteristics with the shift of one property, a kind of structural coupling between body and environment (Maturana, 2002).

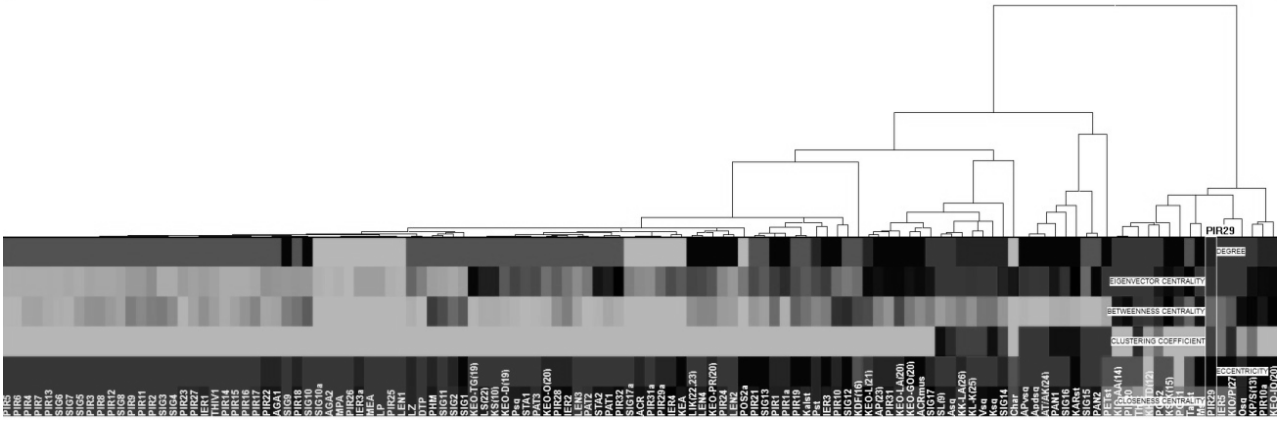
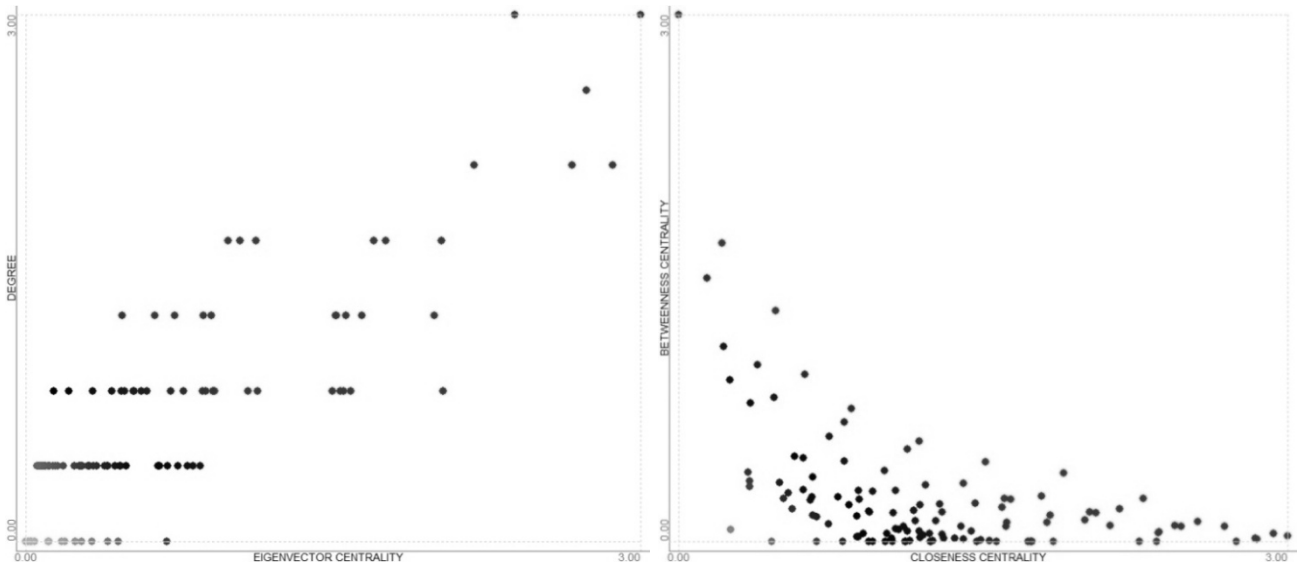


Figure 3

Cluster analysis visualized as a color mosaic (presented here in b&w) and dendrogram of supra-local nodes.



Figures 4,5

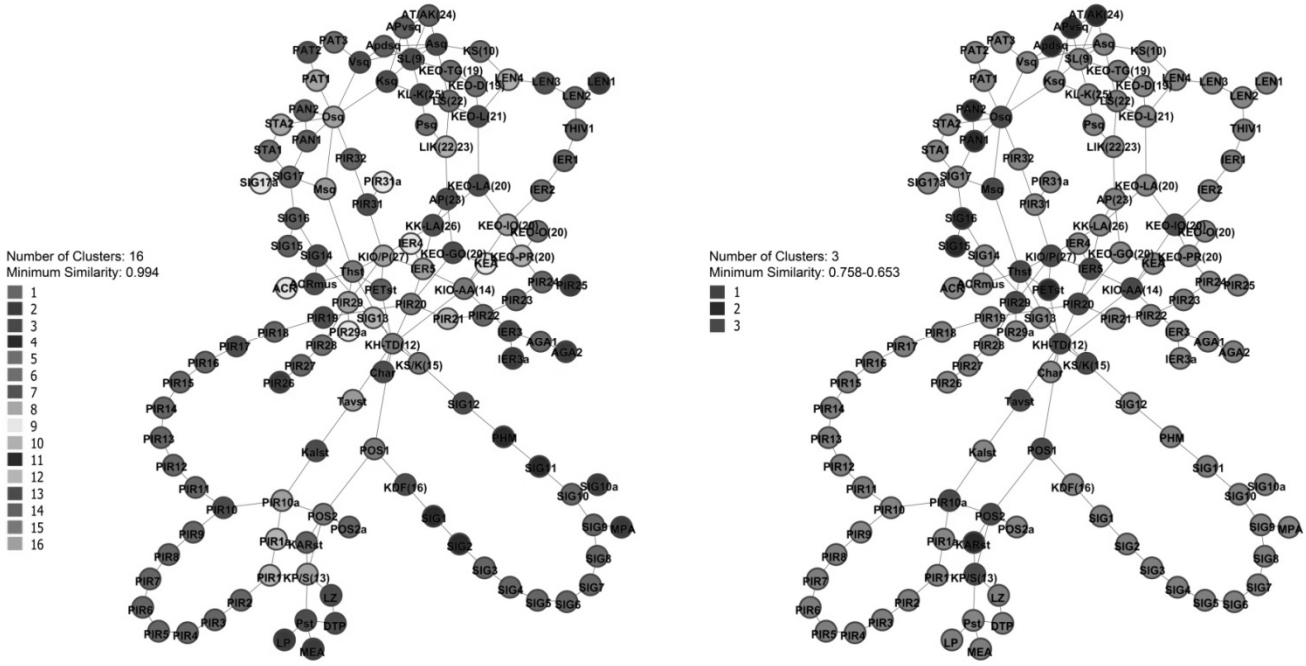
Scattergrams of pairs of properties reflecting network structure.

Based on the results of the applied similarity/linkage functions in what concerns the nodes' grouping of the supra-local nodes for 3 (minimum similarity: 0.758-0.653) and 16 resulting clusters (minimum similarity: 0.994) (Figures 6,7) and comparing them to the community detection results (Blondel et al., 2008, Rosvall et al., 2009) (Figure 2), the nodes' integration to clusters is further

explored, looking at the issue this time from the angle of analogy and identity of objects with certain properties and not focusing merely on the network's structure.

The resulting clusters, comprised of sets of nodes, when applied at the network visualization, appear as sparse entities whose location on the network map doesn't seem to originate at all from topological network proximity, presenting a strong difference in results and, of course, in methodology from Blondel and Rosvall methods. The implementation of similarity results in the network structure shows that proximities of things this time resides in homogeneity and heterogeneity and not in topological proximity.

The transition from the physical space to the network structure means the retention of proximity through network's connections only, exempting any other analogy or dependency from the objects' Cartesian's coordinates at the physical space. This second transition, from network structure to treating network characteristics as object's properties and conducting comparative studies, produces clusters whose configurations do not keep a straight link or analogy to the network's proximity of objects, in spite of the attributes' emergence from those qualities of proximity between things.



Figures 6,7

The application of the similarity/linkage functions results on the network's visualization, for 3 (minimum similarity: 0.758-0.653) and 16 clusters (minimum similarity: 0.994) respectively.

While focusing on higher values of minimum similarity and therefore producing a higher number of clusters, things that belong to each cluster get more similar to each other and the reasons why one cluster is comprised from certain nodes and not others become clearer. However, even in the case of the production of three clusters (Figure 7), where the value of minimum similarity is rather high, the ability to track and comprehend similarity is less viable but remains reachable. (Figure 8).

In the case where the minimum similarity is defined to contain a range of values between 0.758 and 0.653, the concentration of values referring to each of the three clusters, for pairs of attributes reflecting network structure (Figure 8), is rather dinstinct, even suggesting an evident qualitative dissociation, as is shown for the pairs of betweenness centrality - closeness centrality, eigenvector

centrality - betweenness centrality, eccentricity - closeness centrality.

Being therefore able to track the concentration of values for each cluster and detect the interrelation of attributes reflecting network structure, identity is being traced and redefined, in this case as a set of distinctive characteristics for each cluster which show a certain amount of distinction for each group of elements and as a relocation of elements in a map of associations deriving from network structure.

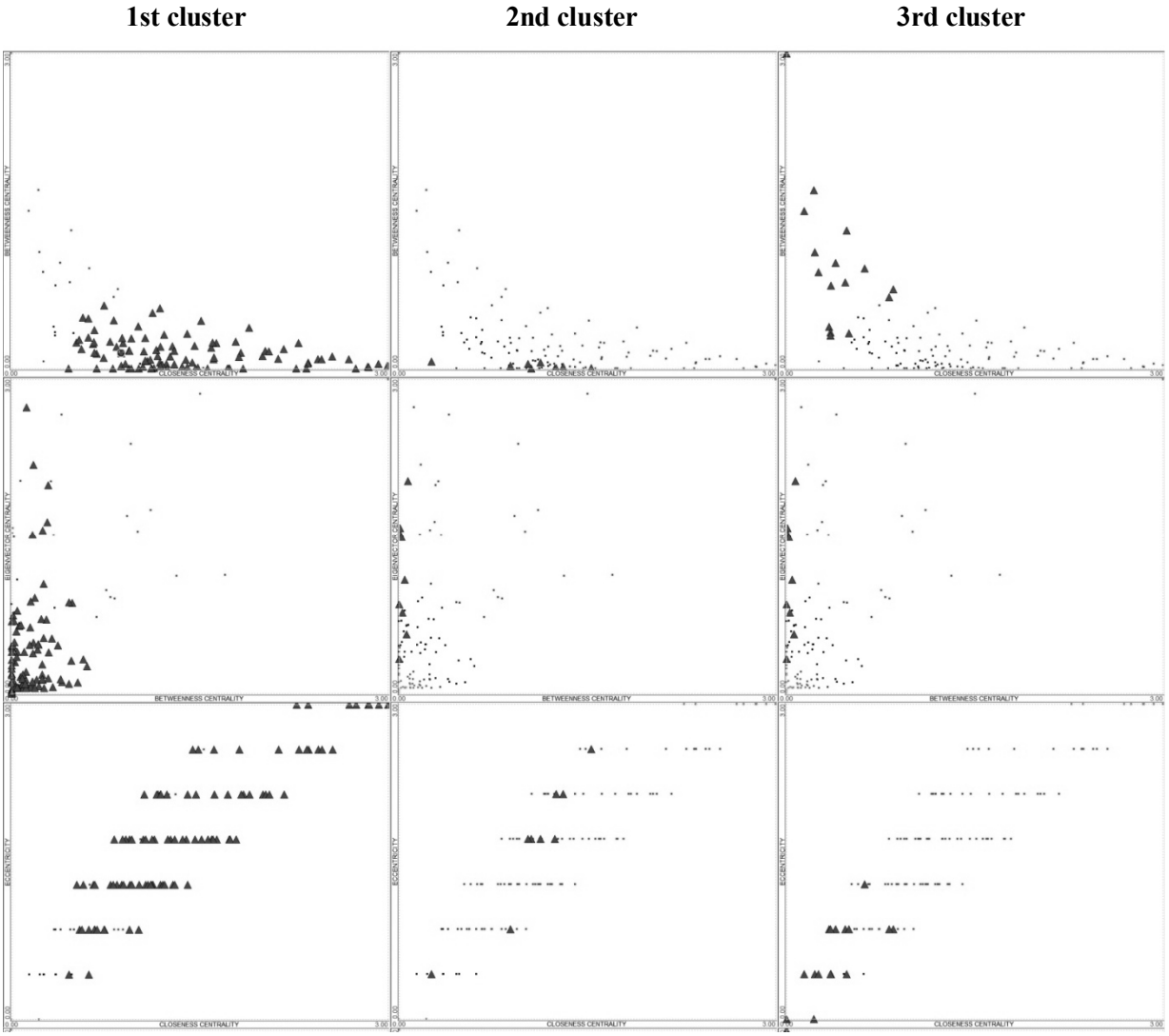


Figure 8

Scattergrams of pairs of attributes reflecting network structure, for each one of the three clusters produced when the minimum similarity is set within a range of values from 0.758 to 0.653.

3. ATTRIBUTES REFLECTING GEOMETRY, TRAFFIC AND ACCESSIBILITY

The research presented here aims at offering a way of dealing with the multiplicity of elements in what concerns their properties' inclusiveness, as well as a methodology of approaching the association of attributes, towards an attitude of embracing the ambiguity of things. In order to extend the range of attributes we are dealing with, properties of nodes which reflect quantitative and qualitative characteristics are examined.

Geometric and qualitative characteristics of the urban body are examined here alone, without including the attributes which reflect network construction and include the geometric characteristics

of the total area, the built-up area and the free area of the urban sites, the number of floors and qualitative attributes such as the degree of accessibility of pedestrians and cyclists to the sites and from metro/isap stations, as well as the visitors' traffic observed at each node.

The associations between properties of things, the way elements cluster in accordance with the degree of similarity/dissimilarity and the constant variation of the accepted difference, constitute a continuously evolving field of identity definition. Identity is defined at this step from the geometric and qualitative characteristics of the urban sites, which are examined as things with multiple qualities. In a way we deal here with the urban body as an entity which occupies space, resides in areas of close proximity or relative remoteness to metro/isap stations, is geometrically defined from soft or harder boundaries which allow easy access to the pedestrians and cyclists or not and is constituted by urban nodes of greater or smaller streams of visitors' traffic.

The integration of objects into the same family or the exhibit of a certain amount of segregation depends on the degree of focus (minimum similarity/cutting the tree), the threshold which defines the penetration into more detailed ways of organizing elements, acting accordingly to the amount of wishful similarity by convergence or the accepted amount of difference, creating thus greater assemblages of things while accepting a greater amount of heterogeneity between elements.

The urban identity is explored here in terms of an overall consideration of a crowd of things and a set of values, which are comprised of quantitative and qualitative characteristics, constituting an understanding of identity which is continuously sculptured, following a process of capturing similarity between samples. These samples react in certain ways to questions posed which can be specific or rather vague, can be answered positively, negatively, or with a certain exact value or could be answered only within a range of possible value variations. However, what really matters at the end of this process is the definition of focus into similarity within an extended field of possible configurations.

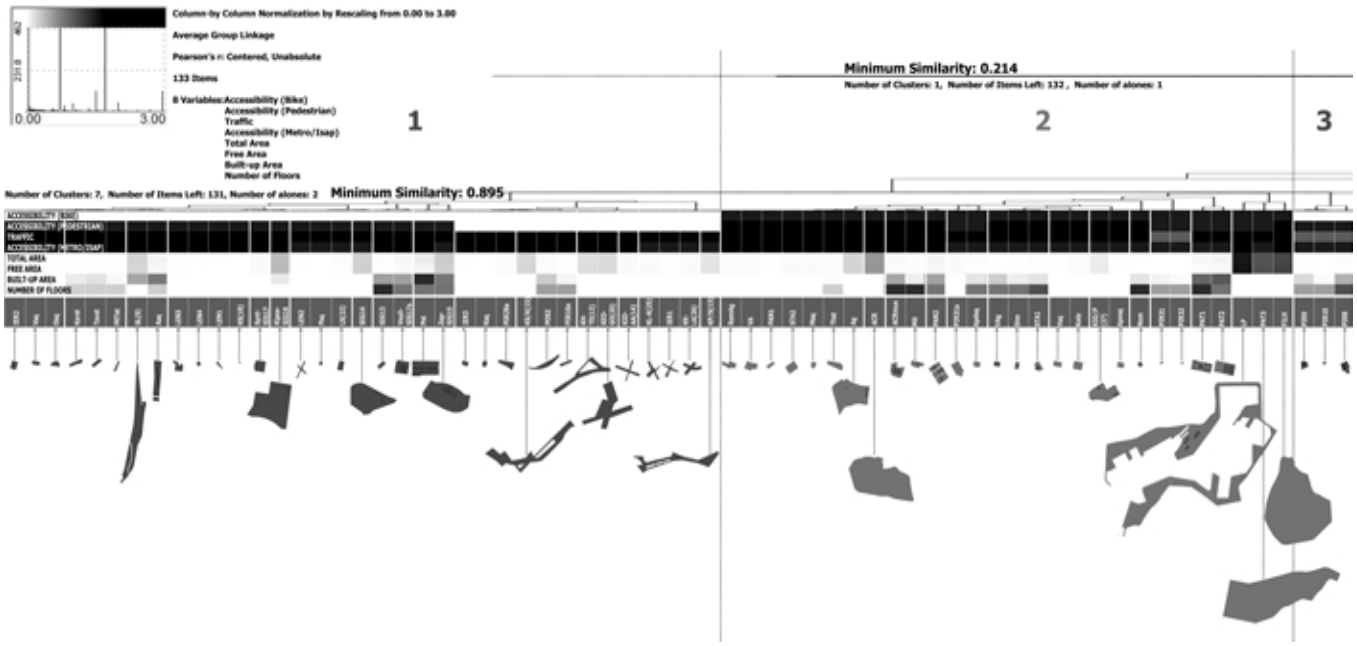


Figure 9

Similarity /Difference resulting from 6 attributes: The difference in colors (presented here in b&w) reflects the different clusters (min.similarity: 0.835), while the white columns dividing the clusters reflect the inner structure and possible subdivisions in the clusters (min.similarity: 0.996).

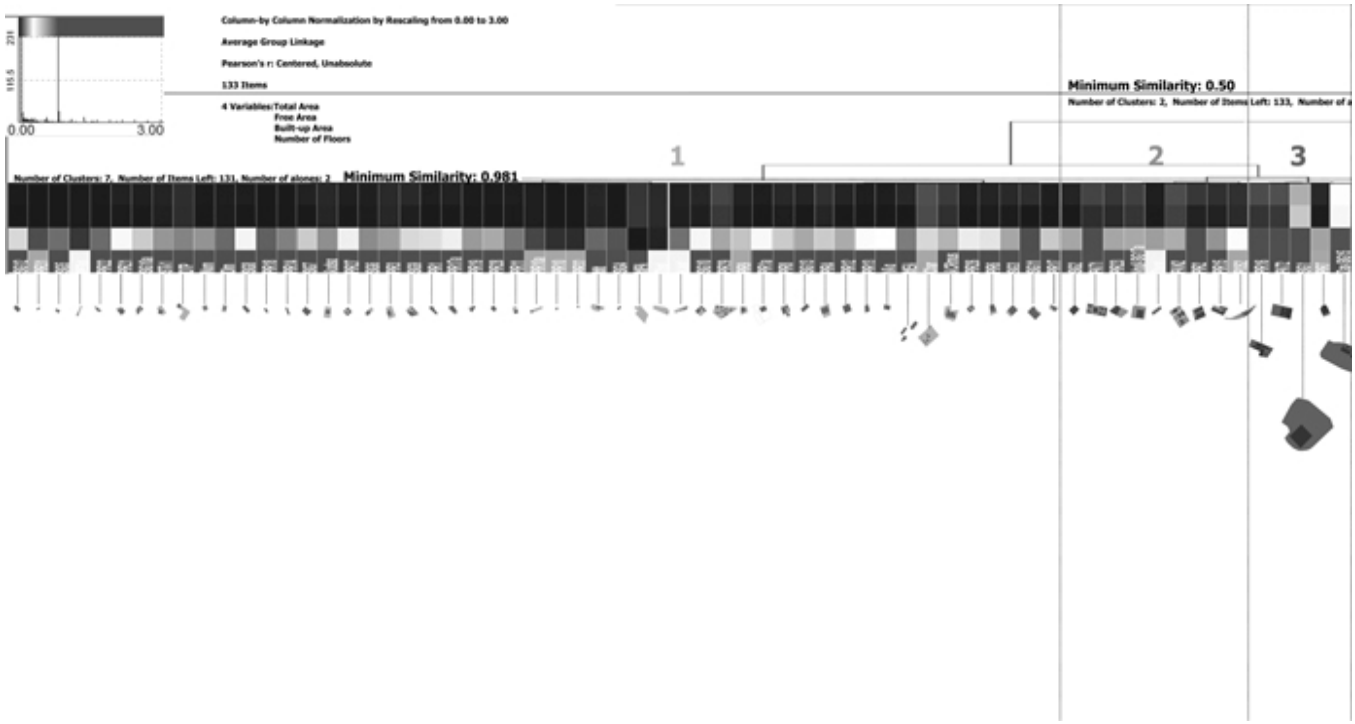
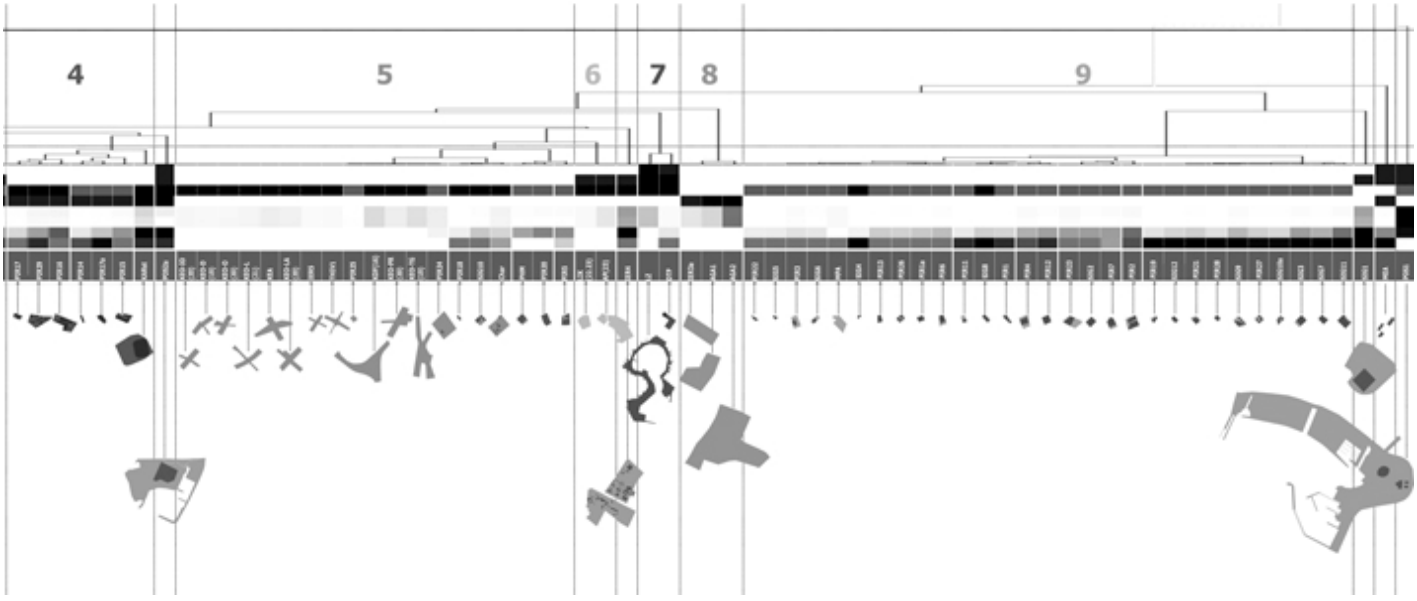
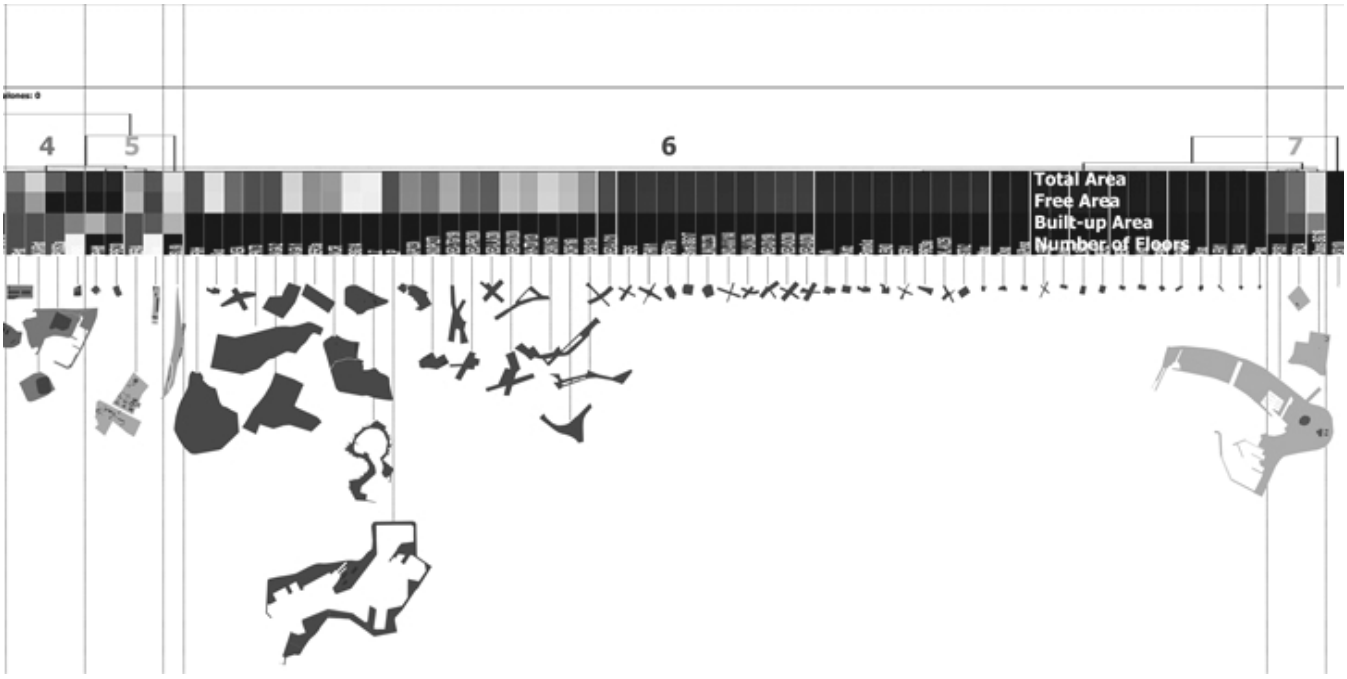


Figure 10

Similarity /Difference resulting from 4 attributes reflecting geometry only: The difference in colors (presented here in b&w) reflects the different clusters (min.similarity: 0.835), while the white columns dividing the clusters reflect the inner structure and possible subdivisions in the clusters (min.similarity: 0.996).





4. CONCLUSIONS

Rather than proposing a discussion on overall equality, the research presented here is a discourse on revealing difference through properties of equal number and on exploring the evolving nature of a property of things called identity. What is identity made of? It is claimed here that it is comprised of things of different qualities, which however keep a certain amount of similarity within the immaterial and evolving boundary of identity. The set of things withheld into this cognitive envelope of identity depends on our flexibility in what concerns the range of the threshold which determines identity's sensitivity on difference. In fact, identity in this case seems to be a family of things with certain characteristics, urban elements which join together to breed a broader aspect of the notion of identity, in terms of homogeneity and heterogeneity. Urban quality in this sense, could be a sum of distinctive quantitative and qualitative characteristics of the urban sites.

The methodology proposed here is a way of mapping the multiplicity of elements' structure, in terms of crowds of elements and sets of attributes' values which redefines proximity as similarity and remoteness as difference. This allows for the relocation of the ambiguity of information, shown in a way which enables us to arrive at an understanding of information in the grounds of similarity, to look into the aspect of multiplicity of things, to draw upon a potential exploration of proximity in terms of homogeneity and to capture an ever-evolving field of difference and therefore identity, with an altered degree of focus into the accepted divergence of things.

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Sustainable Renovation of historical urban settlements outdoor spaces

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Abstract
The ecological matter sets questions and imperative assignments for architectural design. However, as pointed out by James Wines, the need to re-establish the relationship between man and nature should not only operate as an attempt to mitigate - through eco-friendly technologies, energy efficiency, use of recyclable materials - the negative human effects on the environment, but also encourage a radical cultural change with a new foundation not only technical and scientific, but also philosophical and aesthetical. As matter of fact, much of the Italian architectural heritage consists of buildings and related open spaces in a state of poor maintenance, in prevalence designed without knowing that energy would become a cutoff point of our way of life and our future. The aim is to present a study on the renovation of this heritage of urban landscape and to get a widespread environmental quality, wellbeing for the population and a decrease in the energy consumed in the public sector.
Besides the issues and methodology necessary to choose the criteria to be used to achieve the objectives of the environment renovation, we will introduce some case studies of particular interest for the city of Rome.
Keywords: Sustainable design; outdoor spaces; urban landscape.

1. INTRODUCTION

The heritage related to postwar Italian social housing was studied particularly regarding the protection, rehabilitation and regeneration of the buildings. After the second world war, Italy was defeated and impoverished. The "Piano Incremento occupazione operaia. Case per lavoratori" (Plan for increasing workers' opportunities. Houses for workers), better known as Piano Ina-Casa, as well as the financial aid of the United States, restarted the Italian economy, giving the opportunity to unskilled labors by means of poor materials coming from the local tradition, to construct in a few years, many houses that were assigned to segments of the population in need. It was founded in 1943 and included a targeted program for the reconstruction of the houses in the UNRRA-CASAS. The United Nations Relief and Rehabilitation Administration known by the acronym UNRRA-CASAS, was an organization established to assist economically and civilly countries badly damaged by World War II.
Our research [1, 2] on the regeneration of these buildings (in press), have highlighted service deficiencies and poor conditions of maintenance, that now are associated with the need to incorporate the law for energy requirements. Our analysis has also pointed out that the projects and proposed solutions for the case studies should be supported by the original approach of the guidelines drafted at the end of the Forties for the Ina-Casa programme. The density of these new buildings was limited within a maximum of 500 inhabitants per hectare, thus realizing an urbanism in extensive nature.
The areas dedicated to the outdoor green spaces connecting the buildings are, therefore, the topic of this new study on the sustainable regeneration of the neighborhoods.

2. HISTORICAL PROJECT INTENTIONS

Four dossiers on suggestions for the designers of INA-CASA neighborhoods [3,4,5,6] were published between 1949 and 1956.
The second dossier, concerning examples and planning rules for designers [4], gives indications about public areas. In fact, in this report a short chapter is devoted to the key role of the outdoor spaces. We will comment it in its full version further.
Overall it is a sort of Dictionary of good practices and proposals of typological models synthesized in form of manuals. These suggestions led to the activation of interventions that we now could define "sustainable" and, at the same time, to the final abandonment of the lexicon derived from Rationalism. It was the second postwar period, in which more strongly - that of necessity - the designers thought about healthy and modern housing.
The recommendations concerning the project of "Public Areas", "Traffic" and "Green Zones" [4, pp.55-56] were intended to guide the designers to prefigure an urban system of public buildings and related outdoor spaces, to be correctly located and dimensioned, which would have been built by municipalities or other public or private institutions. The areas had to be chosen so as to be well-connected to urban public spaces, and yet well protected from traffic; the total area for collective buildings of an autonomous or semi-autonomous settlement should be around 6 square meters per inhabitant.

Figure 1. Matera, Italy.#The Italian Government and the American Economic Cooperation Administration cooperated to build new housing (left).
Frattamaggiore, Napoli, Italy. INA-CASA Housing (right)

The articles of the manual are reported below.

1. *Tracking and dimensioning of the roads must be set to strict economic and functional criteria so that each street must have a well-defined traffic quality (commercial, residential, etc.) and this function must satisfy geometric and metrics characteristics (slope, minimum radius curves, section width).*
2. *The section of the street must be proportionate to the actual amount of traffic expected rather than the height of the buildings, foreseeing, if the latter rule would lead to excessive width, the setback of the buildings from the street, that is also convenient to leave a zone of separation between the houses and the traffic.*
3. *The relation between road area and total area in residential neighborhoods varies from 1/3 to 1/10 depending on the width of the streets. For a width of m 12 related to a depth m 70 from axis to axis road, the road area occupies 24% of the total, for a width of 15 meters the percentage is equal to 30% and for a width of 18 is 36%.*

4. Especially in residential areas included within existing urban centers, public green areas properly placed and organically spread should be arranged as part of the project. They are essential elements of the settlements, both aesthetically and psychologically, moreover under the hygienic aspect, giving people the feeling of rest and of being part to the nature, reducing the noisy and artificial atmosphere of the city.
5. Consequently, the problem of green zones cannot be considered only in terms of quantities, but mostly on the basis of an organic conception, establishing the link between the new and existing green areas, by means of the setting of continuous bands crossing the urban organism, so forming a "green system".
6. Not neglected was the possibility to assign residual spaces in the worker settlement houses the function of a playground for children, which soon will connect them to the nearby houses. [4, pp.55-56]

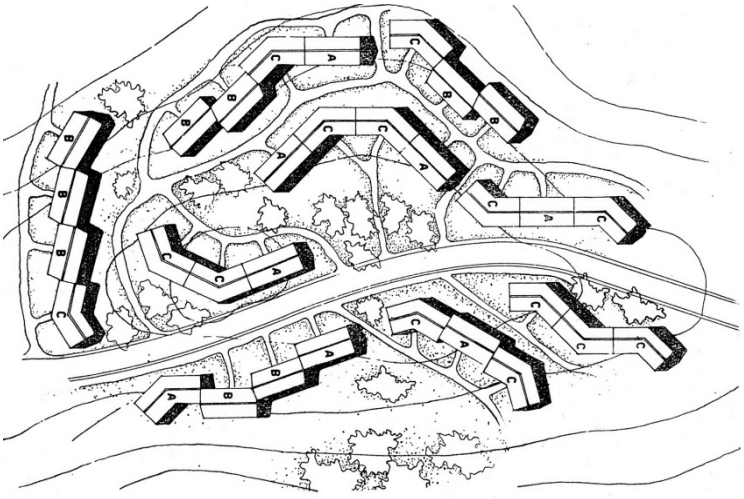

Figure 2. Ludovico Quaroni. Project for the first contest INA-CASA.
Association of building types in the green.

If we look at those settlements we can see a complex and rich organism in which public spaces are inserted in residential systems. Who walks along the edges of these urban complexes, can easily cross the evanescent boundaries, without realizing it, and perceive the post-war urban settlements just like one of an ideal garden city, in a form that is adapted to the specific social context, related to a post-industrial working class, hand-crafted, "urbanized".
As a matter of fact, often, the absence of enclosures along the perimeter of the lots, and the array of different types of building, support the presence of outdoor settings, minimal but essential, playing the role of mediation between public and private, between city and micro-city, so completing and "unifying" the design. Frugally completed by trees and flowerbeds, the outdoor zones have assumed the role of "space-threshold" at various levels: within the system and between it and the urban contexts.
Similarly, in almost all the Italian cities, the Ina-Casa and in general the post-war new settlements are neighborhood units, with meeting places able to develop sociability, but above all to contribute to an optimization of the hygienic conditions of the settlement [7].
A particular case is that of the Milan QT8, promoted by Piero Bottoni in 1945 as commissioner of the Triennale. He launched this project as a key issue of post-war reconstruction so an experimental district. QT8 was built in an area of an artificial hill formed with the rubble of buildings destroyed by the bombing of the city. QT8 was presented in 1947 as a set of buildings laying in a vast green area, with open spaces, playgrounds and sports fields, parks and condominium gardens, integrated by a large park of about 375,000 sqm, as a gift of the district and of the reconstruction organization to the city of Milan.
It was therefore clear, since the beginning, that the Reconstruction was to proceed, taking into account the tradition transmitted by an ancient Turkish aphorism, recalled by Le Corbusier in his

writings on urban planning, according to which "where a building is build, there trees are planted".

3. CRITICAL SITUATIONS RAISED IN BUILT DISTRICTS (outdoor criticism)

While in the previous section we have presented recommendations or design intentions (present and potential in some built cases), in this section we want to highlight how unfulfilled aspects of green spaces, regarding these projects and following life, or its misuse, constitute today the critical issues and the limits in achieving a satisfying grade of quality for suburban analyzes [8]. Nevertheless the project of regeneration of the districts can restart from the native potentialities of the green areas.
In the contemporary city, in fact, the periphery is characterized by residual spaces and voids without identity. The city produces residual spaces, the more its fabric is rarely: in the center they are reduced and poor, in the suburbs, vast and numerous. Unavoidably, the expansion of cities and mobility lead, with its lines of communication, to an increase in the number of waste without recycling. The problem about urban green areas concerns, then, these three aspects: its interior quality, the margins of the area, and the relationships with the neighboring green spaces which, very often, do not provide corridors.
Gilles Clément [9] shows the importance of all these fragments of landscape, which defines "Third Landscape" places as non-anthropic and without function having in common the characteristic that they are a land of refuge for diversity. For this and other reasons it is necessary to mend the fragmented suburban pattern rather than facilitate the urban sprawl.
The outdoor green spaces inside the neighborhood suffer the same criticality of green areas on an urban scale, that are: margin, interstitial interior green spaces (used and abandoned), their characterizing elements, and voids (residual and used). More in general outdoor areas must are relate to the spaces of sociality, services, land use, access and mobility.

Synthetic description of the main topics.

- Soil. The soil is frequently un-characterized and poorly articulated; as a consequence people are not even able “to name” the places where they live, neither they feel part of it.
- Margins. The physical boundary of the districts become a threshold-free function, undefined lands, which on the contrary a correct project could make permeable with the city.
- Mobility. It is evident an uncontrolled increase of the presence of cars that causes local traffic problems and the change in the use of common areas, poorly defined in themselves, into parking lots (see Fig. 3).

Figure 3. Greenery uneducated and poorly maintained.
Tuscolano II, Roma. Parking lots and streets replace collective space (left). Harar, Milano. Large green spaces deserted (center).Valco San Paolo, Roma. The green outdoor spaces today (right).

- Collective spaces. The historical settlements, allowing social functions, have erased social spaces on behalf of roads and parking lots. Due to the problematic accessibility and poor maintenance, public spaces have been drastically reduced, with housing being the main lasting function.

- Services. The services are not sufficient or are undersized for incompleteness of the plans. A few of the planned constructed and outlasted, very often services have closed due to the crisis. All that remains are a few abandoned artifacts for which it is difficult to foresee any kind of future use.
- Voids. At best, voids undergo a process of privatization, through occasional fences. Often intended for parking, subtracted to collective use, in general, are in a poor state of maintenance.
- Green and Open Spaces. Dedicated to a generic "green" (green for oxygenation), they were originally designed with care, and were conceived to be strictly related with the buildings, in terms of dimensional relationship, today they are mostly uncultivated and abandoned (see Fig. 3).

A general overview of the historical context shows a combination of insensible tampering and a strong degradation.

4. INTERPRETATION STRATEGIES

Before lecturing on the redevelopment of green spaces project, and generally, that of the complex landscape of the historic districts in its urban context, we need to make an introduction on the interpretive strategies derived from the analysis of the housing heritage, in the range of our research.

We must outline the crucial character of the settlement, on which the projects of regeneration are based. Although beneficial, it should not be only a superficial indiscriminate "green injection". We must not forget, in fact, that the green areas within the city, in close relationship with the whole urban landscape, assume both an aesthetic-architectural and a social-recreational function, contributing to psychological wellbeing of the inhabitants.

Green outdoor projects and its care are also important from the cultural point of view, because they promote the knowledge of botany, natural sciences and the environment in general, for the important educational role they play and for the awareness they provide for future generations in the protection of the environment [10, 11].

Figure 4. Projects G124 Renzo Piano for the "mending of the suburbs."
Viaduct of Presidents, Roma, degradation and uncultivated nature in the Saxa Rubra-Laurentina station unfinished (left). Under the Viaduct. Project of urban renewal in self for a new downtown district, with containers that host a workshop and a workshop / studio for group activities, designed by architects A. Lungo and M. Foffo with the Renzo Piano G124 (center).
BAL, Good Deeds for Librino. R. Pastore and R. Corbia architects are appointed by Renzo Piano of the "mending" of the former satellite-city of Catania, released by the association Briganti, and the school Vitaliano Brancati. The project consists in a playground for children (right).

Finally, it is also relevant to underline the eco-environment function for the preservation of biodiversity and, not least, for the mitigation of the temperature, and the regulation of the microclimatic effects.

- The value of the site is its identity and credit. Its perceptive component allows people to assign value to it.
- The allocation of green and open spaces is a unique quality to protect, in particular in the historic urban fabrics.

- The redevelopment project of these neighborhoods, even partial, cannot be considered only of urban interest. In fact, it presents a strong social content that enacts the process of regeneration.

A contribute to the consolidation of green tissue in the periphery is not only an aesthetic or poetic issue but, if those areas are occupied by a green outdoor space designed, it is configured as an action of social rehabilitation. Thanks to projects with participatory processes, in some municipalities we can observe, social interventions of "mending the suburbs", quoting Renzo Piano, who makes it a key objective of his recent work with the Group G124 for "the mending of the suburbs" (see Fig. 4). Building on built and preserved green areas is the primary objective in the regeneration of the periphery.

5. THE REDEVELOPMENT AND INTERVENTION STRATEGIES. EXAMPLES

The Design strategies act at different stages under many respects; guidelines for the intervention must be established and followed to satisfy checklist requirements. The intervention strategies must find the right balance between the addition of new elements and re-use of the existing ones. In their application it is necessary to use an inter-scalar approach and to ensure that the design strategies meet the social needs avoiding to play out simple aesthetic strategies [12, 13].

However, it is difficult, if not erroneous to formulate a generic model of "green design" for the periphery. It is necessary that a design of the outdoors is not only considered strictly in terms "dimensioning by law" but also in relation to the different urban, social and environmental needs, through participatory processes involving the inhabitants.

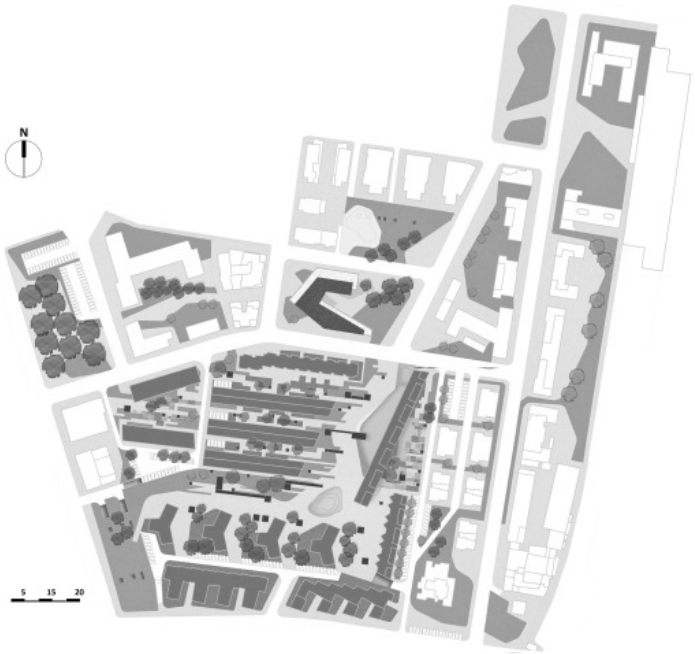

Figure 5. Workshop RI-HABITAT [14] - Masterplan Project Valco San Paolo in Roma, Italy, L. Calderoni, R. Causarano, S. Di Benedetto, N. Dway, E. Dobjani, E. Fiorini

Sustainable regeneration and bio-climatic design. The analysis of the site from the point of view of sustainability evaluates climatic-environmental factors such as sunshine and related studies of shadows and ventilation in summer and winter, as well as the study of existing tree species and their on-site location efficiency. It is necessary to define a preliminary summary of objectives, of strategies and of technological devices prescribed and enforced with a general reference to LEED certification. The LEED (Leader in Energy and Environmental Design) is a system of evaluation of environmental sustainability for the design, construction and operation of high-performance sustainable buildings [13].

In Italy, it is represented as a percentage in six categories. Among the strategies, should be noted:

- The introduction of new tree species (*sempervivum* to the north, deciduous to the south) to improve air quality which also has the role of noise and wind (north) barriers;
- The different treatment of the common outdoor green areas: urban gardens, roof gardens to cover old or new housing, green walls and green systems as a link between different levels;
- The recycling of rainwater for irrigation of urban gardens and local green. The recovery of waste water must be made through proper descendants integrated into the facade that convey water in special tanks. It is recommended that the presence of water tanks for summer cooling, placed as to ensure the right amount of moisture to the facades to the summer winds exposed.

Design of open spaces and connections. We propose a new design of the ground that is predominantly green spaces, to maximize the permeability of the site. The project proposes a new system of driveways, walkways and pedestrian streams, whose aim is "to mend" the existing disconnections. New functional spaces are identified, designed in various activities and precisely the green areas are distinguished according to their use: urban gardens, recreation green areas or multiple uses. The research group has organized workshop activities, whose results are master plans, reconfiguring selected areas of historical urban settlements in Rome, by refined designs of outdoor green areas for sports and leisure, instead of degraded and abandoned ones. For example, the project for the case study of Villa Gordiani implies the re-design of the interconnection and relationship with the archaeological park nearby. A green plug, with walking and cycling routes, on which the new point features stand (a bar, a space for the neighborhood committee, a music school, etc.), redesigns the space between the houses (see Fig. 7). The analysis of the site highlighted large urban voids in-between buildings of medium and high density. This kind of image of the town, established in the 60s up to the 90s, betrayed the purposes of the Plan, denying these areas the required aptitude to structure the territory.

Figure 6. Workshop RI-HABITAT [14] - Masterplan Project Tuscolano II in Roma, Italy, F. Ciresi, I. De Simone, A. Guerrieri, L. Maricchiolo

Project of the margins. It becomes necessary to condense the periphery through a structure of green ground that clearly delimits the border, often impenetrable, between the district and the city, and between this and the countryside.
In this sense, the boundaries of the areas have a vital role because they represent a system of quite undefined spaces suitable for possible future transformations. The concept of margin, meaning any kind of border between a housing context and another, should be replaced by the figure of a porous and permeable membrane, that should be the result of the redevelopment and the inclusion of productive activities and community centers (parks, agricultural, educational), of completion of the

district by the insertion of new parts (services for the inhabitants, energy production or waste disposal) and planting trees with a shielding function that reinforce the margin. So, it may constitute as a green corridor itself, an ecological continuity, for the preservation of biodiversity [13].

Articulation of the Soil. Integration of elements that constitute new functions (playground, space for public events) and any possible earth movement to make small differences in altitude together with the provision of devices for environmental sustainability (rainwater harvesting, geothermal plants) is suggested. The basement of some buildings can be used to produce an immediate crossing, as access to special housing, or solving the variation in the height with inclined green planes along the paths. In the case study of Tuscolano II, the soil was redesigned with garden areas and geometrized margins, by the exclusion of the cars along the interior avenues (see Fig. 6).

Privatization and use of common areas. Promotion of urban gardens and, in some cases, a form of privatization dedicated, is suggested. The final goal of the master plan should be to eliminate any enclosures characterizing individual buildings, and all the physical barriers and obstacles, handling the hierarchy of spaces and paths. In the case study of Valco San Paolo an interstitial green alternates with larger areas, where is situated a system of services inside the micro-cities, and with urban gardens and other multifunction spaces, including private activities.

Mobility. The expansion of public transport and new parking lots, even in the underground, are foreseen. The project should lead to a clear differentiation of pedestrian flows from the driveways. In general the master plans developed in the field of our research consider the correct location of the road traffic, on the edge of the neighborhood. It could be connected to possible underground garages, with the aim to reduce (or to solve) the problem of parking. Cars now invade the spaces such as squares and courts, designed for the public and pedestrian use. An underground car park, if allowed by characteristics of the ground, can return to pedestrians plenty of space; so placing all the traffic on the edge of the neighborhood, the reduced internal vehicular traffic will be clearly differentiated from the pedestrian and cycling [16].

Figure 7. Seminary Degree RI-HABITAT [15] -
Masterplan Project of Villa Gordiani in Roma, Italy,
S. Clemente, M. Gavazzi, C. Gemmiti, A. Rocchiccioli

Green and Open Spaces. Definition of existing green spaces and their integration into a single system, through a consistent design of the general structure, that is, a sustainable project that restores the landscape of the area. The art of greenery in urban areas has always had multiple functions: symbolic, aesthetic, productive and of microclimate regulation. The thermoregulatory

function of the trees in the summer has been known since ancient times, in the whole Mediterranean area. The main goal of the redevelopment project is to insert new connections between the built and the vacuum, characterizing the space among the houses, introducing new functions of local interest. In the master plan for Villa Gordiani, five strips of green lane draw and define pathways to walk under the building and easily access to the cinema, to the exhibition gallery situated under the front building (see Fig. 7).

Services. Inside the voids, new neighborhood facilities are located. A kindergarten and a senior center are dedicated to the categories considered most sensitive: children and the elderly. The study on the services and flows highlighted a lack of facilities for leisure and / or cultural nature, such as cinemas, theaters, and museums. Therefore, we can include these activities into the unused spaces as new elements in the master plan or conceive replacements or re-use of other structures in disuse.

6. CONCLUSIONS

The regeneration projects of green areas in the historic parts of the Roman suburbs is an opportunity to verify the potentialities of historical programs of integration of the buildings in a composite urban design with semi-public green spaces, promenades, squares, parks, and also - in a wider view - urban parks or natural systems. The recovery of the urban environment as a whole, must therefore operate within the entire context, including the redevelopment of the buildings that constitute only a specific part of the interventions, within a systemic integrated view, able to return dignity to the suburban landscape of our Modernity. Green and built interact in these projects by a set of integrated actions, from the elimination of cars along the streets and internal voids, to the redesign of the soil with garden areas and plant margins, its specific characteristics and quality in continuous differentiation. In the selected case studies green interstitial alternates with larger areas, location of plant service systems inside the micro-city. In all, the role of urban design as a whole, recovers its original vocation, sometimes unspoken and often unrealized organisms integrated between nature and artifice.

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