Experience, like language, no longer seems made of isolated elements lodged somehow in a Euclidean space, signify from the “world” and from the position of one who is looking.

— Levinas, Signification and Sense, Humanism of the Other
Draw Simple, Think Complex
On Postmodernism, Identity, and Complexity

Urban design, involved at the end of 1960s, is regarded as a phenomenon of Postmodernism and a critique for the modernist architecture and urban planning, the functionalism and the international style. The largely centered zoning and the mega structure generated from mass production and industrialization in modern society. As a student majored in Urbanism since bachelor, I've been educated to an architect and urbanist during the past few years with the heroic dimensions of Modern architecture.

However, due to the structural changes of economy in postmodern era, from mass production for a mass society to flexible production for a fragmented society, new interests in the built environment have been brought to the stage. The main focuses of architecture and urban planning since then, had switched from producing good and functional forms to drawing inspirations from the mass culture, the social context, the local and the past. It draws new attention to the unique local characters and the quality of urban space and urban life. The role of urban design therefore deserves a rethinking or a new way of being considered by professionals nowadays.

People of different backgrounds have different concerns and perceptions on the physical urban environment, thus have different images of the city. These images create diversity in urban spaces and multiple faces of a city. This diversity is then interpreted in building the urban environment with multiple identities. When we talk about ‘identities’ of a city in urban design, we more or less refer to place identities which are diverse because of the diversity that public realms possess. When we talk about people, we are referring to clients or agents including both public and private sectors who are also users of urban spaces. When we talk about urban design, we talk about the making of public realm in which diverse needs of diverse users need to be considered.

Urban design is at the interface between architecture and planning but is quite distinct from both disciplines. The design may cover multiple sites and involve quite a few owners, users and government agencies. (Moughtin, 1992) This is truly a process full of interactions between interdependent actors cooperating and exchanging information. (Kickert, 1997) In the case of urban design, the main actors in the play are streets, squares and building that make up the public image of our towns and cities. (Moughtin, 1992)

However, the common gap between professionals and ordinary people is inevitable. This had already been understood since the rise of Postmodernism against Modernist architecture and planning. Ordinary people who don't have any knowledge about urban design or architecture also have their own images about urban spaces and their own ways of understanding and using public realms. Sometimes if these images and understandings are not in consistent with the designer's ideas, the gap occurs and may lead to wrong conditions. Urban space is complex, so is urban design process.

Therefore, to propose more cohesive ideas, we need to try our best to fill this gap by taking different actors and their wishes into account. Urban designers should be able to communicate with non-professionals by using tools of visualization and interpretation in a simple while understandable way. But the thinking behind their drawings is actually complex. They need to manipulate the complex structure with multiple meanings, multiple perspectives by taking into account the collective decisions of different communities and make it deliverable for the simple daily usage. The end products should be as straightforward as images, simultaneously as meaningful as stories within a collective decisionmaking platform.

Wenwen Sun
May, 2015  TU Delft
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SITE PRESENTATION
1.1 SITE PRESENTATION

1.1.1 A Typical Case of Post-fordist Economy

Treviso is a mid-size secondary European city in Veneto region located in North Italy. (figure 1.1) It is the capital city of Treviso province where industrialization researches a high level ranking the 2nd in Italy. The strategic position of TV in terms of economy in the region makes it a prototype of Post-fordism economy. During the 1970s and 1980s, there was a phenomenon called la Terza Italia, the Third Italy which was, by contrast, a dynamic area of small firms and workshops in the center and north-eastern regions of Italy. (Kumar 1995, 37) In economy, the effective units of production and regulation, flexible specialization and decentralization of production replaced mass marketing and mass production. In cultural and ideology, fragmentation and pluralism were values and life-styles, and post-modernist eclecticism and populist approached to culture.

Veneto province is a representative of the 3rd Italy. In this regions, small workshops and factories with no more than 5-50 workers, often less than 10, constitute the core thriving ‘industrial districts’. Each region specialized in a range of loosely related products. (Kumar 1995, 38) The main products are shoes (clothes), ceramics, plastic furniture, coffee machines, etc. (figure 1.2)

As Brusco addresses, the productive decentralization and social integration are the two main features of Post-fordist economy. (Brusco 1982) Most of the workshops and factories are ‘high-technology cottage industries and the products are sophisticated and design-conscious, penetrating international and national markets. (Kumar 1995, 38) A dense system of subcontracting lies at the heart of the local economy. The ‘rich and complex relationship’ (Brusco 1989: 261) between clients and subcontractors indicates the special social relations within the networks. Collaborations also go further to the sharing of resources and the costs of expensive equipment. The resources were pooled to set up for the collective provision of marketing, accounting and technical services. (1995, 39)

Figure 1.2: Main products in Treviso. Source: TV2020 smart city lab workshop Venice, 2014
These features also co-respond to the ‘creative economy’ and its associated characteristic. This type of new economy was constructed on the basis of new technology and large-scale public media since 1980s. Technological and organizational innovation enables new relationships with customers and the public that are not reliant on ‘mass-production’ models. (Cunningham 2002) (figure 1-2)

To conclude, Treviso is a very suitable case for this ‘complex thinking’ of urban design and this ‘multi-actor’ approach because the fragmented, inter-related networks present a collective structure with a variety of collective business trying to reach the creative economy as an ongoing issue. There are many types actors involved, namely agents, clients, users, contractors and workers.
Flexible specialization
Effective production units
Decentralization

Looking into the region, you can really see how these small factories lay out spatially. Most of them are built next to the owners' houses, and they are lined along the main infrastructures. Here are some representative companies in the region as examples. (Figure 1.4)
1.1.2 Historic Context of Fiera

Fiera means ‘fair’ in English. It is a place, usually of large area of open space for trading fairs from the begining of the 20th century in Italy. The first fair ground in Milan was opened in 1906 as the area of world fair. (wikipedia: Fiera Milano) But in the longer history, it originally was place for valligers to trade caws. That is why farm land could be seen in some of the historic maps. (Firgure 1.5)

Fiera exits in other cities of Italy as a sort of 'Italian symbol' which signs itself to the roots of the Italian culture. In mordern era, most of them had been transfromed into large trading place with a typibal modern urban planning approach. They are normally large and separated, locates at the outskirt of a city. They are highly related to some large business trading fair for example the one in Milan, which is a very remarkable and successful world trading center. Even the one in Padua, not far from Treviso, has been used as regional conference center for a long period.

Concerning the size and location, the Fiera in question in Treviso is only one fifth large than the one in Padua and they belong to the same province. The old, modernist strategy will not work in this case. Therefore, a new design philosophy is needed to tansform this Fiera in another direction.
Figure 1-6: Images of Fiera in Modern times
The river Sile, as shown in the historic maps, has become an important water way for the transport of goods and people since 1930s. Once a port was built during that period of time. In 80's, the site was built to be an industrial zone with a good connection to the city center. Nowadays, the river Sile is not used for transport anymore but for recreational usages such as sailing and conueing. (Figure 1.7)
1.1.3 Socio-spatial Characteristics
As is addressed in the former chapter, Treviso is a highly industrialized region with all those small firms and family owned business clusters that cooperate with each other for an international spin off. Spatially, a distinguished pattern can be clearly perceived which makes this region unique. The medieval wall has divided the region into two parts, in the ‘golden wall’ and the ‘otherness’. Inside the wall live the wealthy people and outside are agriculture lands and industry clusters. The Fiera area once was where all the immigrants got together and they formed the group ‘the others.’ This social feature even exists in today’s era which shows a clear difference in terms of many aspects. First of all, the lifestyle is different because the average income of the people living in Fiera is lower than that of the people living inside the wall. Secondly, the density is lower compared with the in wall city. Those socio-spatial characteristics have formed a strong driving force for redeveloping the area. (Figure 1-9)
The site called Fiera is a branch of urban sprawl, an extending area on the west of the old city which is enclosed by nature preserved landscape and agriculture land. Not like the old downtown of Treviso, the main identities could hardly be perceived in this area. First of all, the urban fabric of this area is different from the traditional one which Treviso has. It is very ordinarily built like many other suburban areas with mainly dwellings and big shopping malls. The street scale is bigger and the density is lower comparing with the old downtown of Treviso. The big area of industry and unoccupied land make you barely see the lively street life.
The old Fiera site needs new strategies and plans to create a contrast from the other Fiera in Padova and to serve local residents with shared identities. The DeLonghi factory which is stranded searching for new interventions. Also, the river on the south boundary is an important ingredient for the pocket of spatial qualities in this area, but it requires better accessibility and more connections with public spaces to achieve that. The Fiera case indeed corresponds to the multi-actor situation in terms its problems as well as opportunities.
Treviso is a city with a high percentage of immigrants in its population. Most of the families are organised with two family members.

**DEMOGRAPHICS**

BY 12/2013

Treviso in Treviso Province

**IMMIGRANTS**

4.3%

Treviso: 2nd in the province

- 16% from other municipalities
- 72% from other countries
- 12% other reasons

**COHABITATION**

1.7%

Treviso >> other cities

**AVERAGE OF HOUSEHOLD NUMBERS**

Numbers of Households: 38067
Population: 83145 (31/12/2013)

2.15

Treviso >> other cities

Figure 1-12: Demographics, Treviso 2013. Info from: http://www.istat.it/
1.1.4 Involved Actors

There are diversified actors involved in this project. They range from governmental to non-governmental, from stakeholders to users, from professional to non-professional, from local to foreign. The municipality of Treviso is the top-down organization who makes regulations for the investment and development. Their aims are not only boosting the economy, but also the maintaining social well-being of the local residents. The stakeholders could be categorized by their occupations of career. They belong to different organizations namely bundles of industry, service and education. The three bonds form a non-governmental organization called ‘Treviso Smart Community’ aiming at transforming Treviso into a smart, sustainable city. The ordinary people of the city are the group of users but there are also differentiations according to their characteristics. They are the people who live within the ‘golden cage’ (the wall), ‘the others’ who are mainly immigrants and low incomes and the visitors from other municipalities or countries.

In this system, I as an urban designer who undertake this project am the professional with knowledge and experience of urban design, as well as the coordinator of this strategic process. The biggest challenge of playing this role is taking care of the needs and aims of different types of actors when dealing with the complex situation and making decisions. (Figure 1-13)
1.2 PROBLEMS AND RESEARCH GOAL

1.2.1 Problem Statement
Some cities’ common grounds have been appropriated by ordinary people in the time of urban growth. The public space is occupied for their individual and/or shared interests. It is a result of a rapid and compact urban growth in which publicly-owned space cannot always be traditionally governed by the public government.
The site called Fiera is a branch of urban sprawl, an extending area on the west of the old city which is enclosed by nature preserved landscape and agriculture land. Not like the old downtown of Treviso, the main identities could hardly be perceived in this area. First of all, the urban fabric of this area is different from the traditional one which Treviso has. It is very ordinarily built like many other suburban areas with mainly dwellings and big shopping malls. The street scale is bigger and the density is lower comparing with the old downtown of Treviso. The big area of industry and unoccupied land make you barely see the lively street life. Secondly, the historic site, big square in the South part with the name ‘Fiera’ which means fair in English is originally used for trading events in history. However, as there aren’t so many outdoor events happening nowadays, Fiera becomes a huge parking lot most of the time. (Figure 1-16) This way of usage can neither benefit the public interests nor contribute to the local character and culture.

Even though at the moment, the area is somehow problematic, it promotes opportunities for new developments as well. The old Fiera site needs new strategies and plans to create a contrast from the other Fiera in Padova and to serve local residents with shared identities. The DeLonghi factory which is stranded searching for new interventions. Also, the river on the south boundary is an important ingredient for the pocket of spatial qualities in this area, but it requires better accessibility and more connections with public spaces to achieve that. The Fiera case indeed corresponds to the multi-actor situation in terms its problems as well as opportunities.
There has been an important loss of the shared knowledge that once let people build human environment in this area. (Salingaros) It is hard to perceive from the spacial qualities, the translation of behavioral, collaborative theories into decisive, sustainable planning practices. This phenomenon thus evoked reconsiderations from different levels of spatial interventions.

No doubt that the primary discipline of urban planning is dealing with these collective networks with different actors involved. The multiple relational networks should be incorporated when urban designers are trying to shape and frame a place.
1.2.1 Research Goal
As a matter of fact that the existing complexity in the urban structure and the social networks is clearly perceived in today’s cities, the public interests are becoming more involved than ever before and urban designers are more engaged in people’s daily life when trying to moderate different aims of agents in their design processes. Public interests therefore are of great values for urban design which enrich the experience of urban designers and broaden their views on complexity. This also provides more possibilities for building up effective and sustainable human environment.
This research and design project is aiming at filling the gap between non-professionals (ordinary people or ‘latent designers’) and ‘pro-designer’ (urbanists, architects) in perceiving this complex situation by an actor-oriented approach. Thus the actors involved in the design process are the main focuses and their wills will be accommodated by a flexible mediating approach. The research topic is developed based on the following hypothesis: if a design solution could correspond to local conditions and make a balanced group dynamics of different actors, it will not only allow each social group to claim its own identity from a set of places, but also will evolve to make people’s life better.
1.3 RELEVANCE

1.3.1 Scientific Relevance
This research and design project is trans-disciplinary which contributes to two fields of studies. One is the complex system study in cities which has been developed since 1970s when the postmodernism theory was developed in architecture and urban planning. It thus has relations with the postmodernist mentality, the values and culture, also concerns the complex nature of cities as a very emergence which should be incorporated in urban design thinking and practice. The other contribution of this project is putting the multi-actor approach once adopt in the policy networks into practice by a real urban design project which consists of complex networks of actors because of the economic units. Besides, it links the two fields of studies together and translates the abstract theories into concrete physical interventions. It allows an empirical approach to deal with public interests by a design thinking which is visible and perceptual.
1.3.2 Social Relevance

There's a huge demand of better public service and higher life quality by different social groups in our cities. The public interests are of great values which arouse great attentions in the civic society because more and more people care about the public realms and want to build their own environment. It becomes more evident that urban design is closely related to daily lives in today's society especially in term of public realm design. Today some of the most transformative changes in cities are happening in public spaces. (Burden 2014) A successful design always depends on the very individual experience. (figure 1-19) It can even be found in some media like films which are about the tension between keep and rewind in urban transformation processes. (figure 1-20) It indicates the fact that participation and inclusive urbanization are drawing world’s attention. This research and design project is aiming at solving real problems faced in practice. It is therefore relevant to the real on-going issues in building environment.
1.4 RESEARCH OUTLINE AND METHODOLOGY

1.4.1 Research Questions
A deep research on the integrating multiple actors and the built environment in the complex urban networks will be elaborated both theoretically and empirically. Therefore, the following questions are addressed to guide the extended research process and the finding of design solutions.

Main research question:
‘How can actor-oriented urban design approach be elaborated in Fiera area to reclaim multiple identities?’

Sub questions
- How is ‘identity’ concerned in urban design?
- What are the shared identities of this area?
- Who are the leading ‘actors’ in Fiera and how do they appropriate the common ground? How their life stories are interpreted in Fiera?
- How can urban design process act as a mediating instrument to improve different actors’ daily lives?
- How could design be framed to enhance a ‘creative economy platform’?
1.4.2 Research Approach

The research process is mainly guided by the following research and design methods including collecting information, observing and mapping, desk analysis, theory study which help to generate the whole process and the final products and to fulfil the very essential intention of this graduation project. The methodology therefore consists of both quantitative analysis and qualitative observation. But still it focuses more on the qualitative dimensions.

On one hand, the classical approaches such as desk research, site observation and literature review help to build up the research frame for the further design studies. The research and analysis approach incorporates spatial and social dimensions concerning the urban characteristics and people's daily life. It also contributes to the selecting key projects according to the overlapping of spatial influence and occupation. The selection process that generates a design solution is the result of action and decisions by a host of individual inputs. (Salingaros 2004)

Site observation consists of two parts. One is the first visit to the site when I attended the workshop in Venice about the smart city transformation process in Treviso. (Figure 1-22) I was informed by the first impression and idea of what this context was about from this site visiting, its features, socio-spatial characters and the important issues going on.

As a following-up, the theoretical framework was built based on a selective literature review as a backup for the research topic.

Mapping daily life ‘paths’ of different actors (divided by social groups) on all of the possible constrains that provided by the environment and design interventions and their aims drove me to get into the actors faster and allows me to develop multiple mental acts from others’ perspectives.

Figure 1-22: Pictures taken by the author at Smart 7020 Workshop, Venezia
How can actor-oriented urban design approach be elaborated in Fiera area to reclaim multiple identities?

What are the spatial qualities and the shared identities of this area?

SITE VISITING & WORKSHOP

Who are the leading ‘actors’ in Fiera?

CONCLUSION

How can urban design act as a mediating instrument to conduct a resilient, open-ended process for a successful future?

SITE VISITING

socio-spatial characteristics

interview on site

DESIGN

THEORY PAPER

POSTMODERNISM

COMPLEXITY

MULTI-Actor

1st idea about urban strategies

FINISHING

COMPOSING THESIS & REFLECTION

Figure 1-23: Research approach from p1 to p5
This is an assumed session.
To develop this actor oriented approach in the initial stage of research, I identified 5 different individuals of different background. They are a manager who owns the factory in Fiera, a whole seller according to the economy, a college student from the art school in Treviso, a mother of two kids and an old lady. They are not real but logically exist in this area. I tried to put myself as an urban designer in their positions and to think about their goals and needs and how their life could relate to each other's. That is incredible. There are life stories that worth being told and being unfold. I believe it is the stories that bring people together and let them understand what kind of place to create.
Housewife
lives in a community apartment,
has two kids

Whole seller
runs family business with his
brother, works mainly at home

Old lady
lives in one of the private
neighbourhoods
Figure 1-25: Daily/Weekly (or longer) paths of the identified characters all together.
Figure 1-26: Density of traffic in Fiera

- Always busy
- Often busy
- Once in a while
- Normally quiet
- Very few cars
This is a very useful method for the analysis. It is interesting to put all of the paths of the five characters together. It can be immediately assessed which road is more important and which area has more potentials for interventions. Most of the interactions are happening along the main roads where there are service facilities. Also the pedestrian path which partly connects north and south is used by most of the people. Combining the conclusion that is drawn from the analysis, the goals are set as improving public service, creating business platforms and opportunities for better connections, enriching life experience. I intend to reach the goals by building self identities and creating places with shared identities. (Figure 1-27)
2.1 ON POSTMODERN CONDITION

Urban design: a phenomenon of Postmodernism
Began at the end of 1960s, urban design, or the making of public realm is concerned as one phenomenon of Postmodernism. It is used by Postmodernists to criticize the architecture and urban planning based on the idea of modernity. Postmodernists treat the city as a stage and see the space differently as something autonomous. Urban design could be regarded as one of the postmodern phenomena, a by-product of postmodernism that distinguished from urban planning around when postmodern mentality came into being and was applied in design. It then became a very effective tool for managing cities in terms of environmental quality and its integrity with the users’ needs. (Velibeyoglu, 1999) Postmodernism era is a continuity of modernism which is the culture of postmodern society, said by Indian sociologist Krishan Kumar. (Kumar, 1995) The criticism and rejection of modernist design inaugurated the era of architectural and urban postmodernism. The criticism and rejection of modernist design inaugurated the era of architectural and urban postmodernism. Postmodernism is taken by British geographer David Harvey to signify the break with the modernist idea as a conception of the necessarily fragmented urban fabric, a rewrite of superimposed past forms, and a ‘collage’ of the current ephemeral usages.
In the Postmodern motto, the city is treated as a stage, a place for enjoyment and the exercise of the imagination as much as a utilitarian system of production and consumption. (Kumar, 1995)
Reclaiming Multiple Identities in Fiera by an Actor-oriented Approach

Flexible Production in a Fragmented Society

Mass Production in a Mass Society

From Modernism to Postmodernism...

Figure 2-2: Different ideologies of Modernism and Postmodernism...

Source: Toward Resilient Architectures 2: Why Green Often Isn’t, Michael Mehaffy and Nikos A. Salingaros

To walk from one end of the plan to another, at a uniform pace, will produce a sequence of revelations which are suggested by a series of sudden contrasts and so an impact is made by a series of sudden contrasts. The even progress of travel is illuminated by a series of sudden contrasts, like nudging a man who is going to sleep in church. My drawings bear no relation to the place itself: I choose it because it seemed an evocative plan. Note that the slightest deviation in the alignment and quite small variations in proportions or setbacks on plan have a disproportionately powerful effect in the third dimension.
2.2 COMPLEX THEORY

Later on in 1970s, complex theory was for the first time adopt in the field of urban study because complexity is discovered in time by academics the very nature of a naturally grown city geared to the postmodern ideologies and culture.

Urban designers are facing with the growing complexity of the urban networks in this so-called post-modern era. ‘The city is a discourse and this discourse is truly a language.’ (Barthes and Miller, 1975) Therefore we might be curious about how urban designers should perceive this intricate system and how they depict the structure of a city based on its very nature of complexity.

To set a specific view on the multiplicity in urban space, I pay the very attention on ‘complex theory’ and try to back up a system-thinking about old forms and social aspect. But at the same time, I pick up those studies that are relevant to my objects in urban study to avoid generosity in theories. For instance, Alexander’s a city is not a tree is very stunning example which allows me to make an decisive progress in understanding the complex nature in urban forms, the ambiguity and tension in the physical and social networks. Dating back to 1960s, the Austrian architect Christopher Alexander’s ‘semi-lattice’ model of city which boosted new ways of thinking in the field of urban design sharply indicated the problems emerged in both understanding and designing the city. A naturally grown city is structured in a more complex way and becomes a ‘semi-lattice’, he argues, but in designers’ mind it becomes a tree without the overlapping units.

Figure 2-3: Semi-lattice vs. tree by Alexander (1965). He argues that a naturally grown city forms the ‘semi-lattice’ structure with the future of complexity. Source: http://contentsmagazine.com/
2.3 MULTI-ACTOR APPROACH

A city is complex, in terms of structure, environment as well as social networks with diverse types of people involved and these people are actors performing on the big stage of a city. The primary emergence of urban design is thus coordinating decisions and choices of multiple agents in the collective networks that are complex.

This study aims to explore a proper way of positioning urban design in the complex urban system from multiple perspectives and to find a solution for designers to incorporate multiple actors in different levels of the society. This multi-actor approach addresses three levels of disciplines for urban design, namely individual principle, collective intelligence and network thinking. The nature of complexity of urban networks should be incorporated when urban designers are trying to shape and frame spaces with shared knowledge of a variety of actors. Our society is a collage of enormous communities and every single community itself is a complex system. Accordingly, it’s initially necessary to figure out the issue that needs a solution and then identify the relevant actors who represent the specific group and their common interests. Then it is designer’s job to transfer these interests into potential projects spatially. These projects generate the answers to the raised questions and are geared to the available resources. (Boelens, 2009)
SITE ANALYSIS

3. Fiera: a Free Zone for 'Otherness'
Figure 3.1: Three scales of study and analysis
3.1 SPATIAL QUALITIES AND CHARACTERISTICS

3.1.1 Spatial Qualities
The site of Fiera leaves an impression of rural character with a direct and single connection to the old city center. It once was the place where the fortunate people built their estate in history. Even now, some of the historical heritage are still used by the wealthy people for summer holidays. The riverside is the place where the most activities take place, namely, running, walking with dogs, cycling etc. It is more or less becoming the main and the only reason for the locals to come during normal days according to my interview on site.
Figure 3-4: Pictures from the current situation, taken by the author.
RIVER SILE:
Long continuous water front provides unique spatial qualities. It's also where activities concentrate.
RIVER SILE:
Long continuous water front provides unique spatial qualities. It’s also where activities concentrate.

THE PARK:
The only connection to the otherside of Sile
Flow concentration

NATURE-PRESERVE AREA:
Adding natural quality to the riverside

FIERA:
Constant usage - car parking (free)
Rare usage - big events

A. 4754 m² 200 parking spots
B. 7982 m² 300 parking spots

Figure 3-6: The current occupation of Fiera
RIVER SILE: Long continuous water front provides unique spatial qualities. It's also where activities concentrate.

THE PARK: The only connection to the other side of Sile. Flow concentration.

NATURE-PRESERVE AREA: Adding natural quality to the riverside.

FIERA: Constant usage - car parking (free). Rare usage - big events.

A. 4754 m² 200 parking spots
B. 7982 m² 300 parking spots

Figure 3.6: Spatial qualities of the park
NATURE-PRESERVE AREA:
Adding natural quality to the riverside

RIVER SILE:
Long continuous water front provides unique spatial qualities. It’s also where activities concentrate.

THE PARK:
The only connection to the otherside of Sile

FLOW CONCENTRATION

NATURE-PRESERVE AREA:
Adding natural quality to the riverside

FIERA:
Constant usage - car parking (free)
Rare usage - big events

A. 4754 m²  200 parking spots
B. 7982 m²  300 parking spots

Figure 3-7: Spatial qualities of the nature-preserve area
3.2 SITE ANALYSIS

3.2.1 Privacy
There are three different types of spaces in terms of ownership and privacy. They are private spaces, collective spaces (privately owned but publicly accessed, or partly private) and public spaces. Because of many different private ownerships and actors in this area, the complicated situation of governance and the history issues, the Fiera area is surrounded by closed private land and housing. The public spaces are only accessed via those collective spaces. This situation has lead to a distinguishable contrast in terms of spatial form and the inbalance in public and private.
3.2.2 Traffic
Since the Fiera and the park were taken from the wealthy family in history by the majority, it has been used for public events once in a while. But the area has not been developed in a way it should be according to the previous situation. Even though the free parking does offer bonus to the locals who come to the riverside, it doesn’t contribute to the local character and the spatial quality due to lacking of programs and activities and the poor quality of the space.
3.2.3 Accessability
Fiera, the park and the water front are the three main elements in the site, and they suppose to be accessed by the public easily and directly. However, the real situation is they seem are rather separate individuals due to the hard and soft barriers. The accessibility in general is poor and needs to be improved via future interventions.
3.3 CONCLUSION

It's not difficult to picture the future vision of the site if the right changes take place to transfer it to a multi-functional place with diverse images and characters which form the identities. It needs to become another strategic spot for different users and developers to spend time at and to invest and build.
The inherent value of history, the opportunities of development and the human use create a set of parameters that distinguish this site from others. The images the urban design creates are reflections of the past form and experience. The users who are maintained in this project are diverse. Their needs and experiences are crucial points that should be always kept in mind.
DESIGN INTERPRETATION

Urban design: a resilient learning process
4.1 DESIGN CONCEPT AND GOALS

4.1.1 Generic Interpretation
Urban design is a process in which all the interventions and proposals should introduce flexibility and modification in time. The end result is not rigidly defined because the design images do not strictly limit the process of a design. It allows changes in the process. Mixing the three ingredients, the end result or the endless process should by each step fulfill the diverse needs of these user groups by creating a collective while specific form or a resilient strategy. The topics of attention have been settled down as diversity, identity and flexibility. Urban designer acts as a director who sets up the frame of the story, directs the process and gives space to interests, opinions and hopes. He/she coordinates the process to help the developers make right decisions with all the possibilities. Successful design proposals at the same time generate more possibilities and successful chances for the future.
4.1.2 Business Incubator

A business incubator is an organization designed to help new and startup entrepreneurial companies to develop or to accelerate the growth and success of those companies through an array of business support resources and services that could include physical space, capital, coaching, common services, and networking connections. Business incubation programs are often sponsored by private companies or municipal entities and public institutions, such as colleges and universities. Their goal is to help create and grow young businesses by providing them with necessary support and financial and technical services.

To meet the socio-economic needs of developing Fiera, the aims of creating business incubators are:

- Business creation and retention
- Local economy accommodation
- Encouraging immigrants and low incomes to succeed in business

**INDOOR**
- Business workshops (coworking)
- Conference rooms
- Offices
- Product display
- Supporting services (catering, hotel, retail...)

**OUTDOOR**
- Products display and retail
- Supporting services (parking lot, public space)
- Meeting spot

Source: [http://thebusinesslounge.org/us/](http://thebusinesslounge.org/us/)
4.1.3 Sign, signifier, signified
The lowest scale on which the design proposals lie concerns the eye-level exchange of information. It aims to build up linguistic communications between people's cognition and the features of spaces in three aspects, namely the path, legibility and the relationship between space and act.

The Linguistic Communication between People and Space

The sign is a whole that results from the association of the signifier with the signified.

Saussure's Model (Course in general linguistics)

How to create signs that are readable by most of the people?
4.2 DESIGN INTERVENTIONS

4.2.1 Generic Discourse
Culture and climate differ all over the world, but people are the same. They'll gather in public if you give them a good place to do it.

Jan Gehl

In this part of the thesis, the design study of Fiera is addressed, explaining how the concept of different levels could be spatialized in this specific site. In this chapter, not only the generic structure of development, but also it concerns human perspective towards spaces. It focuses on designing different forms which accommodate the needs of specific user groups yet becomes the practice of Postmodernist design ideology which regards spaces as autonomous, complex entities. It allows people claiming their self-identities while forming shared identities and it guides them to find new ways of using spaces. The design study aims at creating a place with multiple identities and appreciated by a variety of users as well as providing opportunities for local business activities.
4.2.2 PROGRAM

- Existing programs
- New programs
4.2.3 Space and Act
The zoning of the square is based on the link between space and people's act. People's act could be defined by some specific forms and elements such as stairs and seats which invite people to stay while a large area with few elements provides more freedom. So the reacts of people range from specific activities to undefined movement, from static activities to dynamic movements. However, it's not always been so clear that some spaces are formed with the purpose of ambiguity. Just as what Postmodernist design indicates, urban spaces have a 'many-sided' nature which values the effect of physical forms upon human spirit. (Venturi, 1966) There're always been multiple levels of meanings among spaces and elements with varying values. This design studies this relationship between the spatial form and human perspective just like an exercise of imagination yet is based on the existing experiences and philosophies.
Bike Service
Making use of the empty building and transforming it into a bike service kiosk to serve the cyclers and other people around this area.

Creativity Space
Creating diverse forms of activities by making different levels of constrains provided by physical forms and programatic elements.

Program Zone
Providing spaces for business incubator and the activities attached to the park, the soft transition area between the bushy puzzle to spacious monument. The empty house next to the park wall is designed to be a cafe, which helps to orientate visitors and offers supporting services to the activities.
4.2.4 Design Articulation

The idea of the walls is taken from the existing elements in the area as a design language.

Auto traffic are placed on the outside circle which makes this area less car-oriented.

Some programs like market and outdoor exhibition which sell local products.

A good pedestrian system is necessary for any public space.

The central square with few elements is for big events which remain the original functions of Fiera.
The continuous pedestrian system forms a continuity of the public space. People could follow the elements, which are the walls that gradually guide people and manipulate people’s mind with specific and systematic signs. The image visualizes a typical scene of the local life of weekend in this newly designed area that is full of possibilities for different social groups. It basically welcomes everyone from every social class and offers spaces for different programs like food market.
Green Space
The walls also functions as creating the hierarchy of privacy in different public spaces as well as a different atmosphere. On its back side locates a set of green area with trees and soft ground cover. It offers spaces for different outdoor activities such as sitting and outdoor dining.
'Made in Treviso'
This collage demonstrates the other possible usages of those walls. They represent the local images of Treviso with a reflection on historical forms of the city. Functionally, those walls are used like display boards for posters and images for exhibition activities. They are made in Treviso in the sense of history as well as functionality which is selling local products like clothes and other industrial productions made in Treviso.
Human beings are complex systems one way or another. Many cognitive activities interact and affect each other so that it’s difficult to completely restrict behaviors with some specific spatial forms. As a result, the elements that are proposed in this space have their undefined nature to some extent. They offer choices and possibilities to people who want to use them but yet leave some space for imagination. For example, the stone features in the zone around the central square create an outdoor ‘living room’ providing a space for residents to relax as they arrive at the square after work or during weekend. There is a differentiation of height, 40cm and 20cm. They are not simply used for dividing spaces. The higher ones could easily seduce people to sit on them because they are ergonomically designed for sitting. The lower ones are more interesting. They seem too low to sit on but if people sit on the ground, the height of those elements is just right as a table. Also the steady material applied in the design provide the sporting people a good object to count on when they are playing with their skaters for instance.
4.2.4 Design Articulation

"Outdoor Incubator"

This is a place that is designed as 'outdoor incubator' as well as a transition zone where two different types of actions meet, overlap and these actions are transformed by another typology. It provides different types of spaces and facilities to support outdoor activities for business incubators such as product display, meeting spot and services like dining and drinking. On the other hand, it releases the park from the wall and the fences by opening connections with the main square. It provides accessibility from Fiera to the park instead of detouring from outside. The changing elevation also divides spaces in a more dynamic way for example by adding a terrace associated with the highest point of the park land. The ingradient terraces also create different perspectives toward the square. It could not only be used as a terrace for a good view but also as a stage for performance.
These are the two 'open spots' of the park wall. People are allowed to enter Fiera from the park just like stepping in a completely different universe. It creates such a big contrast of feeling and sphere, from the green, shaded forest to an open, bright square.
This is a program zone designed with the initialty of entailing business activities which need outdoor spaces. It provides display area, meeting spots and other possibilities. It helps bring people together more easily and offers spaces for a variety of interactive activities. It shows how the diversity of space is created according to different people’s perceptions.
Bicycle Service Kiosk

The empty building is reused as a bike service kiosk which serves the people who come to the riverside to cycle. This is also one of the spots of the newly proposed bike system in Treviso. This is a kiosk offers bike renting and repairing services and it is a bar too.

- Emphasize individuality in the spatial design
- Create a place (as a whole) / places (as a system) that are understandable by most people yet comprehended specifically by ‘individuals’
4.3 PROCESS AND PHASING

4.3.1 Action Choice of Development

The ‘Action choice’ diagram demonstrates the fact that urban design is a complex, communicative, conductive and open-ended learning process. In each step, making a move means on the one hand, creating conditions for a upper level of development, on the other hand finding solutions at the same time creating new problems to be solved. Just as an essential aspect of postmodernist discourse, ‘Postmodernism raises questions rather than attempting to supply answers’.

The main pillar of industry in the whole region is this Postfordist family business developed in small firm clusters. They are also the most proprirate investors for small projects. The owners of some empty properties on site are another actor group who could possibly work with the municipality or be supported financially by the municipality for some small projects to support the local business and to contribute to the public well-being. The river and the facilities along the riverside are owned and maintained by the water board ‘po valley’ which is relevant with interventions for the waterfront.

Besides the users, myself, as an urban designer also play a key role in the process of development as a coordinater to guide the public and private sectors and the stakeholders making the right decisions for the public welfare and to gain profit from the process for themselves.

Phase 1 - Bike renting kiosk + existing services
Phase 2 - The ‘square’ + traffic integration
Phase 3 - A change to the profile of traffic + develop the program zone
Phase 4 - Public spaces and programs
Phase 5 - Opening the park + business incubator
Phase 6 - Improving waterfront quality
4.3.2 Scenarios

Scenario-1 Service center

There’s barely only one possibility in the mediating design process. The design proposals are with the nature of flexibility that could be developed in a different way which leads to another scenario sometimes. In this scenario demonstrated in the diagram, the area will possibly be developed into a local service center with a well-developed service equipment system and an entertaining waterfront. Most of the services are invested to be built by different local companies. In the end, different companies could claim a piece of the land to run their business in this area to make Fiera multi-functional. It has a better integrated traffic system which enable better connections to the main urban network.
Design as a Mediating Instrument
Reclaiming Multiple Identities in Fiera by an Actor-oriented Approach

Phase 1: The ‘square’ + traffic integration

Phase 2: Bike renting kiosk + existing services

Phase 3: New programs constructed by local investors

Phase 4: Opening the park, forming traffic system

Phase 5: Developing towards the water, making more connections
Scenario-2 Living community

In this scenario, the development is more leading to a local scale with an increase of housing real estate. The Fiera square itself will not change a lot, but the land value increases due to the well constructed services and the advantages brought by the waterfront. The area becomes more attractive in this scenario so that it brings opportunities for investors to build more houses for the ‘others’ namely the low income people and immigrants.
Phase 1-2: A change to the profile of traffic

Phase 3-4: Developing a service system to serve the local business and life

Phase 5: Real estate and housing development

Design as a Mediating Instrument Reclaiming Multiple Identities in Fiera by an Actor-oriented Approach
4.3.2 Multi-actor Approach

Urban design is a process in which all the involved actors' goals and intentions should be concerned by the designer. This is a diagram demonstrates the hypothetical startup of this design process from the idea stage to the future scenario.

In the beginning, urban design comes out with an idea based on his/her experience and research and then discusses it with the actors relate to this project at the higher level. The designer is the dominant actor at the idea generating stage. General decisions are then made at this step according to the inputs by other involved actors at the higher level. Contracts are prepared and ready to be signed among different stakeholders. At the same time, the designer should consider about leaving the option pool for uncertainties and possibilities. The co-funder stage is the step when the stakeholders cooperate for the finance or other other aspects and some sub-contracting activities might also happen at this stage. The designer’s dominant will become less and private investors would involved in the construction of the project. Yet negotiation goes on simultaneously with the group of decision makers. Finally the actors are not defined any more at the developing stage which means anyone can become actors in this process. The previous process from the idea to the development will be runned again by the system.
A HYPOTHETICAL STARTUP GOES FROM IDEA TO FUTURE SCENARIO

Mediating a multi-actor approach...

what everyone does

DESIGNER
- come up with ideas
- coordinating the process
- suggest conditions

MUNICIPALITY
- setting rules
- providing fundings when necessary
- making decisions

NGO
- numbers discuss then make decisions
- could invest

PRIVATE INVESTOR
- invest if interested
- help making decisions according to their interests and volume

OWNER
- selling/buying according to the conditions
- have freedom to make changes to properties

ANYONE
- after developed to certain stage anyone in this system can become an actor
Design as a Mediating Instrument

Business incubator
inner city transportation hub
public space along the river
improving the connection
Fiera: A Place for all

0 100 200 300 km
0 100 200 300 m
4.4 TESTING RESULTS

This chapter is all about testing the results of the design interventions with the characters defined in the research process. It is a useful way to check the adaptivity of this urban design project to different social groups. The first story is related to the local entrepreneurs. The Fiera offers outdoor spaces for business events as part of the business incubator as was mentioned before. The second story reflects the effect of good public spaces on people’s daily life.
What do you think makes you one of the most successful young entrepreneurs?

Welcome!

Your order!

Thank u!
Let me check.
I heard there's something interesting in Fiera...

I'll bring my kids to Fiera next time...

Come to our show in Fiera if you like rock too!

Hmm...

'A Fun Weekend'
Sure, sweety!

Mom, I want ICECREAM!

Look! What’s going on there?

Our band is gonna perform here this weekend!

Snacky?

A good place for reading!

Very Beautiful!

Blossom!
REFLECTION

On research, design and the process
This chapter delivers the feedback for this research and design project and reflects on to what extent it works out a substantiated result in response to the methods that have been applied. The reflection is compiled with three parts or four aspects as mentioned in the graduation manual each of which addresses an essential of the graduation project: the research, the design and the process.

**A practice based research and a theory related design**

The research process of this graduation year is continuous and complex. It follows both classical routes of study and non-traditional trend, which introduces a variable combination of the two, research and design. As any typical research process, my research is framed systematically by the investigation on the subject ‘Design as a mediating instrument’ which leads to the production of knowledge adding to the existing studies about ‘multi-actor approach applied in urban planning’. A specific question is raised by then according to my own interests and capability which are targeted on urban design. Then it becomes ‘a multi-actor approach for urban design’. It consists of collecting data through navigations in the ocean of relevant literatures and experimentations like academic writing on the subject based on a variety of knowledge that is obtained from this journey.

The testing hypothesis is testified by the design study on the selected case Treviso. It could be defined as an exploratory practice within the typical process of academic research. By allocating outcomes in the critical context, I as a preliminary researcher and urban designer could contribute to the body of knowledge and the existing arguments in the field of urbanism. Dated back to the starting phase, certain problems are generated and concluded from the study case connected with the research subject which, in my case, the existing problematic yet remarkable urban fabric which limits the development towards a flexible and prominent future but processes unlimited possibilities. It also has strong socio-spatial characteristics within the unique and complex urban networks. To solve this problem, methodological line was built and the hypothetical framework was set to be proved by the design practice.

To conclude, the tension between the rational and empirical wings of the research and design process lies on the practical design work which leads to a transferable research process as long as I have explored during the graduation year.

**Project & design of the urban fabric research group**

My project by its title ‘Design as a mediating instrument’ is an urban design project. It mainly focuses on searching for the answers to the question ‘how urban design is elaborate as a mediating instrument for reclaiming multiple identities that could be shared by different actors in this area through spatial interventions’. AT the theoretical level, it communicates with different schools of urban studies, such as complexity of cities, actor-relational approaches for urban management and addresses the idea of postmodernist design as a background of knowledge and principle. The theories and literatures that have been addressed in this project are geared to the main study realm of the research theme. For example, the background of the research is set in the postmodern context, specific in Postmodernist architecture and urban design. The main references are Robert Venturi’s ‘both-and’ theory and Charles Jencks's ‘double-coding’ which indicate the complexity and multiplicity in architecture. Moreover, the complexity theory part which refers to Alexander's ‘semi-lattice’ theory in a city is not a tree, which is an important branch of study about complexity in cities in the field of urban fabric study.

The crucial aim of this research group Design of the Urban Fabric is to explore throughout research and practice, how we could contribute to the making of sustainable, attractive and vital urban spaces for a variety of social groups. Therefore as a conclusion drawn from the graduation project, there has been a match between my research and design approach and the aims of urban fabric research group because it discusses the role of urban design in practice, addressing urban design in the complex networks of cities to develop better understanding on how urban design could be elaborated as a mediating instrument to accommodate public interests in the professional field.
Methodological relations to the graduation lab

The research theme ‘Design of the Urban Fabric’ concerns of strengthening urban design as a technical scientific discipline and a developing tool for professional practice. The research and design project forms an integral design method which addresses scale differentiations ranging from urban level to the neighborhood scale, even ‘individual scale’.

It is on the one hand elaborated at the local level including the redesign of urban spaces and guidelines for urban developments, on the other hand offering ideas from human perspectives. It considers the urban fabric as complex human environment where the multi-actor approach is adopted and introduces patterns and forms technically in relation to the local conditions or the context.

Project & the wider social context

The project touches upon the wider social context with the meaning of ‘multiple identities’ that it aims to reclaim. Identity is an abstract term but could be directly linked with the images that people have in mind about a place. People of different background have different concerns and perceptions, thus have diversified and complex images of urban spaces. The design proposes a place with multiple images for diverse groups of people and each of them takes a piece of the images which is related to themselves in terms of needs, interests and perspectives. This is how ‘self-identity’ is built. Eventually, designing the process of constructing self-identity helped to reclaim ‘place identity’ so that it could bring back the vital urban life that is diversified by different social groups.

Urban design has never been so closely related to the quality of daily life in today’s society referring to public realm design. People don’t live without being in a public environment and a good design offers efficiency and possibilities to people via improving the spatial quality in public realms. Treviso has its specialties and I attempted to achieve my goal of reclaiming multiple identities with an actor-oriented approach in this research and design project. Gone through the graduation year, I’m now at a temporary stop of this research and design project while a turning point of my academic career. I have learnt comprehensive and systematic research methods and design skills as well as enormous knowledge in several fields. Those are highly appreciated. Finally, special thanks go to my mentors and all the people who ever contributed to this project during the whole master study. It never comes to an end.
APPENDICES

1. Paper Review 'Mediating Complexity'
Mediating Complexity
A Multi-actor Approach for Urban Design

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Paper abstract – Began at the end of 1960s, urban design, or the making of public realm is concerned as a phenomenon of Postmodernism. It is used by Postmodernists to critic the architecture and urban planning based on the idea of modernity. Postmodernists treat the city as a stage and see the space differently as something autonomous. Later on in 1970s, complex theory was for the first time adopt in the field of urban study because complexity is discovered in time by academics the very nature of a naturally grown city geared to the postmodern ideologies and culture. A city is complex, in terms of structure, environment as well as social networks with diverse types of people involved and these people are actors performing on the big stage of a city. The primary emergence of urban design is thus coordinating decisions and choices of multiple agents in the collective networks that are complex. The main question raised in this paper is ‘what should be the way that urban design interprets itself in this complex system of a city’, and this question is answered in the conclusion after the discussion towards a variety of academic and empirical studies.

This study aims to explore a proper way of positioning urban design in the complex urban system from multiple perspectives and to find a solution for designers to incorporate multiple actors in different levels of the society. This multi-actor approach addresses three levels of disciplines for urban design, namely individual principle, collective intelligence and network thinking. The nature of complexity of urban networks should be incorporated when urban designers are trying to shape and frame spaces with shared knowledge of a variety of actors.

Key words – urban design; postmodernism; complexity; multi-actor
1 - Introduction

The purpose of this paper is to investigate how urban designers could deal with the growing complexity in cities by incorporating different perspectives and aims of different actors involved, and to discuss the role that urban design plays in the complex urban networks.

It addresses the following three important debates. The first one is a review on Modernism and Postmodernism from the architectural and urban perspectives. I set this whole research topic in the postmodern context according to the previous stage of urban development. The line of the reasoning is simply because we are more or less living in the postmodern era since 1960s, or some people believe that we are in ‘late-modern’ society which is not yet beyond the Modernity. Urban design could be regarded as one of the postmodern phenomena, a by-product of postmodernism that distinguished from urban planning around when postmodern mentality came into being and was applied in design. It then became a very effective tool for managing cities in terms of environmental quality and its integrity with the users’ needs. (Velibeyoglu, 1999) The next chapter presents the fact that the complexity of urban networks is an on-going important issue for urban designers to tackle. The complexity theory and its application in cities will be addressed and discussed in this chapter. The third chapter is about methodologies in three different levels incorporating multiple actors in the process, namely individual design, collective design and managing urban networks. The multi-actor approach from the existing studies is discussed and integrated here concerning how design performs itself as a mediating instrument which enables urban designers to communicate with different agents, users, and to coordinate multiple disciplines in the complex urban networks. It also concerns the collective intelligence adapted in urban design processes to solve the problem of ‘single-mental act’ of urban designers. The motivation to compose this paper is provided by my conviction on the multi-actor approach, specified in the conclusion, which will contribute to the knowledge and methods of urban design to deal with complexity in this networked society.
2 - Urban Design in Postmodern Context: the Different Disciplines of Modernism and Postmodernism

Modernist architecture clearly links cultural modernism and the 18th century idea of modernity. The idea of architecture for the modern age is in tune with modern life and modern technology. Modernist architects turned to new materials, which were truly modern, and wanted the building they build and the city they planned to be based on scientific, universal principles. In cities such as Chicago and New York, modern buildings took on the familiar and characteristic features of ‘International style’: geometric, streamlined. (Scully, 1961), (Pevsner, 2005) It seems like ‘one possible answer to any question’. (Harvey, 1990)

In terms of urban planning, the way of structuring and organizing a city in the early time of 20th century focused on large-scale, metropolitan-wide, technologically rational and efficiency. (Harvey, 1990) The planning principles which gained a lot of critics worked mainly through mono-functional zoning, argued by architect and architectural theorist Leon Krier. According to his complain, what modernism urban planning expresses is ‘functionalist monotony as legislated by functional zoning practices’. Additionally, the economic form of the modernist society is a dominating factor for the modernist architecture and urban planning. The largely centered zoning and the mega structure generated from mass production and industrialization meet the general requirements of the modern society.

![Figure 1: Pruitt-Igoe housing complex in St. Louis. This complexity is a fore-type of Modernism architecture, an example of high-rise building scheme out of the international style. It was razed to the ground by dynamite on June 15, 1972 at 3.32pm. Source: http://financingcities.ifmr.co.in/blog/2014/02/03/the-pruitt-igoe-myth-of-public-housing/](image)

Postmodernism era is a continuity of modernism which is the culture of postmodern society, said by Indian sociologist Krishan Kumar. (Kumar, 1995) The criticism and rejection of modernist design inaugurated the era of architectural and urban postmodernism. Postmodernism is taken by British
geographer David Harvey to signify the break with the modernist idea as a conception of the necessarily fragmented urban fabric, a rewrite of superimposed past forms, and a ‘collage’ of current ephemeral uses. Another distinguishable aspect he addresses about urban postmodernism is departing from the conception of how modernists regard space in his best-seller *The Condition of Post-modernity*. The postmodernists see space as something independent and autonomous, to be shaped according to aesthetic aims and principles instead of being subservient to the construction of a social project. (Harvey, 1990) To make a rewind of Charles Jencks who is regarded as a pioneer among American postmodern architects and a representative of the ‘East coast group’ and his ‘Postmodernism as double-coding’, it is truly a definer which was introduced in the 1978 edition of LPMA. In his series, he as a postmodern architect criticized the repetition of mass-production and prophesied the coming variable computer production by 1970s.

‘In a nutshell, PM was the contrast of Modernism and its other. Since the rich, middle class and poor (to use Modernist class terms) have varying speeds of change, a single style or code will not be effective for complex, urban situations. Modern projects that failed to perform within the various codes of the users.’ (Jencks, 2010)

I want to pay very attention to the distinguishable postmodernism architect Robert Venturi and his master piece ‘complexity and contradiction in architecture’ which is ‘probably the most important writing on the making of architecture since Le Corbusier’s Vers une Architecture of 1923’. (Vincent Scully 1966) The ‘many-sided’ nature of his philosophy values the effect of physical forms upon human spirit whose image is opposed to Corbusier or modernism architecture, which is more fragmentary, moving through more compromised relationships. His ‘both-and approach’ is a descent discourse of multiple levels of meanings among elements with varying values in architecture. (Venturi, 1966) Furthermore ambiguity and tension, multiple meanings he emphasizes in the book not only provided new ideologies in postmodern architecture design in the meantime, but also were reflected in the later studies of the complexity theory in cities which is addressed in the next chapter.

In the postmodern motto, the city is treated a stage, a place for enjoyment and the exercise of the imagination as much as a utilitarian system of production and consumption.(Kumar, 1995) This perspective of treating a city is thus regarded in this paper as the starting point of further discussion on complexity.
To walk from one end of the plan to another, at a uniform pace, will provide a sequence of revelations which are suggested in the serial drawings opposite, reading from left to right. Each arrow on the plan represents a drawing. The even progress of travel is illuminated by a series of sudden contrasts and so an impact is made on the eye, bringing the plan to life (like nudging a man who is going to sleep in church). My drawings bear no relation to the place itself; I chose it because it seemed an evocative play. Note that the slightest deviation in alignment and quite small variations in projections or setbacks on plan have a disproportionately powerful effect in the third dimension.

Figure 2: Gordon Cullen’s Townscape: a city of serial version. Source: http://cycle-space.com/healthy-green-transport-for-a-small-city-part-4/gordoncullen/
3 - A View on Complexity: Overlap, Ambiguity and Multiplicity

To better introduce this set of theories and phenomena, it is worth quoting Gershenson (2005) who formulated the definition of complex system etymologically in his preface: ‘A complex system is one in which elements interact and affect each other so that it is difficult to separate behavior of individual element. The state of each element partly depends on the states of others and affects them in turn in each of complex system.’ (Gershenson, 2005)

Complexity is intimately related to systems theory, notwithstanding the fact that complexity as a generic concept did not feature in general systems theory until 1970s when physicist Peter Allen (Complex Systems Research Centre) applied complexity theory to cities among the first. (Michael Batty, 2012) He elaborates the view that cities as complex system typified by co-evolutionary behavior and organizations, with the consequence that they ‘can change, adapt and maintain rich, diverse and varied strategies (…) sub-optimal behaviors (…)’.

Allen believes that centers of some old cities are an embodiment of the complex, historical co-evolution of knowledge, desires and technology. Towns and cities are the visible external evidence of the complex, historical co-evolution of the knowledge, desires and technology of the multiple agents that have inhabited them. (Allen, 2012)

Urban designers are facing with the growing complexity of the urban networks in this so-called post-modern era. ‘The city is a discourse and this discourse is truly a language.’ (Barthes and Miller, 1975) Therefore we might be curious about how urban designers should perceive this intricate system and how they depict the structure of a city based on its very nature of complexity.

-A city is not a tree (Alexander 1965)

Dating back to 1960s, the Austrian architect Christopher Alexander’s ‘semi-lattice’ model of city which boosted new ways of thinking in the field of urban design sharply indicated the problems emerged in both understanding and designing the city. A naturally grown city is structured in a more complex way and becomes a ‘semi-lattice’, he argues, but in designers’ mind it becomes a tree without the overlapping units. ‘Designers, limited as must be by the capacity of the mind to form intuitively accessible structures, cannot achieve the complexity of the ‘semi-lattice’ in a single mental act.’ (Alexander, 1965) It is true that designers at that certain period of time started to stretch their minds out of the modernism mentalities, but still ‘seemed to be yearning for the physical and plastic characteristics of the past’. Alexander addresses in this paper the inner nature, which is the ‘semi-lattice’ structure, or the complex networks, the towns of the past have were not yet found by the modern conceptions of the city. (Alexander, 1965)
Figure 3: Semi-lattice vs. tree by Alexander (1965)
These two diagrams demonstrate the different ways cities are structured. He argues that a naturally grown city forms the ‘semi-lattice’ structure with the future of complexity. Source: http://contentsmagazine.com/
4 - The Cooperation Networks of Urban Design: a Multi-actor Approach

The concept of ‘actor’ is generated originally from the process approach of public policy in the 1970s. Various theories and governmental politics models conceptualized the first feature of this approach. In these theories, public policy is the production of interaction between various actors trying to influence the policy process in a way favorable to the actors. (Kickert et al., 1997) Can ‘actors’ exist in urban design process and influence urban design? It has been proved that actor indeed is a crucial element in this indivisible entire process of urban design or planning.

4.1 The Single-mental Act of an Individual Designer: a Dilemma

Research shows repetitively that the capacity of one urban designer is inevitably limited due to the single metal act as individual human being. In A City is Not a Tree for instance, Alexander promoted this dilemma by raising examples of the tree structure cities that were built in Modern era. To avoid this single metal act which leads to a ‘tree’ structure, urban designers need to cooperate with non-professional designers (ordinary people) and to incorporate different levels of meanings of urban spaces. In Alexander’s another notable work A pattern language (Alexander, 1977), he suggests the way of understanding the complexity in building environment by identifying elements at different scales and how they link to each other. (Alexander, 1977) Also, in Alexander’s recent empirical study in 2003, new concepts in complex theory were set forth facing the problems of architecture frankly by concluding other scientific fields to make breakthroughs. (Alexander, 2003) When talking about the emergent tasks of architecture which require a new focus, he captures the value of social agreement ‘rises naturally when hundreds of people need to make decisions together’, and this, often was the case in the human environment in regards to a complex system. (Alexander, 2003) The complex urban system therefore is not describable by some overall optimization principle. It is seen that the system is driven by the decisions and choices of multiple agents that involved in decision making and these are affected by their perspectives and aims. (Allen, 2012)

4.2 Collective Intelligence in Urban Design

After the discussion towards the dilemma most of the single designers are facing with and the single mental act which is unavoidable or takes enormous efforts to avoid, some effective solutions evolved were figured out to acquire a complexity that often exceeds the intelligence of an individual human being in recent addition. A city itself with its very nature of complexity is a product of the collective
intelligence of enormous generations acting together over time both spatially and socially. (Salingaros, 2004) Salingaros is a mathematician as well as a close cooperator with Alexander. His research has been paid considerable attention in the field of urban complexity study. In one of his conference papers Design methods, emergence and collective intelligence, it is this argument about collective intelligence in design processes that arouses rethinking urban design from multiple perspectives. Collective intelligence, as he argued, produced the traditional built environment for the sake of the complexity. (Salingaros, 2004) Cognitive intelligence is applied in both top-down and bottom-up design implementations. These two different ways of adopting design which are normally regarded contradictory could be mutually emerged in accordance to Salingaros’s conclusions:

The selection process that generates a design solution via bottom-up methods is the result of actions and decisions by a host of individual inputs. ‘A collective design project includes selections by the architects, end-users, and environmental forces.’ (Salingaros, 2004)

He also issues the adaptation of cognitive intelligence in the top-down process, which takes the built environment as a common repository of stored information where enormous collective efforts of individuals are involved throughout ages. This is the stereotype of history, ‘society’s collective memory’ according to Salingaros. The rich meaning and information that generate from traditional typologies could be utilized in this top-down design implementation for broadening the intelligence of individual designer or a group of collective designers. This implementation then includes the experience of other individuals from the past, thus extends human intelligence into the built environment. (Salingaros, 2004)

4.3 On Managing Complex Networks of the Society

‘The postmodern architect and urban designer can, as a consequence, more easily accept the challenge to communicate with different client groups in personalized ways, while tailoring products to different situations, functions, and ‘taste cultures’. (Harvey, 1990)

'Sociology is best defined as the discipline where participants explicitly engage in reassembling the collective'. (Latour, 2005) Our society is a collage of enormous communities and every single community itself is a complex system. Some of the earliest ‘complex systems’ models applied to cities considered the different types of agents involved, and tried to generate their observed behavior, actions
and responses by assuming their preferences and goals. (Allen, 2012) Taking one of Allen’s very early studies for example, he articulates the complex evolving system to simplified successive assumptions concerning the relative disciplines and domains and let them interact in reality as a part of the complexity. Different people see the same system in different ways. His model presents a ‘system’ thinking which supposes that the system has a shared purpose, and the successive assumptions are measures of ‘performance’ which provide a direction for improvements. (Allen, 2012)

In recent years, there have been several phenomenal works which incorporate the multi-actor approach for the big picture of a city. One of the noticeable by the Dutch urban planner Luuk Boelens published in 2009 named ‘the urban connection: an actor-relational approach to urban planning’ has integrated the series of methodologies to tackle related issues about the actors as a planning discipline.

I find it runs so true with urban designers that they play mediating roles in the process after sort of research and analysis. Denise Scott Brown once pointed out this role in her published article in 1981 which took a record of her career as an architect and urban planner. According to her normative, they as a professional group ‘point out what the alternatives for development are, and it’s going to be up to them to choose.’ This is also a teaching process because eventually the designers leave and the plan will be implemented without them. Therefore it is of great value that pro designers could recommend ‘paint colors’ for other people involved to repaint their own stories. (Brown, 1981)

Back to the very emergence of our aim, managing the complex networks as a practical subject with a multi-actor approach requires designers to think in both ways – inside-out and outside-in.

Debates have been raised in recent decades toward the tension between these two controversial proposals. Some of the arguments are convinced the fact that the inside-out planning proposals which are more ‘top-down’ remain mostly governmental-focused and it is no longer sustainable because the top-down implementation might ignore forces that ‘would make it truly adaptive’. (Salingaros, 2004)

Instead, the opposite approach which is the outside in (or bottom-up) leads to more potentials of incorporating different levels of performance of actors. This is somehow true to some extent, but it doesn’t mean governments should be excluded. Instead, it is something beyond the ‘big’ plan. The actor-oriented approach is elaborated as to transcend the barrier between the government and non-government sectors. An actor-relational view, defined by Boelens (2009), demands ‘a prominent role as a mutual moderator and open medium to sketch opportunities’. It emphasizes the focus on identifying opportunities and connecting them to the possible actors who are intended to cooperate with common possibilities, interests and/or aims from ground up. (Boelens, 2009) Accordingly, it’s initially necessary to figure out the issue that needs a solution and then identify the relevant actors who represent the specific group and their common interests. Then it is designer’s job to transfer these interests into potential projects spatially. These projects generate the answers to the raised questions.
and are geared to the available resources. (Boelens, 2009)

5 - Conclusions and Reflections

In general, this paper is mainly about what urban designers could do on the basis of understanding the complex situation of urban development and always keeping different actors in mind when they are framing urban spaces. Scientific studies of the complex system theories from different periods of time in the postmodern era presented a steady scientific base as well as an interesting debate. I also discussed the complex nature of cities and the application of this nature in design approach such as what was converted in ‘semi-lattice’ by Alexander. Behind that, a strong sense of responsibility could be captured and it promoted me to rethink the role of urban design and urban designer. Adaptive multi-actor approach was explained in three levels of disciplines and scales with reference to the results from complexity theory. I tried to link these three levels by positioning design in this system and society. Individual designers need to break away from single mental act thus should incorporate collective intelligence of a larger and more diverse community and the accumulated experience through time. Simultaneously, shaping and framing a space might correspond to a multitude of relational networks. (Boelens, 2009) There are multiple layers of networks in the society consist of enormous communities and relationships, and each community is organized and moderated by design groups. Designers emerge in this complex, networked system, and thus need to deeply understand the ongoing issues and their situations, what can be changed and who are involved to make those changes. To create a better condition, design proposal should become a mediating instrument used by designers to communicate with those related actors no matter within one community or between different communities.
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Relevant Bibliography


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