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ICONARP

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ICONARP INTERNATIONAL JOURNAL OF ARCHITECTURE & PLANNING

ICONARP as an e-journal considers original articles, research briefs, book reviews and viewpoints in peer-reviewed. ICONARP is an exciting new venture occurred with experiences, theoretical approaches, critical and empirical studies in the field of architecture and urban planning.

SCOPE and AIM

The journal aims to be a platform for the studies of design, education and application and has a goal to be a bridge in between traditional/modern, east/west, local/global in the disciplines of Architecture / Planning.
Architecture and Planning, as two interconnected fields, are strongly affected by other disciplines such as fine art, urban design, philosophy, engineering, geography, economics, politics, sociology, history, psychology, geology, information technology, ecology, law, security and management. However, there are no academic journals which specifically focus on the connections of architecture and planning with other social fields. ICONARP aims to fill that gap. Our scope is to provide a suitable space for theoretical, methodological and empirical papers, which use global and local perspectives together, in architectural and urban studies.

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EDITORIAL

ICONARP began its broadcast life as peer-reviewed faculty journal in the field of international architecture and planning and now it is the eighth issue.

ICONARP is continuing its growing process with this new issue.

The ninth issue will be published in June 2017 and we wait for your contributions with your scientific studies until March 2017.

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No "Obstacles" In Playgrounds That Are Not Only Accessible But Also Inclusive

Hatice Ayataç* & İpek Pola**

Abstract

In the current century, the importance of play for children is a major issue addressed in the literature. Play enables the physical, mental and social development of children. According to the United Nations Convention on the Rights of the Child, engaging in play is a fundamental right for children. This article of the convention covers all children below the age of 18 and does not exclude the children with disabilities. Like their peers, children with disabilities should also enjoy the right to engage in play, and societies should use every means available in order to help children play whether indoors or outdoors.

According to the 2011 Population and Housing Research, 6.6% of the population in Turkey has one or more disabilities. The target group of this study is 'children with disabilities' who live in İstanbul. In this group, speech disorders (21.9%), and mental disabilities (17.1%) prove to be the most dominant disabilities. However, the number of playgrounds where disabled children can play are scarce in number.

Keywords: *Children, play, playground, inclusive design, İstanbul.*

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This study provides an analysis of children's playgrounds, which are essential for the development of children, and evaluates the design features of these playgrounds based on inclusive design principles. The study also addresses the requirements of inclusive playgrounds by referring to the examples of inclusive playgrounds around the world as well as those few examples in Turkey. The design principles of inclusive playgrounds were also evaluated for three parks in İstanbul which were designed and are currently in use - namely Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park.

INTRODUCTION

"Playing" is among the fundamental needs for children in order to ensure a healthy development beginning from infancy. According to the Convention on the Rights of the Child, it is evident that engaging in play is one of the fundamental rights of children. Every child on earth has the right to engage in play, and children with different abilities should not deprived of the right to engage in play.

Children's playgrounds are urban facilities that enable children to enjoy the right to play in the public realm. While children may sometimes play on the streets, they may also use planned and designed playgrounds (Whyte, 1980).

Although children's playgrounds are simply designed to ensure the safety of children while playing, they also prove to have many advantages for both children and adults. Therefore, children's playgrounds are among the most critical urban facilities for children, and their design should put children at its center. Only this way, it will become easier to comprehend children's needs related to play, and playgrounds that serve their purpose can be designed.

Today, in many countries, the inclusive design approach is adopted for the projects carried out to meet the children's need to play, and many research on inclusive design is conducted. Lately, the available literature on the topic puts specific emphasis on the fact that children with disabilities and particularly those who are physically disabled have difficulty in accessing such playgrounds, and even if they managed to reach these playgrounds they are not adequately welcome to play, and the playgrounds that can actually meet their needs are scarce in number.

Inclusive playground designs would provide a space for all children with different abilities where they can play together with their peers whenever they need and desire and not feel left out. Children who can fulfill their need to play without any

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obstacles enjoy a healthy development, and they would contribute to society when they become adults.

DESIGN THAT IS NOT ONLY ACCESSIBLE BUT ALSO INCLUSIVE

The residents of a city participate in the daily life practices by using public spaces, and they should enjoy the right to equally benefit from the opportunities and facilities available in the city. The concept of inclusive design has emerged in order to allow individuals reach the opportunities in an equitable fashion (Mace, 1998). In a nutshell, inclusive design refers to the process in order to design products and environments that can be used by as many individuals as possible in as many occasions as possible (Prellwitz, 2007).

Since the concept has emerged, there have been many definitions. According to the British Standards Institution, inclusive design ensures that essential products and/or services are designed so that they are available for the access and use of as many individuals as possible without any adjustment or special design(http://www.ek.yildiz.edu.tr//images/images/ yayinlar/ktp.pdf, 2013). It can also be defined as an integral design approach that allows individuals to use all products and environments regardless of their age, capabilities and status, and a product design process that enables as many individuals as possible to use such services and products under all circumstances (City of Calgary, 2010).

When we take a closer look at the definitions and descriptions of inclusive design, it becomes quite evident that accessibility and inclusiveness are starkly different from each other in many ways. Therefore, accessible spaces and inclusive spaces differ from each other. Inclusive spaces are all accessible; however, from time to time, accessible spaces fail to possess the characteristics of an inclusive space. Thus designers should pay due attention to design inclusive spaces rather than accessible spaces in order to increase diversity, and they should also ensure that individuals with different capabilities can spend time together.

Design Principles of Inclusive Playgrounds

In 1998, Architect Ron Mace and a group of architects, engineers, product designers and environmental engineers who joined him in founding the Universal Design Center developed seven principles in order to clarify the definition of “Inclusive Design” and to provide guidance to design professionals (http://idea.ap.buffalo.edu/udny/Section3.htm, 1980).

These principles ensure that more functional and aesthetic designs for individuals with different anthropometric dimensions and different abilities are developed. These principles are *Equitable Use, Flexibility in Use, Simple and Intuitive Use, Perceptible Information, Tolerance for Error, Low Physical Effort, and Size and Space for Approach and Use.*

Even though play can be defined as the universal language for the children around the world regardless of their language, religion, ethnic identity, physical dimensions, age and abilities, it is quite critical to provide inclusive play, which is of high-quality and which can be enjoyed everyone. However, the provision of inclusive play is usually neglected.

In order to provide inclusive playgrounds, current playgrounds should be redesigned so as to transform into inclusive, and new playgrounds should be designed based on the inclusive design principles.

User-centric playgrounds that comply with the inclusive design principles can be identified as 'Inclusive Playgrounds'.

Equitable use ensures that the design makes the space fun for everyone, provides continuous and balanced diversity of physical and social activities, features various options for different users and allows several children to play with the same play equipment at the same time (http://www.inclusiveplaygrounds.org/ me2/principles, 2015).

Flexible use ensures that spaces are designed so as to be easily understood, to give children the opportunity to try and succeed and to make the users feel safe. Designers should consider in which ways the design can fulfill the needs of different users' needs (Kirazoğlu, 2012; Skulski, 2007).

Simple and intuitive use ensures that designers not only fulfill children's needs and expectations from a playground but also eliminate unnecessary complexity. If designers develop play equipment that can be clearly understood by children from different age groups and with different abilities, children will intuitively start exploring these equipment over time; and consequently, they will greatly enjoy their time at the playground and will end up using the playgrounds more frequently.

Perceptible information considers the fact that children process information via visual, sensory or experimental means, and thus argues that any information conveyed through the design should be easily understood by users (http://www.inclusiveplaygrounds.org/me2/principles, 2015; Kirazoğlu,.2012; Skulski, 2007).

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Tolerance of error minimizes the risks in inclusive playgrounds and allows children make minor errors while they are exploring and challenging their surroundings (Kirazoğlu, 2012; Korkmaz, 2014).

Low physical effort suggests that a successful design does not require children to spend extraordinary effort during play. Spending less effort can only be ensured by enabling children maintain a neutral body posture and by achieving a balance between play activities that require less effort and play activities that require repetition.

Size and space for approach and use facilitates the design process by ensuring designs that are appropriate for children with different body dimensions, postures, activity and motor skills. Consequently, playgrounds designed by professionals can reach out not only to individuals with ‘standard’ abilities but also to individuals with different abilities; therefore, more users will end up benefiting from the playgrounds (http://www.inclusiveplaygrounds.org/me2/principles, 2015; Kirazoğlu, 2012).

Although these principles differ from each other, they all boil down to characteristics such as safety, accessibility, usability, intelligibility and inclusiveness. In addition to these principles, different countries have adopted various regulations and standards that differ from each other on the basis of diverging perspectives on children and children’s playgrounds.

Figure 1. Livvi’s Place Playground-Sydney, Playground Finder, 2013.

Figure 2. Playground in the Grommet Island Beach Park, Together We Play, 2012.

Livvi’s playground in Australia (Figure 1), Grommet Island Beach Park in Virginia Beach (Figure 2) and Clemyjontri Park in Virginia are excellent examples of inclusive playgrounds (http://www.special-education-degree.net/, 2014).

Australia’s first inclusive playground Livvi’s playground and Josh Thompson’s Grommet Island Beach Park were both designed to prioritize the sensitivities of families with a disabled child due to a disease. Both of these inclusive parks allow disabled children,

their families and children who are not disabled play along with each other.

These examples demonstrate that the adoption of inclusive design principles in existing and future playgrounds will enable disabled and children without a disability play along with each other allowing disabled children share the same public space with their peers.

EVALUATION OF INCLUSIVE PLAYGROUNDS IN ISTANBUL

According to the data available in TÜİK's Population and Housing Research in 2011, İstanbul takes the lead with a total of 670,756 disabled residents. The same research indicates that the rate of children between the ages of 4-17 with a physical or orthopedic disability 4.2% (roughly 28.000 individuals).

A research study emphasizes that children's playgrounds in Turkey are inadequate in terms of both quality and quantity, while the 2013-2017 National Child Rights Strategy and Action Plan indicates that the existing playgrounds can fulfill the needs of only 25% of the children in Turkey (http://cocukhizmetleri.aile.gov.tr/data/54ad4cd6369dc5dac028bda2/ulusal_cocuk_haklari_strateji_belgesi_ve_eylem_plani.pdf, 2012). Furthermore, in their study, Aksoy (2001) mentions that the rate of green space per person (m^2/person) in İstanbul is way below the standards.

The primary motivations behind this study are the population of the disabled in İstanbul, the rate of disabled children among the disabled and the data that reveal the inadequacy of playgrounds. This study aims to scrutinize inclusive playgrounds in İstanbul; and for this purpose, three parks that are currently used - namely, Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park were analyzed. These parks were comparatively analyzed based on the design principles for children's playgrounds.

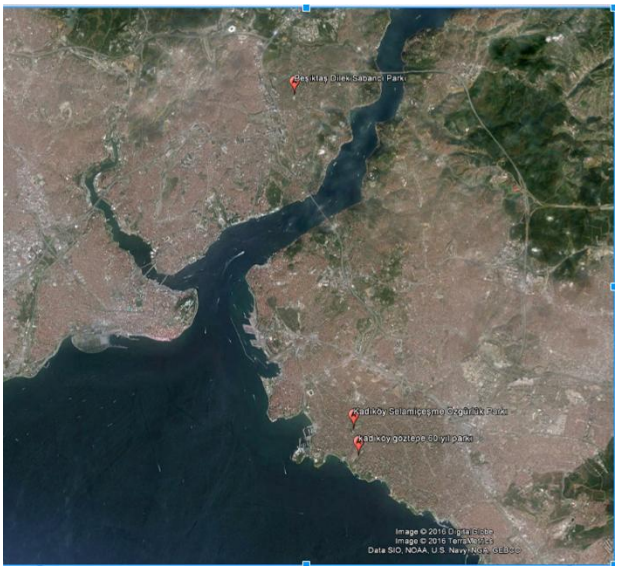

Figure 3. Location of Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek.Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park in İstanbul (Pola, 2015).

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RESEARCH METHODOLOGY

Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park were analyzed by making on-site observations conducted with the checklist that was developed and localized based on the descriptive principles for inclusive playgrounds in Sydney, Australia 2014.

Kadıköy Göztepe 60. Yıl Park | **Beşiktaş Dilek Sabancı Park** | **Kadıköy Selamiçeşme Özgürlük Park**

Figure 4. Parks that were compared under the scope of the study, (Pola, 2015).

Table 1. Comparison of the inclusive design criteria and the three parks in İstanbul, (Pola, 2015)

Criteria for inclusive playgrounds	Kadıköy Göztepe 60.Yıl Park	Beşiktaş Dilek Sabancı Park	Kadıköy Selamiçeşme Özgürlük Park
1-Play activities			
Diversity of options for use	✓	×	×
Sensory richness	×	×	×
Solutions at the ground-level	×	×	✓
Spaces that help socializing	✓	✓	✓
Options to play together or along each other	✓	✓	✓
Diversity of play activities	✓	×	×
Convenience for different body dimensions and postures	✓	×	×
Socially inclusive play options; the opportunity to play along each other	×	×	×
2-Social amenities and opportunities			
Bus stops and other stops	×	×	×
Restrooms	✓	✓	✓
Water features	✓	✓	✓
Public transit in close vicinity	✓	✓	✓
Walking trails	×	×	✓
Diversity of the components that make up the silhouette (trees, entrances, etc.)	✓	✓	✓
Garbage bins	✓	✓	✓
Sitting areas	✓	✓	✓
Bicycle parking	×	✓	✓
Boundary features	✓	✓	✓
3-Paths and entrances			
Intelligible road network	✓	✓	✓
Interrelated play activities	✓	×	×
Perceivable entrances	×	×	✓
Information signs	✓	✓	✓
Attractive colors and visual features	✓	✓	✓
Color scheme and color match	✓	×	✓

4-Accessibility			
Wide, continuous and accessible pedestrian paths	×	✓	×
Points of rest	✓	✓	✓
Car parking in close vicinity	×	×	×
Accessible social amenities	✓	✓	✓
Accessible play activities	✓	×	×
Safety precautions in play equipment	✓	✓	✓
5-Natural features			
Vegetation	✓	✓	✓
Open green spaces	×	×	✓
6-Proximity			
Proximity of play groups and social amenities to each other	✓	×	×

Comparison of the parks in İstanbul that feature inclusive features

Göztepe 60. Yıl Park is located in Kadıköy district. The park was inaugurated in 2005, it was then renovated and reopened in 2013. After the renovation work, İstanbul Metropolitan Municipality Parks and Gardens Directorate for the Asian Side transformed the 8-hectare park into a theme park (Bahadır, 2014).

Göztepe 60. Yıl Park is listed among the top 15 playgrounds in İstanbul, and it features an ample space with play groups. The first section includes a technology-themed section where visitors can play audio games. The second section, also known as the 'action fly', includes the cable car. The third section features play equipment including but not limited to slides, swings, trampolines, cubic climbing track, and İstanbul-themed equipment such as the Bosporus Bridge and the Galata Tower. The fourth section includes the ship play group, which was made of teak to ensure resistance to air conditions. The playground is divided into four sections, and there is a fitness area right next to the play area. In addition to the fitness area, there are 7 tennis courts in the park where various tournaments are held.

The overall analysis of the park reveals that paths that can also be used by the disabled and ramps with optimum slope along with stairs were included. Four section for play and the fitness area include play equipment for children with disabilities, and disabled children who come to the playground with their families can seize the opportunity to use these play equipment along their peers. However, inclusive play equipment and paths appropriate for the use of the disabled are not sufficient to characterize the playground as inclusive. Therefore, due attention should be paid to other features such as the location of the park and whether users can benefit from the park in an equitable fashion. Although the park can be easily accessible with

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private cars and public transit, the responses provided by disabled respondents whom we surveyed imply that children with disabilities cannot access the park without any assistance. When the park is analyzed on the basis of the inclusive design approach, it is evident that it has features that are in favor of the disabled.

Dilek Sabancı Park is located in the Levent neighborhood of Beşiktaş district. It is quite significant for it is the first park designed for the use of the disabled, and for it proves to be the first park where disabled children can play themselves without any assistance (Bahadır, 2014). The park was inaugurated in 2002, and it is 16 750 m2.

There are 2 large children’s playgrounds in the park. Only one the playgrounds have only a single swing appropriate for the use of the disabled. This swing is located in isolation from the other play equipment, and thus is far from being inclusive. The second playground does not include any play equipment appropriate for the use of children with abilities, and sand was used as a surface material. Consequently, although there are two playgrounds and the paths that lead to the playgrounds are designed with the disabled in mind, children with disabilities cannot use these playgrounds.

Despite the fact that the children’s playgrounds are not used by disabled children, the paths within the park are designed with the disabled in mind. Ramps with adequate slope and width as well as the railings used where necessary help the disabled use the park. Furthermore, stairs are located where necessary allowing everyone use the park and making the park achieve a certain level of inclusiveness. In addition to the children’s playgrounds, there are basketball and volleyball fields, an indoor fitness center, cafeteria, a decorative pool and children's playgrounds.

When Dilek Sabancı Park evaluated on the basis of inclusive design principles, it is apparent that the park was designed accordingly to prioritize the disabled.

Individuals with disabilities who visit the park can reach anywhere in the park thanks to the ramps at optimum slope and number. Even so, the observations revealed that the social amenities and children’s playgrounds are not appropriate for the disabled. Only one of the playgrounds feature a swing for the disabled, while the second playground does not include any inclusive equipment for children to play. Moreover, the swing for children with disabilities is placed in isolation from the main group of play equipment, and the surfaces in both playgrounds prove to be an obstacle for the disabled. Thus, it is possible to

suggest that both playgrounds do not comply with the inclusive design approach.

In short, despite the fact that Dilek Sabancı Park is the first park specifically designed for the disabled, it still has certain shortcomings in terms of inclusiveness. Also, the design of the park is appropriate for the use of the disabled, however, it separates users with disabilities from other users. In addition, the playgrounds in the park cannot be used by children with disabilities due to the fact that they lack the appropriate features.

Selamiçeşme Özgürlük Park is located in Selamiçeşme vicinity of Kadıköy district. Given its proximity to public transit thanks to its location in walking distance from Bağdat Street and Minibüs Street, the park stands out with its highly convenient location.

The park has an area of 120.000 m2, and it has become a point of attraction for the residents of İstanbul on account of the social amenities and the green spaces it provides. The park enables users to rest and have fun at the same time, thus it is used by many particularly on the weekends.

There exists numerous opportunities and facilities inside the park to fulfill the evolving physical and social needs of individuals. These include football and basketball courts, a tennis court, walking trails, bicycle and jogging track, children's playgrounds, sandpit, fitness area, decorative pools, an amphitheater, special areas for pets, picnic areas, rest areas, cafeterias and tea gardens.

There are 5 playgrounds in Özgürlük Park. The observations conducted in the scope of this study indicate that 2 of these playgrounds can be easily accessed by disabled children, while the other 3 require assistance to access and thus cannot be used by children with disabilities.

When Selamiçeşme Özgürlük Park is analyzed based on the inclusive design criteria, it is possible to suggest that the overall design of the park is appropriate for the use of the disabled, and users with different abilities have equitable access to the park.

The analysis of the 5 playgrounds found in the park reveals that 2 of these are easily accessible by all children, whereas the other 3 fail to provide access to children with disabilities. The playgrounds which cannot be accessed by the disabled have stairs at their entrances and do not have adequate play equipment for the disabled. Rubber or rammed earth are used to cover the surface in all 5 playgrounds. These materials are not appropriate to be used by children with disabilities and particularly by wheelchair users. When the play equipment in the playgrounds are observed, it was evident that they were not

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in appropriate dimensions, and thus could not be used by children who use assisting devices.

In summary, Selamiçeşme Özgürlük Park is in general designed considering users with disabilities. However, the playgrounds in the park are not inclusive due to characteristics such as the play equipment and surface materials. Consequently, the park cannot be used by children with disabilities and fails to fulfill their need to play along with their peers.

CONCLUSIONS

Göztepe 60. Yıl Park, Dilek Sabancı Park and Selamiçeşme Özgürlük Park were all designed with a particular focus on inclusiveness. The analysis of these parks based on the requirements of inclusive design approach, it is possible to suggest that all 3 parks include paths that are equally accessible by users with different abilities. Even so, Dilek Sabancı Park is far from being inclusive due to the fact that the paths that lead to the playgrounds and the paths inside the playgrounds are not appropriate for the use of children with disabilities. When the playgrounds in these parks are evaluated, Göztepe 60. Yıl Park proves to be most appropriate for disabled children, and it allows users -whether disabled or not- enjoy play equipment along each other. On the other hand, as mentioned previously, Dilek Sabancı Park does not feature any playgrounds appropriate for the use of the disabled. A total of 5 playgrounds were designed in Özgürlük Park; however, none of them can be used by children with disabilities due to inappropriate surface materials and play equipment.

EVALUATION AND RECOMMENDATIONS

This study addressed the importance of inclusive playgrounds and provided an analysis of the existing parks in İstanbul based on inclusive design principles. According to the findings of the study, the recommendations listed below can be emphasized:

- Designs that comply with the inclusive design criteria should provide equitable rights of use for everyone, they should be kept simple by eliminating unnecessary complexity, and above all, they should be implemented so as to ensure the safety of users.
- Playgrounds are critical in fulfilling children’s need to play; therefore, any designs proposed for children’s playgrounds should pay due attention to the inclusive design criteria and consider all children regardless of whether they are disabled or not.

- Children's playgrounds should ensure equitable access not only between two locations within the playground but also to the play equipment and social amenities. Therefore, disabled users shall be considered accordingly, and ramps with optimum slope and width should be included in the playground equipment where necessary.
- Along with the standards for accessibility, creativity should always be considered when designing children's playgrounds. Playgrounds should include play options which intensify the desire to play and which are interesting and inclusive.
- Every child learns in a different way, thus the notifications on the playground should address different learning styles in order to enable users to easily digest the information provided.
- The equipment on the playground should enable children maintain a natural body posture; sufficient space for children who use assisting devices should be provided; the playground surface material should be smooth enough to allow the use of wheelchairs, and the paths in the playground should have different widths and characteristics so that they can be used by children with different abilities.
- When designing inclusive playgrounds, not only the design professionals but also the relevant authorities play a critical role. Authorities should endeavor to inform both the residents of İstanbul and society in Turkey about disabled individuals and disability; they should raise awareness by carrying out various projects and by taking advantage of the social media and mass communication tools, and they should make every effort to prevent the exclusion of disabled individuals from society. Such activities can make individuals who are not disabled can truly empathize with the disabled and show more respect to the disabled members in society. When authorities inform society about disability, they should put specific emphasis on children with disabilities and on the importance of inclusive playgrounds from which disabled children can also benefit.
- Apart from raising awareness, research about disabled children's opinions on and expectations from play and playgrounds should be carried out (Pola, 2015), and the designs proposed should be grounded on the research performed.

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In short, existing obstacles should be eliminated by adopting a design approach that provides not only accessible but also inclusive playgrounds.

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Re-specification of Concepts in the Morphogenetic Approach for Property Market Research

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Abstract

The Morphogenetic Approach (MA) was developed to explain social structural change processes by sociologist Margaret Archer in 1995. MA became a remarkable and much-debated approach shortly in social sciences because of its unique consideration about structure and agency dualism. Although MA has been discussed intensively in the science world, its appropriateness to real world situations has slightly been questioned by scholars and it has been applied very few to social fields other than education. Starting from this gap, this study aims to introduce MA to property researchers and turn it into a practical methodological tool which may easily be used to explain any social change process in urban and property studies. The study attempts to test the suitability of this methodological tool for property market studies as an alternative social field and seeks the answer of this basic question: "Can we explain the change process of a property market with the help of concepts and methodological framework in MA?". An in-depth and comparative literature review method has been used in this

Keywords: *Institutional approach, morphogenetic approach, property market, social process, structural change.*

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methodology-focused research. The research reveals that despite some of its weaknesses, MA is a useful methodological tool which may be used in explaining the change process of a local property market. The study also makes some important theoretical contributions to the structure and agency dualism.

INTRODUCTION

Understanding the social dimension of property market activities depends on the transfer of different perspectives and innovative research methodologies from social sciences to the property field. This study attempts to adapt the Morphogenetic Approach (MA) whose theoretical and methodological foundation is very strong to property market research. MA's sophisticated concepts and complex methodological framework has been simplified; the simplified methodology has then reconstructed for the explanation of the change process in a local property market in this research. Each concept in MA has been re-specified from the perspective of property markets to explore the strengths and weaknesses of MA in a real world practice. The study brings a new methodological tool in the property literature.

The paper consists of five sections. Section 1 provides general information about the paper. Section 2 makes a comprehensive review of MA; after the introduction of MA, MA's concepts, which are used to explore social change processes, are defined and explained. This section also mentions debates on MA. Section 3 considers how MA's concepts are re-specified for property market research. Section 4 is the discussion section which explores the strengths and weaknesses of MA, which have been revealed during the re-specification. The suitability of MA for property market research is questioned in this section. The final section concludes the success of MA as a methodological tool in the explanation of a social structural change in a property market.

REVIEW OF THE MORPHOGENETIC APPROACH

MA was developed by sociologist Margaret Archer, who is one of the pioneers of the Critical Realism (CR) movement, in 1995. Archer was the first person to apply CR in a sociological field (education). Thus, Archer has opened the way for CR to be applied to different study areas in social sciences. MA tries to explain how a structural change process runs in a society, so it can be applied to all kinds of social processes. The explanation of different social change processes through MA may provide an opportunity for social scientists to make a comparison between varied structural change processes.

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Basis of MA

MA is an approach which uses the 'structure and agency dualism'. Archer tries to analyse the structure and agency dualism from an open critical-realist perspective at the pre-development stage of MA. According to MA, agents have some influential and transformative powers over structures; and structures also have some influential and transformative powers over agents. MA is distinguished from 'individualist' and 'structuralist' approaches by its perspective.

In the individualist approach, social reality comes into existence entirely as a result of individuals and their activities. Structures remain passive, so they are perceived as fixed variables. However, individuals are perceived as independent variables, so individuals have one-way causal effects on structures, from bottom to top. In the structuralist (holist) approach, individuals are seen as inert agents who are deprived of the power of moving and behaving independently. Individuals are perceived as fixed variables, so structures have simple one-way causal effects on individuals, from top to bottom. Archer carries this known structure and agency dualism a step further and states that 'structure' and 'agency' may be separated from each other in a society. In line with this, Archer adds a new conflation at the centre of this dualism. With the help of this central conflation, first, 'structure' and 'agency' are separated from each other in the general operation of this dualism. Next, the issue of how downward conflations and upward conflations occur is explored using some conceptual tools in this interim stage of structure/agency dualism (M. Archer, 1995).

Analytical Dualism

MA is founded on the concepts of analytical dualism; so, firstly, MA tries to understand what analytical dualism is. 'Structure' and 'agency' are found at two opposite sides of this analytical dualism. With the help of this dualism, the issue of why matters are so and not otherwise is open to examination (M. Archer, 1995). This perspective is the basic way of thinking of Critical Realists. Archer asserts that 'structure' and 'agency' must be separated from each other in a structure and agency dualism. 'Structures' may be identified independently from 'agents' through this separation and the causal effect of identified structures on agents may be researched in this way. At the same time, contingent relations and results which emerge as a result of upward/downward relations are explained in this dualism (Lockwood, 1964). Downward and upward relations between structures and agents may be understood through the separation

of structure and agency. The problem of reduction of one side to the other is removed through this approach. Archer explains the matter of the separation of structure and agency with 'link rather than sink' words. In a sense, she rejects the structure and agency duality and adopts another structure and agency duality. In parallel to Archer, Lockwood (1964) states that the separation of structure and agency is not possible analytically, but can be achieved when the time factor is included in this understanding (Lockwood, 1964).

Archer settles time at the centre of MA, drawing inspiration from Lockwood. Time is incorporated as sequential tracks and phases rather than simply a medium through which events take place in MA. In this way, structure and agency can operate in different time periods as separate from each other. This operation must be based on this basic principle: 'Structures are formations which emerge before the beginning of agent actions. Existing structures have an impact on the transformation of agent actions. Therefore, transformed agent actions may change the existing structures' (M. Archer, 1995). MA explains social changes dividing them into 3 parts (see Figure 1):

a. Structural Conditioning
b. Social Interaction
c. Structural Elaboration

These 3 parts refer to the three stages of the 'morphogenetic cycle'. These 3 stages are explained briefly one-by-one below.

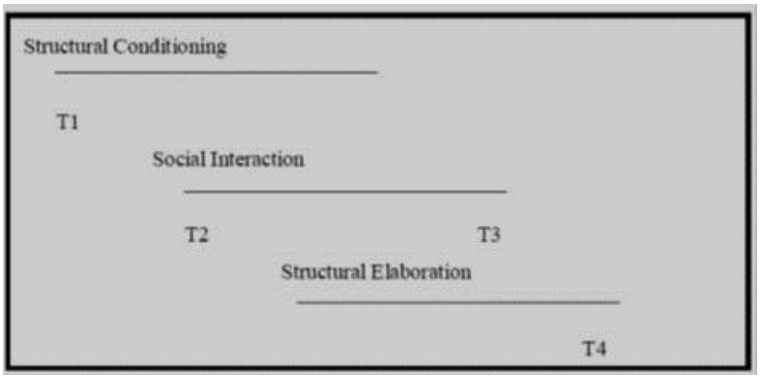

Figure 1. Morphogenesis of structure

"Structural conditioning" is about the outcomes of systemic actions which happened in the past. Institutions are 'refined structures' which are established by previous agents. One of the basic philosophies of MA is this: 'Previous agential interactions and past social events have causal effects on today's agential interactions and social events' (M. Archer, 1995) (see Table 1).

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Table 1. Situational logics in MA and their outcomes in the morphogenetic cycle ((M. Archer, 1995) illustrated by the author)

Agents	Followed Situational Logics	Result	Final Products (SEPs)
Primary Agents & Corporate Agents	Protection Correction	Stasis (No change)	The continuation of existing roles and institutions in the social system in the same way
	Elimination Opportunism	Genesis (Change)	The emergence of new roles and institutions in the social system

"Social interactions" occur under structural conditions, but are not specified by structural conditions. In other words, social interactions are 'emergent'. Structural conditions provide some advantages to some agents and provide some disadvantages to other agents. In other words, structural conditioning is interpreted by different agents in different ways. For this reason, agents generate different behavioural models under the same structural conditionings. Rewarded agents who benefit from structural conditionings try to sustain these conditionings, whilst agents who suffer detriment from structural conditionings try to change them. Structural conditionings do not force agents to do something; they just condition agents. Agents pay some costs if they do not take structural conditioning into consideration; but conditioning is not wholly determinist (see Figure 2).

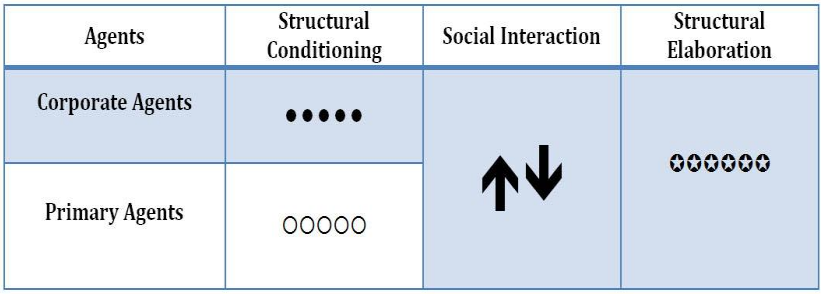
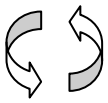


Figure 2. Structural change as a result of interactions between primary and corporate agents in MA

"Social elaboration" is the final stage of the morphogenetic cycle. At this stage, previous structures undergo a modification and new structures emerge as the combined results of actions of different social interest groups. New emergent structures cannot be predicted in advance; nor can they be designed. The morphogenetic cycle is then completed after the emergence of new structures; but a new morphogenetic cycle starts immediately. These cycles always go on in the same way (see Table 2).

Table 2. Mechanisms of the bargaining power and the negotiating strength and their outcomes in MA ((M. Archer, 1995); illustrated by the author)

Agents	Mechanisms	The integration of agents' interests	Result
Primary agents  **Corporate agents**	Bargaining Power & Negotiating strength (based on resources)	No	Stasis (No change)
		Yes	Genesis (change)

There are four basic propositions of the Morphogenetic Analysis (M. Archer, 1995):

- There are internally and externally necessary relations within and between social structures,
- Causal influences are exerted by social structure(s) on social interaction,
- There are causal relationships between groups and individuals at the level of social interaction, and
- Social interaction elaborates upon the composition of social structure(s) (by modifying current internal and necessary relationships and introducing new ones where morphogenesis is concerned).

The first proposition is a kind of authorisation for the analytical dualism. There are some structures which are created as a result of past social interactions and past events. These structures exist as separate entities which are independent of present agents. The second, the third and the fourth propositions refer to the three stages of the morphogenetic cycle. The structuralist view only accepts the second proposition whilst the individualist view only accepts the third proposition. However, 'Structuration Theorists' or 'Central Conflationists' only accept the fourth proposition; namely, they do not see the second and the third propositions as separate assertions so they miss these points. The fourth proposition is about the capacity of agents to transform structures. With the help of these four propositions, MA brings a much more sensitive explanation to the structure and agency dualism. In order to understand MA better, it is necessary to explain the concept of 'emergent property' first because critical realists emphasize 'emergence' as the basic point of their approach.

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MA accepts that there are two different types of 'emergent property' (M. Archer, 1995). The first type is 'Structural Emergent Properties' (SEPs). SEPs are emergent properties which differ according to physical and human resources. Roles, institutions and systems can be considered in the context of SEPs. Every SEP emerges as a consequence of a previous material morphogenetic cycle. In short, every SEP is the outcome of social interactions which have been experienced in the past; every SEP is also a structural entity which will have an influence on future social interactions. A morphogenetic cycle starts with the first SEP. Every SEP then conditions social interactions which follow the first SEP. Social interactions and social changes produce new SEPs. The emergence of new SEPs means the beginning of new morphogenetic cycles. These cycles always follow one another so every SEP retains some patterns of the previous SEPs. The second type of 'emergent property' is 'Cultural Emergent Properties' (CEPs). CEPs are analytically similar to the SEPs. CEPs are related to essential ideational relations between social structures whilst SEPs are related to material relations; so from this point of view CEPs differ from SEPs. Theories, beliefs and ideas can be considered in the context of CEPs. Every CEP is an outcome of the previous cultural conditionings and socio-cultural interactions. In other words, every CEP is a cultural outcome (emergent) of previous cultural morphogenetic cycles. As with the SEPs, the existence of a CEP depends on the existence of past cultural context and past socio-cultural interactions. In this context, experiencing morphogenetic cycles bring new CEPs out. Thus, these cycles always follow each other, so every CEP retains some patterns of the previous CEPs (M. Archer, 1995). So far, the basic view of MA on sociological structural change processes and the general framework of MA have been described in detail.

General Criticisms of MA

Some sociologists have offered criticisms of MA in the last fifteen years. Before the description of MA's concepts one by one, it is better to provide the criticisms of social science scholars against MA in this section. In general, MA is considered by many sociologists as a very sophisticated and convincing approach, both conceptually and intellectually. Stones (2001) states that MA brings a conceptual richness and a new, different perspective to the structure and agency dualism (Stones, 2001). According to other sociologists such as (McAnulla, 2002) and Willmott (2000), the elements of culture are successfully accommodated into the structure and agency dualism in MA. These scholars also emphasize that the 'ideational' aspect of social life, which is culture and its role, is defined clearly in MA. Carter (2000)

mentions that MA is a successful approach in explaining social change processes. (Carter, 2000) also supports the words of Archer mentioned below:

> …the distinctive feature of the morphogenetic approach is its recognition of the temporal dimension, through which and in which structure and agency shape one another. (2000, p.92).

(Czerniewicz, Williams, & Brown, 2008) assert that MA provides social scientists with a rich and worthy framework so that social change processes can be examined in depth using MA's consideration of structure and agency:

> Archer's theory of the relationship of agency and structure would provide a rich and valuable framework to deepen our understanding of these important biographical accounts (2008, p.87).

Some negative criticisms have also been offered against MA in the literature. (Hay, 2002) argues that MA comprises an ontological dualism rather than an analytical dualism. He states, 'to speak of the different temporal domains is … to reify and ontologise an analytical distinction' (Hay, 2002). In addition, Hay (2002) considers that the concept of 'agent' is not defined very well in MA:

> The morphogenetic approach implies a residual structuralism only punctuated periodically yet infrequently by a largely unexplicated conception of agency (Hay, 2002).

Akram also argue that 'there are significant problems with Archer's concept of agency' (Akram, 2013). King (1999) describes the morphogenetic approach's ontology as 'fallacious', believing 'any form of ontological dualism which posits a realm of objective or structural features is a mere reification'. According to him, a theorist has to argue that 'there are some other aspects of society which are independent of any individual in that society' (King, 1999). In contrast to scholars who consider MA as a complex and stratified approach, (Jessop, 2005) asserts that MA is a 'unilinear' and a 'monoplanar' approach. Jessop also argues that the concept of 'space' is ignored in MA:

> …it adopts a flat temporal ontology, neglects space, and treats the poles of structure and agency in terms of a relatively undifferentiated concept of society and people rather than engaging with specific sets of structural constraints and different kinds of social forces… (2005, p. 47).

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Finally, some sociologists such as (King, 1999), (Stones, 2001), (Salgado & Gilbert, 2013) raise the issue of 'what emergence means' or 'what emergence should mean', which is not clear in MA. (Elder-Vass, 2007) also accepts the weakness of MA in defining the concept of 'emergence'; therefore, he tries to contribute to MA by searching for ways of filling in this gap. It is seen that most criticisms against MA are on a very philosophical level. The developer of this approach, Archer, has answered these criticisms on the same philosophical level (M. Archer, 2000; M. Archer, 2007, 2010). This study attempts to use MA as an operational methodological tool to fill in a property market research. Therefore, criticisms especially regarding the practical use of this approach are much more important than theoretical criticisms because the strengths and weaknesses of MA in explaining the structural change process of a property market is more important for this study rather than other philosophical issues. To understand the explanatory power of MA, it is necessary to see the use of this approach as a methodological tool in past empirical studies (Pawson & Tilley, 1997).

It is seen that MA has not been used very much up to now in empirical research in social sciences. In the literature, a few empirical studies which use MA as a methodological tool have been carried out. In the first three of these studies, MA has been applied to the field of education. (Quinn, 2006), using MA, tried to analyse the emergence of an official academic staff development programme in a small university in South Africa. Priestly (2007) tried to understand changes in the secondary education system in Scotland with the help of MA. In this context, Priestly examined the issue of how teachers adapt their schools' education curriculums to the new secondary education system developed by the government. Czerniewicz et al. (2008) also applied MA to the field of education (Czerniewicz et al., 2008). Using MA, these scholars tried to explain the relationship between the provision of technological equipment for students by universities and the use of this equipment by students in three different universities in South Africa. Swain (2004) was the first to apply MA to a social field other than education (Swain, 2004). Swain has attempted to understand the emergence and development process of retail warehouses in UK with the help of MA. The final study using MA as a methodological tool belongs to Fleetwood (Fleetwood, 2008). Fleetwood has adapted the concepts of MA, such as structure, institution, agency and habit, to a specific social field, 'labour markets'. In this way, he tried to reify and clarify these concepts in an empirical research project. The aim of Fleetwood's research was to see empirically the

reality of the structure/agency relationship which is mentioned in MA.

It is possible to find both positive and negative criticisms against MA in the literature but which is clear is MA has been adapted to real world situations very few up to now. To develop MA into a methodological tool which can be used easily in all social fields, it is necessary to test the suitability of this approach for real world situations through using it in more empirical research in varied social fields. Starting from this need, the concepts of MA are re-specified to property market studies in the next section.

RE-SPECIFICATION OF CONCEPTS IN THE MORPHOGENETIC APPROACH FOR PROPERTY MARKET RESEARCH

A property market is considered as a social construct according to the institutional approach (the cultural economy version). As a social construct, a property market is identified and formed by the perceptions and activities of social agents (Healey, 1992, 1995), (Guy & Henneberry, 2000). The institutional approach accepts that, like all social systems, property markets are created by certain social actors in a certain time; and property markets may change dependent on social actors' decisions and behaviours and dependent on interrelations between social actors (Healey, 1995; Henneberry & Roberts, 2008). According to this approach, social actors and interrelations between them, and also social structures established to condition property market players prevent the emergence of sudden structural and cultural changes in a property market so the change of a property market has to be considered as a process which progresses cumulatively and evolutionary (Keogh & D'Arcy, 1999; Magalhaes, 1998). The issue of how a property market is created and how it changes in time is important because property markets have an efficient role in the development of urban built environments (D'Arcy & Keogh, 1998). Property markets are not social systems which affect only the type and quality of urban environments. Besides, they play a crucial role in the provision of social justice, in the prevention of poverty and in the enhancement of life quality in urban societies (M., 2011). Therefore, social actors involved in a property market, social structures which are created historically by these social actors and the influential power of these structures on the decisions and behaviour of property market players are significant issues to be emphasized in property studies. In short, when the creation and evolution of a property market is known, the ways of developing that property market into one which serves positive urban developments may be explored easily.

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As mentioned before, MA explains a sociological change process using the structure and agency dualism. The change process of a property market may also be explained using a structure and agency dualism. The property market may then represent the 'structure' and property companies may represent 'agents'.

In line with this, for a property market research, "structures" may refer to:

- Laws
- Public Authorities
- Associations

These are macro structures which condition agents, in other words which strongly promote certain behaviours of agents in a social system. Laws are a set of rules, enforceable by the courts, regulating the government, the relationship between the organs of the government and the subjects of a country, and the relationship or conduct of subjects towards each other. 'Public authorities' refer to a country's national or local government agencies. 'Associations' are the organizations of the actors in a property market that have a common purpose and a formal structure.

"Agents" may refer to:

- Property Construction, Development and Investment Companies
- Property Service Companies (Consultancy, Agency, Management, Valuation)

The question of how a property market changes structurally as a result of varied interactions between property companies may be answered through the specification of multi-dimensional upward and downward relations and through the identification of new structures which emerge as a result of the relations established in a property market research. Most industrial companies may display more than one activity in a property market so varied property companies are presented as grouped above. These type of companies are the most important players of a property market because they have the power to promote other market players and to change the structure of a property market.

The concept of **'situational logics'** may refer to property companies' market strategies and the concept of **'intentionality'** may refer to property companies' institutional vision. Collecting data regarding the market strategies and institutional visions of property companies which are active in a property market is not very hard for a researcher; again, there is no need to develop special methods for the specification of situational logics

followed by property companies in a market. 'Intentionality' may refer to the future plans of owners and managers of a company. A company can specify three basic institutional visions for itself in a property market. These are 'grow', 'wait/keep the market position' and 'shrink/leave the market'. 'Intentionality' is a concept regarding MA's structural conditioning stage. The four situational logics regarding the structural conditioning stage in MA may be re-specified as follows:

a. **Protection**: This is the situational logic that may be followed by property companies which do not want a change in the institutional, legal and industrial setting of a property market in case they lose their existing gains and positions in that market; which become unhappy when another company is involved in the market; which do not renew themselves according to changing market conditions and adapt themselves to these changing conditions; and which are closed to cooperation with other companies.

b. **Correction**: This is the situational logic that may be followed by property companies which do not want a change in the institutional, legal and industrial setting of a property market in case they lose their existing gains and positions in that market; which become unhappy when another company is involved in the market; which try to renew themselves to keep their market positions at the same level and to adapt themselves to the changing market conditions to re-gain their market powers which they are slowly losing; and which are closed to cooperation with other companies.

c. **Elimination:** This is the situational logic that may be followed by property companies which want a change in the institutional, legal and industrial setting of a property market in order to find an opportunity to raise their positions and to become more powerful in the property market; which perceive the presence of other companies in the market as a threat to themselves; which try to remove other companies from the market, to seize opportunities much more than before and to increase their market power as much as possible; and which are open to cooperation with some companies to remove some other companies from the market.

d. **Opportunism:** This is the situational logic that may be followed by property companies which want a change in the institutional, legal and industrial setting of a property market in order to find an opportunity to raise their

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> positions and to become more powerful in the property market; which want to become powerful by accurately reading and following the development trends of the market; which become happy when a company is involved in the market; which perceive this involvement as an opportunity for themselves; which are open to cooperation with other companies; and which try to turn every development into an opportunity for themselves in the market, but do not perceive the presence of other companies as a threat to themselves, and do not try to remove other companies from the market.

According to MA, if agents follow the situational logics of 'protection' or 'correction', the existing structural setting of a social system is maintained and sustained in the same way. In other words, these logics do not take the social system to a structural change. As a result, structures which emerge at the end of a cycle will be the same as structures which exist at the beginning of that cycle. In contrast, if agents follow the situational logics of 'elimination' and 'opportunism', the existing structural setting of the social system changes; these logics take the social system to a structural change and as a result structures which emerge at the end of the cycle will be different from structures which exist at the beginning of that cycle (see Table 1).

The presence of an excessive number of companies which follow the 'protection' logic may be a factor which limits or delays a structural change in a property market because the logic of protection is based on the principle of remaining 'unchanged'. The presence of an excessive number of companies which follow the 'correction' logic may be an indicator that the balance of power has started to be disturbed, so a structural change has already started in that property market. If that is the case, this means the social integration of that property market is getting weaker and some incompatibilities are seen between the legal/institutional structure and the industrial structure. Again, this means that existing companies are at risk of losing their positions and power in that market. The presence of an excessive number of companies which follow the 'elimination' logic may indicate that there are some problems or conflicts between industrial players in the property market. Then, a change in the legal and institutional setting of the market is required for the solution of these problems in order to increase the level of social integration in that market. The presence of an excessive number of companies which follow the 'opportunism' logic may take a property market to a rapid structural change, because these

companies may work hard, moving in a very active and organized way, to change that property market structure to the benefit of themselves. In this context, the situational logics that may be followed and their results for a property market study are shown in Table 3 below. This table shows the morphogenetic analysis method that may be used in a property market research.

Table 3. Morphogenetic analysis method: MA's situational logics and their outcomes ((M. Archer, 1995) adapted by the author)

Agents	**Followed Situational Logics**	**Result: Legal and Institutional Change in the market**	**Final Products**
Property companies in a property market	Protection Correction	No	The continuation of current laws, public authorities and associations in the same way
	Elimination Opportunism	Yes	The emergence of new or revised laws, public authorities and associations

MA explains the social interaction stage with the concepts of bargaining power and negotiating strength and emphasizes 'resources' in the operation of these mechanisms. **'Resources'** may refer to resources which property companies need to operate in a property market. The bargaining power may refer to market resources which are held by property companies operating in a property market. It is necessary to find and define market resources initially to understand and see which company possesses which resources in a property market. The negotiating strength may refer to the role of resources in partnership negotiations between property companies or business negotiations between companies and their clients in a property market. In other words, in the context of the negotiating strength concept, these questions may be asked and answered: 'How does a property company use its resources in a negotiation process?' and 'How does the use of these resources affect the success of the realisation of a partnership or a business?' Interactions between agents may refer to the establishment of a legal partnership between property companies or the establishment of a business agreement between companies and their clients based on a formal agreement in a property market. Issues with regard to the operation of bargaining power and negotiating strength mechanisms in partnership or business negotiations and their impact on a property market's structural change process may be considered as follows: 'The structure of a property market

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changes when a company uses its resources in a negotiation process in a successful way and this negotiation process finishes with the establishment of an institutional partnership or with the creation of a business. If the resources of companies and the use of these resources in negotiation processes do not ensure the realisation of a partnership or a business agreement, the current industrial setting continues in the same way and so the structure of that property market does not change' (see Table 4).

Table 4. Mechanisms of the bargaining power and the negotiating strength and their outcomes for a property market study ((M. Archer, 1995) adapted by the author)

Agents	Mechanisms	The realisation of a partnership or a business	Result
Property Companies	Bargaining Power (the resources of companies) & Negotiating strength (the role of resources in partnership or business negotiations)	No	Stasis (No change in the structure of the property market)
		Yes	Genesis (change in the structure of the property market)

The author has faced with some problems while re-specifying MA's concepts for property market studies. The next section considers these hardships.

DISCUSSION: MA'S STRENGHTS AND WEAKNESSES

MA separates agents into primary and corporate agents in a social system so the author has tried to separate companies as active and passive in a property market. However, this attempt has revealed the first gap in MA. MA explains a social structural change by the transformation of primary agents into corporate agents and by the increase of corporate agents in a social system. Some struggles then begin between old and new corporate agents and these struggles support a change in that social system. However, changes in a property market do not fit into this explanation. Instead of a 'primary agent–corporate agent' relationship, a clear 'corporate agent–corporate agent' relationship is always seen in all interactions in a property market at all trajectories. A property company has to follow-up new businesses regularly; it has to arrange transactions successfully; it has to keep its inter-sectoral relations alive; and it has to be always open to cooperation and partnerships with other property companies to survive in a competitive property market environment (See also Wong, Chau, & Lai, 1996). In this way, a property company can only stand, grow and gain power in a property market. A company who stays passive for a while in a

property market cannot find new clients and so its market share and power starts to run down (See D'Arcy & Keogh, 1998). Since all property companies have to be active in a competitive market environment, the separation of companies into 'active' and 'passive' is not meaningful in a property market.

MA divides a structural change process into three successive stages and settles every stage in a separate clear time period. However, the division of a structural change process in a property market into separate stages and the examination of these stages in separate clear time periods may not be easy because of the interpenetration of these three stages in the development of a property market. The enactment of new laws and the emergence of new institutions progress historically and cumulatively in a property market so the three stages of the morphogenetic cycle from a time perspective may not be adapted exactly to the change of a property market.

There are many concepts related to the three stages in MA. This situation increases the complexity of the morphogenetic analysis. Therefore, a conceptual simplification is necessary for researchers in the application of MA to a real world situation. For example, the concepts 'involuntaristic placements', 'vested interests' and 'opportunity costs' may be left out of a property market study because special methods are required to collect and analyse data about these concepts. Instead of these three concepts, the concept of 'situational logics' [which may refer to property companies' market strategies], which is the combined outcome of the three concepts mentioned above, may be used in a property market research. Collecting data regarding the market strategies may not be very hard for researchers; again, there will be no need to develop special methods for the specification of situational logics followed by companies in a property market. Unfortunately, data collection and analysis methods for many concepts are missing in MA.

MA is not an approach which is very interested in the characteristics of final products which emerge at the end of a morphogenetic cycle. The most important matter for MA is the realisation of 'change' at the end of a cycle. However, the characteristics of the final structural products (SEPs) which emerge at the end of a morphogenetic cycle should also be explored using morphogenetic analysis. For example, the content of new laws and the aim/characteristics of new public authorities/associations which emerge as a result of interactions between property market players may have an importance for some property research. MA says nothing about the features of

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emergent properties (SEPs) which are the final products of a morphogenetic cycle.

CONCLUSION

This research shows that MA is a useful methodological tool which may be used in explaining all kinds of social change processes, including the change process of a local property market. MA contextually is a very sophisticated and comprehensive approach because it uses many old and new concepts while explaining multi-dimensional and complex social change processes. The conceptual richness of MA allows researchers to take very different aspects of social structural changes into consideration and to examine these aspects in detail. However, the conceptual richness also makes the use of MA difficult as an operational tool in a social research. In addition, data collection and analysis methods for some concepts are missing in MA, which can be a problem in fieldworks for researchers. Therefore, a conceptual simplification in the use of MA as a methodological approach is necessary in a research.

The structure and agency resolution of MA works in an accurate, successful and unproblematic way in a property market research. 'Structure' may refer to laws, public authorities and associations and 'agency' may refer to companies in a property market. Changes in the structure of a property market, as a consequence of the decisions and efforts of property companies, may be explored and explained with the help of MA's unique understanding of structure and agency dualism.

MA emphasizes the importance of resources and the use of these resources in social negotiation processes. Indeed, resources may play a key role in the realisation of industrial partnerships (partner alliances, franchises, joint ventures and acquisitions) or in the creation of businesses in a property market. The use of MA opens a new door emphasizing the significance and importance of resources in property market research.

This work reveals an important gap in MA. MA defines agents as 'corporate' (active) and 'primary' (passive) in a social system. However, this distinction is meaningless and invalid in a property market because there is no place for passive companies (agents) in a property market. Every player has to be active in a market. Otherwise, companies without any activity may be quickly pushed out of that property market (social system).

The morphogenetic cycle introduces the idea that social events do not appear suddenly; past events may have an impact on the emergence of social events today and in the future. This perspective of MA [that social events are interconnected with

each other] may be used easily and successfully in property market research because laws-public authorities-associations are historical; it means they all complete to each other and they emerge cumulatively dependent on periodical market conditions. Naturally, a past law or an institution affects the context of future laws and institutions.

Finally, relations between 'social structures' and 'space' in a social system are not an issue which is discussed comprehensively in MA. The spatial (locational) characteristics of a city are a very important factor in the structural change process of that city's property market. Therefore, issues associated with 'the significance of space' should be taken into consideration much more in a morphogenetic cycle. In addition, MA is not an approach which is very interested in the characteristics of structural emergent properties (SEPs), which appear at the end of a morphogenetic cycle. MA says nothing about the features of emergent properties (SEPs) which are the final products of a morphogenetic cycle.

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Resume

Dr.Fatih EREN graduated from Selcuk University, Department of City and Regional Planning (Hons) in 2003. Right after graduation, he started to work as a "research assistant" in the same department. During assistantship work, he took charge as a "researcher" in several research and application projects which were funded by Turkey's important public institutions. Meanwhile, he got MSc degree with a thesis on public and private partnerships in urban regenerations. He won a governmental scholarship from Turkish Council of Higher Education (YÖK) in 2007 and his PhD education then started in the Department of Town and Regional Planning at the University of Sheffield, UK. After the completion of PhD, which is about the internationalization process of Istanbul's property market, he turned back to Selcuk University, Department of City and Regional Planning as a "lecturer" at the beginning of 2013. His profession and research interest is on urban and regional planning, property markets, property development and investment so he is now teaching and conducting research on these areas at this university.

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Appropriation and Authenticity: The case of Transforming Churches into Mosques in Ayvalık

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Abstract

A special case of transforming churches into mosques was practiced after the population exchange agreement signed on 1923 between Greece and Turkey, which forced thousands of Greeks and Turks to migrate. The churches in Ayvalık, turned into mosques by incoming Turkish migrates, are representatives of this last practice. This paper discusses the concepts of appropriation and authenticity via examining the changes introduced in the form of alterations, additions and removal during the transformation of Ayvalık churches into mosques. This discussion is contextualized within the broader issue of appropriating past buildings and it has been argued that understanding of authenticity cannot be limited to the original meaning when the building was first designed and appropriated meaning can be as authentic as the original meaning.

Keywords: *Appropriation, authenticity, Ayvalık, Kydonies, churches, mosques, re-use*

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INTRODUCTION

The concept of authenticity as discussed in architectural discourse refers to something being true to its origin. As such authenticity of a human habitat refers to the original intention of the designer and the users of this habitat to construct it in the first place. However, within history it is witnessed that once the current function of a building become obsolete, people give them a new purpose for existence. As such authenticity cannot be equal to those properties of an environmental form that is given to it by its first designer and users. Rather, the concept of authenticity should be understood as the specific properties of the relationship between that environmental form and its users at different times. Authenticity understood as a relationship refers to the process that involves an act of appropriation. To appropriate, i.e. to make one's own what was initially alien, requires a fresh attitude from the people towards the environment. In this paper, transformation of churches into mosques in Anatolian town of Ayvalık will be examined as a case study to explore the concepts of appropriation and authenticity.

Hagia Sophia is one of the well-known examples of Ottoman practice of turning churches into mosques. Built as the new Cathedral of Constantinople of the Byzantine Empire by Emperor Justinian in 532-537 CE, Hagia Sophia was transformed into a Muslim mosque after the Ottomans conquered the city in 1453. Indeed, since the first days of Islam, Muslims transformed the existing religious buildings into mosques in towns that they conquered. The Umayyad Mosque in Samarra, known earlier as St. John's Church, is one of the earliest examples of this practice.

There might be quite a number of reasons that enabled to transform churches into mosques and one of them might be related to Islamic world view. According to Islamic thought, since everything in this world is created by the will of God, the environment, man-made as well as natural, are considered Islamic in origin. Because of that, according to (Kuban, 1998), it is not possible to think that any building with any kind of form might be against Islamic ideology. However, it should also be noted that converting a religious building from one to another was not unique to Muslims. After Spanish army conquered Spain in 1492 and ended the Islamic Empire that lasted for about 700 years in Spain, they transformed Cordoba Mosque into a cathedral in 1523. In other words, it might be possible to say that there was a general attitude of acceptance towards converting religious buildings and in general appropriating past buildings for new functions. Today, it is not even possible by most to accept the idea of converting a religious building.

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In this paper, a specific case of this transformation process is being examined. The 19th century Greek orthodox churches in Ayvalık, a small coastal town on western Anatolia, had been transformed into mosques by incoming Turkish migrants who were displaced after the 1923 population exchange agreement in accordance with the Treaty of Lousanne that was signed between Greece and the newly established Turkish Republic. Although most of the churches were transformed into mosques, in time only three of them were able to keep their function as mosques. Others functioned as tobacco depots and one as oil factory until 1984 protection law that left them unoccupied and in turn caused them to be in ruins. This study will enable us to examine and discuss the attitude of incoming Turkish migrants to these churches, which will help us to discuss the nature of appropriation and relate it to the idea of authenticity. It is also expected that this discussion will lead to contemplating and questioning our attitudes towards appropriating past buildings.

The paper first presents a brief history of the context of the study, the town of Ayvalık and then proceeds to describe the churches that are the subject of the study. The next section includes the examination of the transformation process of these churches into mosques after the population exchange agreement. The paper concludes with a discussion of appropriation and authenticity concepts during this transformation process.

AYVALIK: A SMALL ANATOLIAN TOWN

Located on the Aegean cost of Anatolia across from Midilli Island, Ayvalık was first known in history as Kydonies, a tiny port used by the pirates of the Mediterranean (Fig.1). It was named after quince fruit trees and its name 'Ayvalık' in Turkish and 'Kydonies' in Greek both means place with quince fruit trees. It was established as a settlement in the late 16th century by the Greek migrates from Midilli. After 1770s, Ayvalık started to flourish as did the coastal towns of the period due to their becoming trade and education centers. It was also around this time that Greeks under Ottoman rule gained some economic and social privileges based on the Küçük Kaynarca Treaty. Ayvalık, for example, had established an independent Greek municipality in 1773 and the Academy of Kydonies was established in 1803 as one of the few Greek academies permitted to open on western Anatolia, the others being in Izmir (1733), Sakiz (1792) and Istanbul (1804) (Arıkan, 1988; Clogg, 1972; Erim & Uygur, 1948). During this period, Turkish population had to leave the town except for the government workers and their families, who then lived in Sakarya neighborhood.

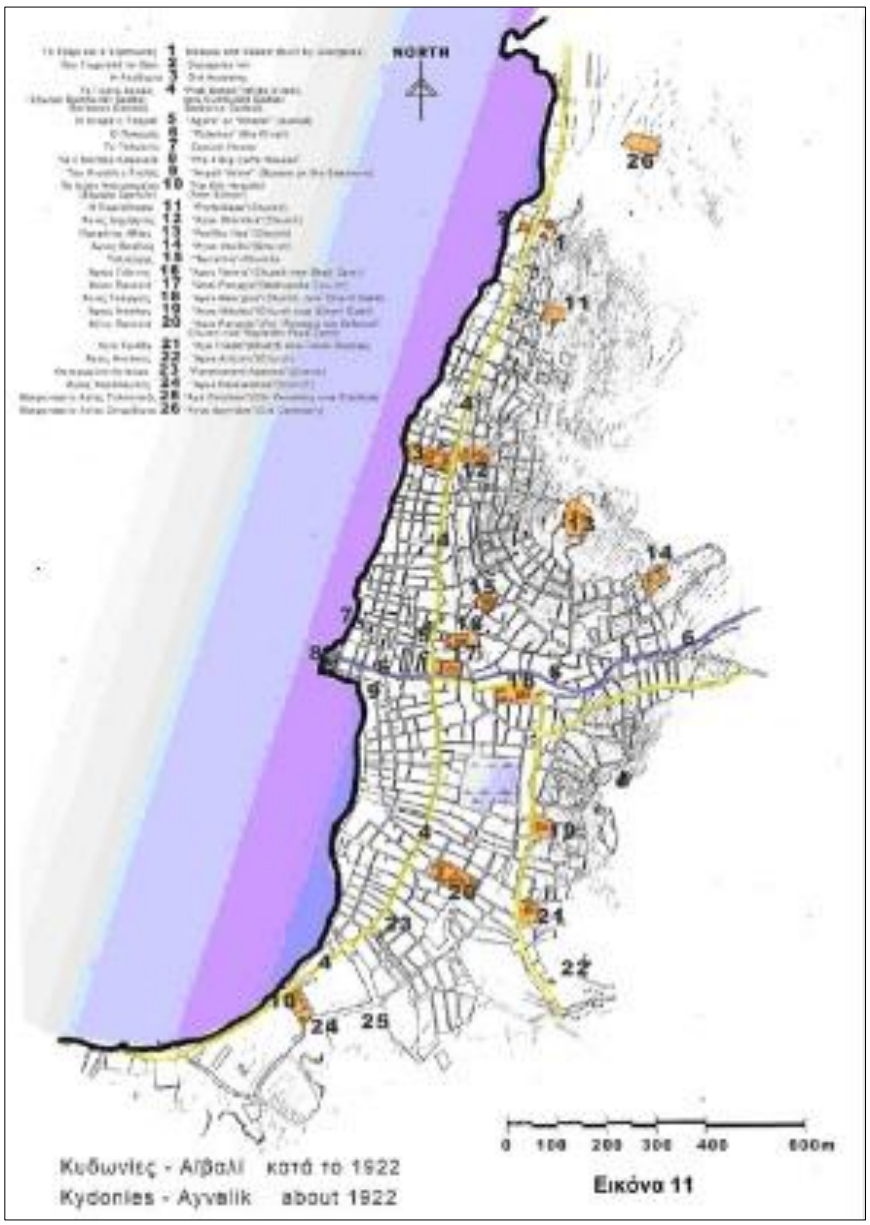

Figure 1. Ayvalik in 1922, (Psarros, 2004)

It was also around this time that Greeks under the Ottoman rule in Anatolia started to feel connected culturally and socially to newly established Greece sharing the same Greek past. As a result, there was an upheaval in 1821 mimicking the Greek revolution in the Balkans, when the town was completely demolished together with its eight churches. After the upheaval ended, which left the town in ruins, the Greek population had to flee the town. Only after 1832 decree that enabled them to move back in their homes that the town started to be reconstructed. It took until 1880s for the town to gain its prosperity back. The churches that were demolished during the upheaval were reconstructed, usually in bigger sizes, and some new ones were

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added. By late 19th century, Ayvalık had a population of twenty-two thousand, eleven neighborhoods and fourteen churches (11 in city center and 3 in nearby Alibey Island) along with forty olive oil and thirty soap factories (Bayraktar, 1998; Psarros, 2004). The oil and soap produced in the town were not only sold in Istanbul but also exported to Balkans, Marsalis and even to Russia. The city's importance was also reflected in the embassies opened in the town, including the embassies of Greece, Britain, Italy, France and Norway. Sir Charles Elliot defined the town at this time as the "Boston of the East" with its beautiful streets, parks, academia, library and loyal residents (Arıkan, 1988). With its population getting closer to thirty-thousand, Ayvalık was a metropolitan during the late 19th century.

One can only imagine the chaos that Greek and Turkish migrants lived, who left all their belongings together with their past lives and past histories back in their home in Ayvalık, Girit, Midilli or Macedonia. (Cengizkan, 2004a, 2004b; Güvenç, 2011; Pekin, 2005; Tosun, 2002) For all of them, it sure had to be a difficult process to make their new homes in the places they started to live in. In Ayvalık, there was no new construction or restoration of existing buildings until 1934 law that gave the migrants the ownership of the houses that they were living in. Yet, it was only after a decade in 1944 when the town was hit by a major earthquake considerably damaging the existing building stock.

The 1944 earthquake forced the government to focus on the town's development. The first city plan of Ayvalık in 1947 proposed a driveway on the shore, which opened in 1950, connecting the city to the country's major road network (İpek, 2003; Şahin, 1986). Until then, Ayvalık was a port-town on the shore that used sea transportation to connect to the world. It's being on the sea-line between Istanbul and Izmir provided to the city major advantages over the centuries. The oil and soap factories, for example, were constructed next to the sea to ease the problem of transportation. The new driveway damaged the city's connection to the sea but it helped the city to get connected to the country.

Due to the growing interest in the city, there was a major study conducted in 1964 by Istanbul Technical University Department of Urban Planning. The study examined the city history as well as its economic and social structure and proposed the town to be promoted as a tourist attraction site due to its well-preserved architecture that reflects the 19th century social and cultural life. With the increased touristic activity, national at first, new buildings started to be constructed causing the historic structures to be demolished. To preserve the architectural and

cultural heritage, the town has been accepted as natural and historical site in 1976 which stopped the construction within the boundaries of the historic city. Especially after 1984 study by Ministry of Culture and Tourism, the town was promoted and advertised to become a famous tourist attraction. The shift in the economy of the town from industry to tourism was also highlighted in 1985 Ayvalık master plan that suggested having pilot areas and pilot buildings to be restored and used for touristic activities (İpek, 2003). Today, not only national but also international tourists, 60% of whom are Greeks from close by islands, visit the town often.

AYVALIK CHURCHES

Along with the tall oil-factory chimneys, the churches in Ayvalık, with their size, height and form are the most dominant features in the city silhouette. These churches, though considered as part of Byzantine Orthodox churches, present original regional architectural features as the last Greek Orthodox churches constructed on western Anatolia and have been extensively studied since 1990s (Akın, 1998; Akpınar, 2012; Aktepe, 1994; Nigdelioglu, 2000; Psarros, 2004; Uçar & İnce Güney, 2007).

Of the fourteen churches that are known to exist in Ayvalık by late 19th century, eleven were located in the town center and three in nearby Alibey (named earlier as Cunda) Island. Today, only six of these churches still exist in the town center: Taksiarhis, Hagia Triada, Kato Panayia (Hayrettin Paşa Mosque), Hagios Ioannes (Saatli Mosque), Hagios Georgios (Cınarlı Mosque) and Feneromeni (Ayazma) churches. There is also a smaller privately owned church that needs to be mentioned: Portaitissa church located within the garden of the house that belonged to the bishop of Taksiarhis. It is known that the bishop held smaller ceremonies here during the weekdays and went to Taksiarhis only for Sunday public gatherings. Of the other churches—Hagios Dimitrios, Messi Panayia, Hagia Nikholaos and Profitis Ilias—some had been demolished during the war and some during the early Republican period and we only know their location[1].

In this paper, I will focus on and examine the seven churches, including the privately owned Portaitissa, which still exist today in Ayvalık city center. Of the seven examined churches, three of them have rectangular basilical plans, two of them belong to cruciform plan typology that emphasizes centrality and the other two have plans with a single nave (Fig. 2a and 2b).

1. Hagios Dimitrios has been used as a mosque until 1944 earthquake and then as an atelier for the nearby school. In time however, it was left to be demolished instead of being taken care of. A new building is erected on its place today. Profiti Elias, which is located on the highest hill in Ayvalık was constructed in 1835 and we have its pictures that show its bell tower as well. Messia Panagia, next to the bazaar area in the metropolitan center, was completely demolished in a fire during the republican period. We have no idea how Hagios Nichalous was demolished (Uçar & İnce Güney, 2007).

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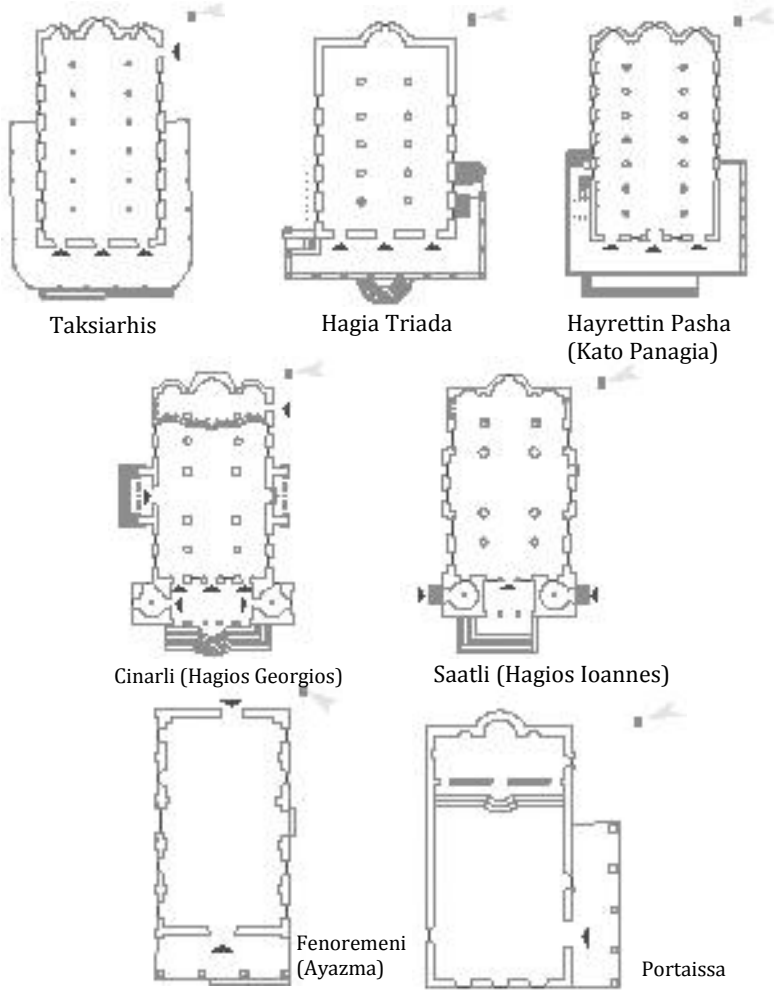

Figure 2a. Schematic plans of the church buildings that still exist in Ayvalik (İpek, 2003).

Figure 2b. Pictures of church buildings that still exist in Ayvalık (İnce Güney, 2007).

All of the churches with basilical plans had been constructed around the same time: Taksiarhis in 1844, Hagia Triada in 1846 and Kato Panagia in 1850.[2] The plan typology of these churches are very similar to the early church form of a rectangular hall, that is timber roofed, with two aisle on each side of the larger central nave, a sanctuary to the east and the principle entrance to the west. Taksiarhis, Hagia Triada and Kato Panagia also consist of a rectangular building running on east-wes t direction and enclosing the nave and the sanctuary. The U-form narthex surrounds the western end of these rectangular buildings though in Hagia Triada the narthex is closer to an L-form. The top part of the narthex is used as logia and reached via two staircases located on the northern and southern ends of the narthex.

Although they have similar basilical plans, these churches differ in terms of their sizes: Hagia Triada covers an area of 400sqm, Taksiarhis 500sqm, and Kato Panagia 750sqm. Kato Panagia, one of the three mosques used today, is the largest church in town in terms of its size. The difference in their sizes reflected in the number of columns placed between the central and side aisles—five in Hagia Triada, six in Taksiarhis, and seven in Kato Panagia. These equal-sized columns emphasize the east-west direction within the church interior.

Another common feature of these basilical churches is their collar braced roof made of timber. The ceiling over the central nave is higher then the side aisles and this enables to have roof windows over the central nave creating a unique interior atmosphere. This is a special characteristic of these churches that distinguishes them from similar basilical churches of Midilli Island (Psarros, 2004).

Except Hagia Triada with a single apse, the other two have three apses on their eastern walls. On their western walls, after the narthex, all of them have three entrances. The door in the center is larger then the doors on the sides. There are templons, icon covered screens, that separate the nave from the sanctuary in Kato Panagia and Taksiarhis churches, and there is no sign of a templon in Hagia Triada. Templons not only separate the sanctuary from the rest of the nave but also encloses the altar as well. On the surface of the templon, there are two kinds of entrances that lead from the nave to the sanctuary area: the main one in the middle of the templon known as “beautiful gate” from which only the clergy could pass, and the others on one or both sides of this door. The beautiful door is always more decorated then the others. In Kato Panagia and Taksiarhis, there is also a separate entrance to the sanctuary area from outside. This door does not exist in Hagia Triada.

2. In a small town in Ayvalık region, Kucukkoy, there is another basilical church, Hagios Athanasios which was constructed in 1840 (Uçar & İnce Güney, 2007).

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It is known that Taksiarhis Church located on Ismetpasha neighborhood has been constructed by builders Voyanikos and Yannis on the location of a church that was demolished earlier. The second inscription found on the exterior wall of the church indicates that this earlier church was constructed in 1753. The court in which the church is located is enclosed with high walls and covers an area of 1200sqm. At the corner of the court a monumental entrance door exists, which is reached from the street level via couple of circular-stairs. The bell tower that is known to be located on top of this door structure does not exist today. There is a small square in front of this monumental door and across the door is the main axis leading to the town center.

Kato Panagia Church, located in Hayrettin Pasha neighborhood, also has a court that is covered with high walls enclosing an area of 4000sqm. In addition to its being the largest church in terms of its size, Kato Panagia has the court with the largest area as well. Hagia Triada, on the other hand, does not have high walls surrounding its court today. Still, from the foundation of these walls that can bee seen on the ground today, it is clear that once Hagia Triada also had a court. Hagia Triada differs from the other churches with its ceiling that is covered with intricate wooden decorations. Another characteristic feature of Hagia Triada is its circular-formed stairs leading to the narthex. The only other circular stair leading to the narthex is found on Hagia Georgias.

After 1870s, the basilical plan typology was discontinued and in the new churches cruciform plan typology was used together with neoclassical treatment of the facades. Hagia Ioannes (1870) and Hagios Georgias (1880) churches are the only representatives of this plan typology in Ayvalık town center. Taksiarhis Church in Alibey Island (1873), currently damaged considerably waiting to be renovated, is the only other church that share the cruciform plan typology in Ayvalık region. All three of these churches had been designed by the same architect from Ayvalık, Emmanues Kounas (Psarros, 2004). Hagios Ioannes Church, located in Fevzipasha neighborhood and constructed in 1870, covers an area of 375 sqm and its court covers an area of 1250sqm. The other church with cruciform plan, Hagios Georgias, located in Hamdibey neighborhood, is much bigger covering an area of 600sqm and its court 2800sqm.

Hagia Ioannes and Hagios Georgias churches belong to cruciform plan typology but they are rectangular in form. Similar to square Byzantine churches which emphasize Greek-cross form in their plan, the cruciform in the plan of these churches has been emphasized with four bigger columns that are located at the centre and carry the dome on top, which is located on the

octagonal drum. At the center of these bigger columns are found wooden columns just as the others that are circular, but their sizes are increased and their form became rectangular due to the additional brick wall that surrounds them. The transept is emphasized in Hagia Ioannes as mere facade treatments, though they become entrances with narthexes in Hagios Georgias. The vaulted roofs over both ends of the central nave and the transept further emphasize the cruciform typology.

In both of the churches, the stairs leading to the logia on top of the nartex have been located within a tower on both ends of the narthex. In Hagios Georgias, the entrances to these towers are directly provided from the narthex while in Hagios Ioannes they are from the garden. In Hagios Georgias, the staircase towers are not emphasized in the elevation. In Hagios Ioannes, on the other hand, the tower on the north has been made taller (36m) to be a bell tower. In both of the churches, the apses on the eastern wall are polygonal in form unlike all the basilical churches in which they are circular. Unlike Hagias Ioannes that does not have a templon, Hagia Georgias has a highly decorated templon that separates sanctuary from the nave (Fig. 3).

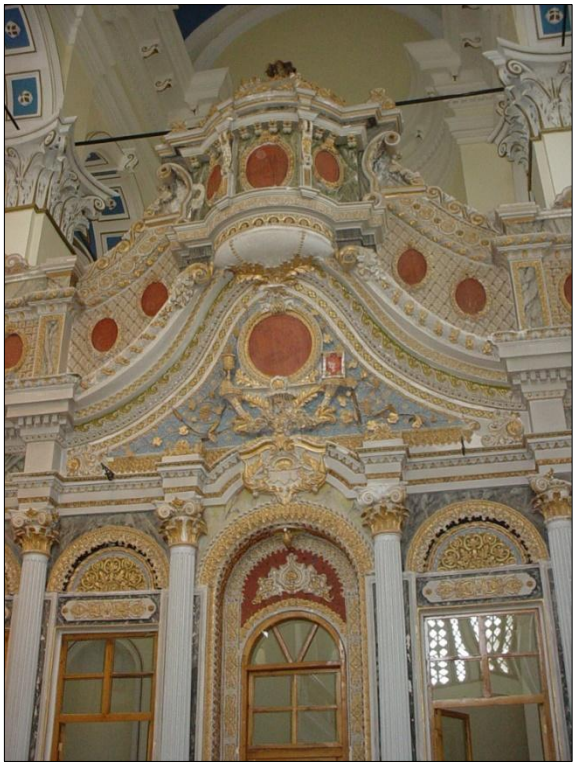

Figure 3. The current situation of templon in Hagios Georgios (İnce Güney, 2007)

Feneromeni (Ayazma) and Portaitissa Churches have single naves as they are much smaller then the other basilical and cruciform churches. Unlike Orthodox churches with single naves, that were usually constructed in out of town places, these churches are located within Ayvalık town center. Portaitissa is a

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very small private church located within the garden of the house of the bishop. It is known that the bishop held ceremonies in this church during the weekdays and went to Taksiarhis only for Sunday sermons. Since it was owned privately, earlier studies might have not mentioned it and yet it should be recognized as part of the Ayvalık churches and be protected. Feneromeni (Ayazma) church is known for its sacred wells, one inside and one on its garden. Summer times, you can still see Greek people who come and visit this particular church.

Feneromeni (Ayazma) church also requires special attention as it is the only church that has the form of a Greek temple. It was the latest constructed church, in 1898, and shows distinct qualities from the other Greek Orthodox churches in town especially in terms of the treatment of its elevation: It was built in the form of a Greek temple unlike any other church in town. It is known that since 1870s, the growing influence of neoclassism had been affecting the styles in Ayvalık churches. But deliberate use of Greek temple front also suggests the influence of nationalist ideas. Considering the growing influence of nationalism during the late 19th century among the Greek population in Ayvalık and the symbolic value of Greek temple form, it might be possible to think that the building was constructed not only as a spiritual building but also as a symbol of Ancient Greek democracy that Greek population on Ayvalık admired and wanted to have.

AFTER THE POPULATION EXCHANGE: THE PROCESS OF APPROPRIATION

It is known that most if not all the churches were turned into mosques in 1923 by incoming Turkish migrants when they first arrived in Ayvalık. The smaller church, Portaissa, was never used as a mosque as it has always been a private property and used as mere depot. It is known that Fenoremeni church was used for a short while as a mosque by incoming Turkish migrants. However, after the imam left the town the building was left unoccupied for a while and later was rented to a private company

Feneromeni church was first turned into a depot by the private company. During this time, a galleria was added on the eastern part of the nave, which was reached via the staircases added at the back. Because of the alteration on the east wall, it is not clear even today if Feneromeni ever had an apse or not (Fig. 4). Later, it was transformed into an olive oil factory. During this period, the interior decorations were damaged and as much damage was given to the outside. The narthex was enclosed and a chimney was constructed running through the ceiling of the narthex. Since

1984, it has been unoccupied and vandalized during the nights and weekends.

Figure 4. Inside of Feneromeni Church (İnce Güney, 2007)

It is known that at first Hagia Triada was also used as a mosque as its old name indicates: Biberli Mosque. Similar to Feneromeni, it was later turned into a tobacco depot when a second floor was constructed to have extra space (Fig. 5). The bell tower that is known to exist has been demolished, most probably during the 1944 earthquake, and there is no sign of the bell as well. After the 1984 law that aimed to preserve the cultural heritage sites, the building was left unoccupied. Because of the unrepaired damage on the roof that let the rain water inside, the wooden ceilings damaged first and then eventually all the interior.

Figure 5. Inside Hagia Triada Church (İnce Güney, 2007)

Hagia Triada is the church with the most damage and none of the features found inside a typical Greek orthodox church, such as ambon and raised throne for the bishop, exist today. There is

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also no sign of templon in Hagia Triada even though the door on the southeastern corner leading from the outside to the sanctuary area suggests its existence. The only hint that let us a glimpse of the interior of the church is the damaged ceiling covered with timber ornate.

We have no information if Taksiarhis was ever used as a mosque but we know that it was used as a depot. During this time, the arches in the narthex were enclosed with walls and a sleeping corner for the guard was installed in this area. After 1984 law, Taksiarhis was also left unoccupied. However, it was selected as the pilot building to be renovated in 1985 Ayvalık master plan that suggested restoring historic structures to be used for touristic activities. The building was renovated together with the smaller buildings next to it. This was a short lived experience and the building was left unoccupied after a short while. However, the increased attention to this building due to increased publication has caused dearly as it became a target at nights for people searching for treasures. Despite the damages, the highly decorated templon inside the building is intact even today, though its icons had been stolen. The bishop's throne as well as the ambon still exist, albeit damaged, while the stairs leading to the ambon is missing (Fig. 6).

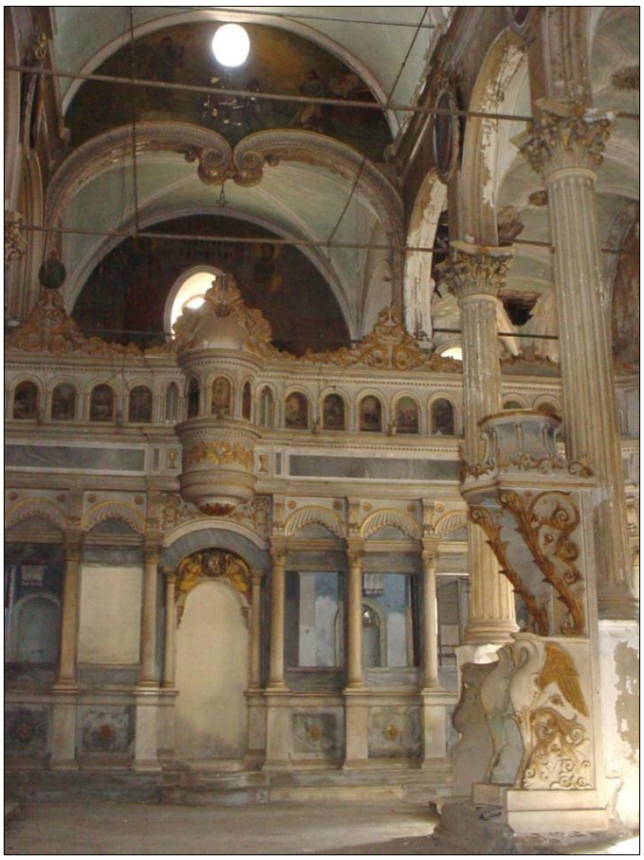

Figure 6. Inside Taksiarhis Church (İnce Güney, 2007)

When the 1984 law caused these buildings to be left unoccupied, it also provided an opportunity for them to get damaged and vandalized. Some of the damages were done just to vandalize and some for economic reasons while others were due to religious beliefs. They included removal of icons, painting over the frescoes, collecting the materials that they might sell such as lead covering the ceiling or handrails over the stairs or logia, removing templons, ambons and bishop's chairs, removal of colored mosaics in the windows, and removal of floor coverings.

There were also damages caused by natural disasters. Damages in the occupied buildings were repaired by the users but when the buildings were left unoccupied there were nobody to repair them. 1944 earthquake, for example, caused major damage to a number of buildings but only those that were used on a daily basis were repaired. The bell tower of Saatli Mosque (Hagios Ioannes), for example, had been demolished during this time and a clock was put during this time when the tower was reconstructed, which gave the mosque its name.

The minarets were also constructed for the first time during this period. In Saatli Mosque, when looked from outside the only element that says the building is no longer a church but mosques is the added minaret that rises along with the bell tower. Though the two are still in contest to each other, the minaret being taller says it was built later and thus the building is a mosque (Fig. 7). The minaret in Hagia Georgias has been constructed very close to the stair tower on the north. The minaret in Saatli Mosque (Hagia Ioannes) reaches 44m, while the clock tower is 36m and the building is 24m. In Cinarli Mosque (Hagia Georgias) the minaret reaches to 38m while the building reaches 30m. The minaret in both cases is 8m higher then the highest point in the building. The requirement of constructing the minaret higher then the bell tower caused it to be unstable and some were demolished during storms and earthquakes and had to be reconstructed a couple of times. Addition of a minaret requires considerable effort but is needed as it provides the symbolism that communicates to viewers that the building is a mosque.

Figure 7. A recent view of Ayvalık with Saatli Mosque on the right corner with its minaret and clock tower (İnce Güney, 2007)

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It might also be speculated that addition of the minaret, the most costly alteration that is required to turn a church into a mosque, played a significant role in the number of churches that are appropriated. Having a minaret might differentiate these mosques from the others that do not have it. It might be also the reason why the minarets are reconstructed better and bigger after being demolished due to a storm in 1950s. The minaret of Cınarlı Mosque (Hagios Georgias) was again demolished in 2002 due to a storm, while in 2003 another storm demolished the minarets in Hayrettin Pasha Mosque (Kato Panagia) and Saatli Mosque (Hagios Ioannes), which fell and damaged the ceiling and the dome as well.

The interior of a mosque should also have a mimber, an elevated sitting place where the leader of the congregation could deliver the Friday sermon as well as formal pronouncements. Thus, a mimber had to be added during the transformation of churched into mosques. Both in Hayrettin Pasha Mosque and Saatli Mosques, it is clear that mimbers are regular ones that could be found in any Turkish mosque. However, mimber in Cinarli Mosque needs to be examined more in detail as it reflects the creativity of the designer who created the mimber out of an ambon and a bishop's chair found in a church (Fig. 8).

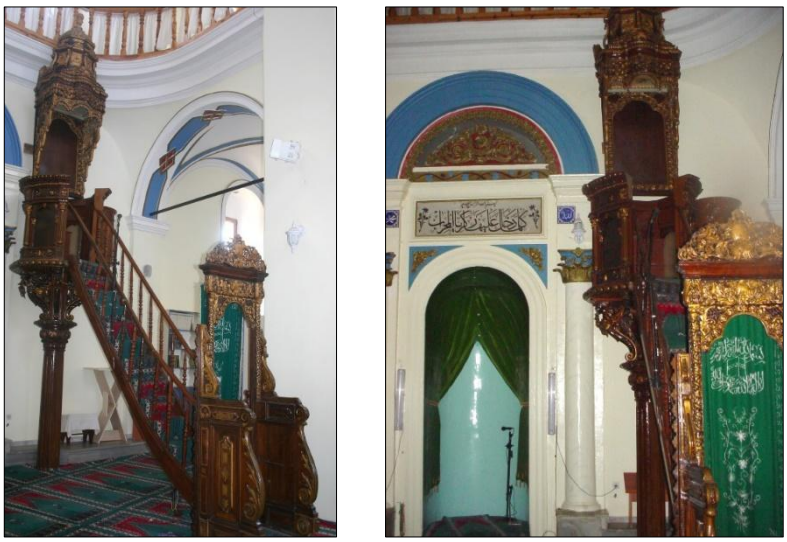

Figure 8. Two views of the mimber in Çınarlı Mosque constructed by transforming an ambon and a bishop's chair (İnce Güney, 2007)

Ambon is a special elevated sitting place in Greek orthodox churches, very similar to mimbers in mosques, where Bible is cited and formal pronouncements are delivered. Ambons usually are located around the third or fourth column from the east, which separates the central aisle from the northern side aisle. There is a wooden staircase on the side aisle to provide access to this ambon. Only in Taksiarhis church the ambon still sits on its original location though without its staircase. There were no

ambons in the three buildings that are still used as mosques, though the empty place of the ambon can still be recognized in Hayrettin Pasha Mosque over the third column on the north side of the central aisle.

It is interesting to notice that although ambon's function is very similar to a mimber's function, at first Muslims did not want to appropriate these ambons that could easily have been used as mimbers. In the case of loggias, which were prayer spaces in churches dedicated for women, there was no need even to think how to appropriate them: they were just used for the same purpose when churches were converted to mosques.

Another special characteristic of a mosque is the deliberate indication of the axis directed towards Mecca, towards southwest in Ayvalık, according to which prayers should direct their faces. This axis usually terminates on the inner face of a mosque by a niche where the leader of the congregation makes his prayer, the mihrap. The prayer of the leader that involves prostration must be observed by other prayers as they need to face the same direction and act in harmony with the leader. In Cinarli and Saatli Mosques, mihrap is placed on the south arm of the cross in a shifted position towards west. In Hayrettin Pasha Mosque, the mihrap is placed within the central apse that is bigger in size in a tilted position (Fig. 9). It is also interesting to recognize that the traverse aisles created on southwestern axis by making use of carpet designs or by literally attaching strings on the ground. The same traverse aisles also continue on the loggias. One can only guess that it should have been difficult for the prayers to follow this tilted angle towards southwestern axis, which run in conflict with the natural east-west direction of the church.

Figure 9. Placement of the mihrap in Hayrettin Pasha Mosque on the central apse (İnce Güney, 2007)

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Another condition that a mosque has to satisfy is the lack of human or animal depictions. Thus the oval surfaces prepared for icons in these churches have to be transformed as well. They were not taken out completely but instead they were covered with scriptures from Quran and kept their usage as decorative elements. It is also possible to find additional features such as an elevated sitting place for müezzin, müezzin mahvili, placed on the northern arm of the cross in Cinarli Mosque.

It is also interesting to note that only three of the churches, which were turned into mosques kept their function till today. Looking at physical properties of these churches might give an answer as to why these three were kept as mosques and not the others. It is clear that all of the churches that function as mosques today as well as others were located prominently in the town as the neighborhoods grew around them, thus by itself this cannot be the answer.

Hagia Georgias and Hagia Ioannes might be selected because of their cruciform plans that emphasize centrality especially with their domes at the center. The dome is the most characteristic feature of a mosque where is emphasizes the central space. It might be that Hagia Georgias and Hagia Ioannes, the only two churches that has a central space covered with a dome on top, resembled the mosques image that Turkish migrants had in their minds. Moreover, all of the three churches that still function as mosques today are the ones that were constructed in later years and they are bigger then the others in terms of their size and height, Hagia Georgia being the highest and Kato Panagia—the only one with basilical plan—being the biggest in area. Kato Panagia's being the largest church might be the reason why it has kept its function as Hayrettin Pasha Mosque, as the only mosque that was transformed from a church with a basilical plan.

The appropriation process requires enormous effort on the part of the people who are appropriating. The transformation of these churches into mosques took the form of addition, removal, and alterations in order to provide the features required. The reason why only three of the buildings were kept as mosques might also be related to this effort. First of all, there definitely was an abundance of religious buildings in town. To appropriate these buildings required quite an effort from these people and thus they picked only some that they thought they could transform them and make their own. Hagia Triada, though acted as Biberli Mosque for a while, was not able to be kept as a mosque neither the Feneromeni church.

The end result of the appropriation process also reflects itself as the naming of these buildings. The ones that are used as mosques today are always referred to with their Turkish names as mosques. But the other churched that were used as tobacco depots or oil factory sometimes named with their function and sometimes with their Greek names. Its only Hagia Triada's name "Biberli Mosque" that still lives today in spite of the fact that the building is no longer a mosque.

DISCUSSION AND CONCLUSIONS

Authenticity might be translated as something being true to its origin. In that sense, the true meaning of a building is that of the designer and of the users at the time when the building was constructed. Accordingly, when the churches were transformed into mosques one might suggest that they become inauthentic as they were not true to their original purpose. Similarly, the ambon that is transformed into a mimber in Cinarli Mosque might also be considered as inauthentic. In this understanding, authenticity has been considered as a property of an environmental form, a property that is based on the culturally endowed meaning of that form. However, authenticity cannot be thought as frozen in time during the life time of that environmental form when its users would be different at different times. As Dovey points out, authenticity is a property of a process and a relationship: "As a process, it is characterized by appropriation and an indigenous quality. As a relationship it speaks of a depth of connectedness between people and their world" (Dovey, 1985). As such, these mosques are authentic as much as the time when they were constructed as churches because they reflect the incoming Turkish migrants connectedness to their world and their indigenous creativity to reinterpret these buildings so as to make them their own mosques.

The aim of incoming Turkish migrants was not to destroy but to appropriate these churches as they needed a prayer space. The churches had inherent qualities, pronounced more distinctly in some then in others, which enabled them to be appropriated by Turkish migrants. Paul Ricouer (Ricoeur, 1965) defines appropriation as "to make one's own what was initially alien." In the appropriation process the aim of Turkish migrants was not to seek the original intention of the building but to make the building their own. Appropriation might be characterized as a struggle against cultural distance and historical alienation as it is a process where the culturally endowed meaning is being stripped from the form and a new one is created. Hence, the act of Turkish migrants was authentic as it reflected their indigenous

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creative nucleus power, which projected a way of life, a mode of being in the world appropriate to their own culture.

The physical properties of these buildings helped them to make sense in a different setting within a different culture. They were appreciated and the expressive properties of them were shared by this new culture. Culture is definitely one of the authorities as a meaning giver to an architectural form, but form itself has to do with meaning as well. Culturally endowed meaning, which might be defined as arbitrary meaning, gets lost in the course of a shift to another culture. But iconic meaning, meaning based on inherent qualities of an architectural form related to organization of its substituent parts, stays still in this process. In these buildings, it is clearly seen that culturally endowed meaning of being a church has been lost for all of them when they were transformed into another function by their new users. However, in especially three of them the expressive properties of the buildings that depend on their inherent qualities stayed with them even when they were turned into mosques. It was indeed these physical properties that helped them to keep their function as religious buildings, mosques in this case. At a smaller scale, another example for this transformation is the decorative elements. The oval surfaces for icons lost their culturally endowed meaning when the icons were covered, but their expressive content due to their physical properties caused them to be used in a similar way where Islamic decorative scriptures were put on.

It was an authentic act of incoming Turkish migrants to appropriate these churches that were left unoccupied due to circumstances and transform them into mosques and use them in their daily life. When Greek population left the town, the way of living which once kept these building alive was lost as well. The newcomers appropriated the building, not the way of life, and transformed it into mosques that were true to their own way of living. This was a natural authentic act and the churches being appropriated and transformed into mosques become part of their daily life. In other words, the lost past of Greek Kydonies was appropriated and it was kept alive as part of the new history of Turkish Ayvalık. It would have been inauthentic if the buildings had been kept as churches. It would also be inauthentic if they were to be transformed into churches now. As Dovey suggests, “inauthenticity emerges out of the very attempt to retain or regain authenticity… out of very attempts to find and create a lost authenticity, a lost world of meaning” (Dovey, 1985).

Ayvalık churches are representatives of the local past including the past of Greek Kydonies, a past that was also part of the Ottoman history. All the basilical churches were constructed during the Tanzimat period of Ottoman history between 1839-1856 when the first steps towards modernization were taken and minorities were given social, cultural and economical privileges. After 1870s the neoclassical style was well spread in Istanbul and its effects were even felt in the churches constructed in Ayvalık. In this period it is known that a number of basilical churches were reconstructed in neoclassical style. Moreover, new churches were designed in neoclassical style as well such as Hagios Ioannes and Hagios Georgias. Both basilical and neoclassical churches reflected the creative nucleus of the local people living in Ayvalık at that time and as such need to be appreciated and protected.

Today, the churches that still function as mosques are well preserved as they are daily used. And for the others that are damaged and unoccupied, there is a growing interest to renovate them mostly because of touristic reasons as the town became a major tourist attraction since 1980s. Moreover, in Turkey in general, there is a growing concern to renovate and protect cultural heritage, which is partly due to membership with European Union and their demands. There are also some agreements between Greece and Turkey, in which each part agrees to renovate each other's religious buildings. The church in Alibey Island is being renovated based on this agreement, for example. The projects are being prepared to turn them into cultural centers or museums both for the occupants of the town and for the national and international tourists, including Greek tourists that visit the town often. When these churches are turned into cultural centers they will once again be part of the daily life.

Some might question the function these churches will have. They might even argue that, since they were constructed as churches originally they need to be kept as such. This understanding values the original function as the only true function and rejects the possibility of having another authentic function for them. The history of Feneromeni (Ayazma) Church that was transformed into an oil factory seems to suggest that this idea might be valid. But, Feneromeni shows how disrespectful one can be toward an architectural object more then it shows the possibility of loosing all culturally endowed meaning. Its transformation to an oil factory is not the result of a connectedness between people and their world; it's a mere reflection of the functional requirement to gain economic value.

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A similar attitude is to reject these buildings as part of Turkish cultural heritage, which in fact can be interpreted as part of the idea that rejects their Greek past as well. Some might have a tendency, sometimes felt as an unspoken reality, to think that these buildings should be demolished all together and turned down to get rid of all the past that come with them. According to this idea, keeping these buildings alive is similar to keeping the Greek past of the town to live, thus the buildings should be left to die with their past.

No matter how they differ in their approaches, both of these ideas reject the possibility of appropriating these buildings as they reject the possibility of having an authentic meaning for these buildings apart from their original meaning. They reject the possibility that when they have been appropriated, their iconic meaning, i.e. their inherent properties would have the most influence on the new meaning making it possible to change their culturally endowed, arbitrary meaning.

This is an understanding that reflects a changed attitude towards the past buildings then in the earlier times when it was considered possible to convert religious buildings. This new attitude sees the original function of the building as the only meaning that the building has to offer. In this conception, the meaning of buildings are seen as the static legacy of their past, which cannot be changed not reinterpreted. Accordingly, authenticity is limited to the original meaning when the building was first designed and appropriated meaning can never be authentic as the original meaning. This is an understanding that if it was realized the past of Kydonies would have really been lost.

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Resume

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Article

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Hansen Re-visited: Alternative Methodology for Istanbul Land Use Pattern

Kerem Yavuz ARSLANLI*

Abstract

In this paper, Hansen Model applied to Istanbul districts and increasing the distribution of the population of 3 million were calculated. Istanbul, population and income growth, the service sector, based in the city's development as a result of advances in transportation and telecommunications, the restructuring of the city, and this encourages residential, commercial and office create opportunities for investments. Land use decision-making process is a very complex includes site selection. Estimates of population growth, starting from the development potential on the one hand, depending on the location of the settlements, and the physical, socio-economic, legal and political characteristics of the functional needs of the city overlaps with each other to create the most effective form is required. In addition, the sub-centers produced a gradual effect of the interaction and the environment as a result of a lot of alternatives for the purpose of evaluating the size of the new centers and, instead, may be decided taking into account the dimension of time. Thus, the development of the whole city and the economic development of the system to provide the

Keywords: *Urban development, population, distribution, Hansen modelling*

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most effective when planned. By investing just as it is today, at certain points, and the creation of high-quality urban services bringing the speculation, raising the quality of life of city-wide, but can provide a healthy socio-economic development.

INTRODUCTION

Rapid and unplanned growth after 1950 in Istanbul, including heavy industrialization, valuable city land and identity has been lost. Today, population growth and economic development of the service sector and as well as the growth and development of telecommunication technologies has encouraged the development of many sub-centres. After the 1980s, the developments of a multi-center of major cities are found in many countries in Europe and in the United States (Gordon & Richardson, 1996; P. & K., 2006). McMillen and Lester (2003) had predicted in Chicago, the number of sub-centres in 1970,from 9 to reach 24 at 2040. In particular their model showed the centres to be evolved along the highways. In Canada, (Coffey & Shearmur, 2001) examined the development of a multi-centre, especially in Montreal. Rowland and Gordon (1996)as an example to developing countries in Mexico City and Vedia Dökmeci and Berköz (1994) in Istanbul demonstrated improvement in a multi-centre development. In addition, Richardson and Bae (2005) examined multi-centre developments in large number of developing countries.

The multi-centre development of Istanbul, has led to the collapse of the historic centre structural form. In addition, since the needs of modern office buildings, transportation network, and parks, and historic preservation district is unable to meet the needs of increased traffic due to the restructuring and growth control has encouraged the development of the new centres around the city (Dokmeci & Ciraci, 1999; Vedia Dökmeci & Çıracı, 1990).

New sub-centres, along the highways, close to the university and large public housing projects developed in such a large investment in socio-economic and physical environment has encouraged the restructuring. Meanwhile, for the revival of the historic centre and the historic neighbourhoods economic development projects have been started (Ergun, 2003). In 1990, the pedestrianization of Istiklal Street, the development of trade, and functional change has encouraged the restoration of the buildings.

The last 10 years there has been 10 to 15 times increase in the real estate market of Beyoğlu by national and international real estate investors (Ozus & Dokmeci, 2005).The historical peninsula, in the municipality of Fener and Balat UNESCO Funds investments in infrastructure and functional restoration of the

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buildings has encouraged the exchange of population and gentrification. As a result of this development, the increases in prices, local and foreign investors are attracted to this region (Ergun & Dündar, 2004).

In the Golden Horn, the investments made for the cleaning of the surrounding encouraged a revival of important historical buildings (Baycan-Levent & Kundak, 2003).For example, Kadir Has University in Cibali Tobacco Factory, Eyüp Feshane Fairgrounds, Golden Horn Congress and Culture Centre, Silahtar Ağa Power Plant, Bilgi University Museum of Industry and Shipyards has been some examples of these important revitalizations.

And functional transformation of these buildings started economic development around the neighbourhood. As a result, sub-centres around Istanbul, re-triggering the recovery to economic development by investment in the city's historic neighbourhoods. The internal dynamics of the city's major economic opportunities mobilized for real estate investors.

In this study, the land and housing values in Istanbul, office and retail trade, real estate prices in the city such as the distribution of rental values were examined. Kindly read this notes carefully. This document serves as a template as well as an instruction to authors in preparing full paper submission.

MULTI-CENTRE DEVELOPMENT OF ISTANBUL

There are many factors that affect the real estate prices in Istanbul, for example, history, quality, and socio-economic characteristics, the location in the city, transportation facilities, natural beauty and views, (Ozus, Dokmeci, Kiroglu, & Egdemir, 2007). Istanbul, the development of a multi-centre circles around them, affect the functional restructuring of real estate values, and in particular to promote the restructuring of slums and the actual value of land in the city to redevelop a very precious opportunity created indirectly.

Distribution of Land Values

Examining the distribution of land values in Istanbul, as a port city in history, places of work to take place immediately behind the port and the transportation system to be developed as a centre of high land values in the centre and near seaside. In addition, recently-built highway intersections, and their paths along the sub-centres, land values increase in a stepwise fashion according to their importance. Meanwhile, despite being advantageous in terms of accessibility, which is still low value land areas will be investigated in the model.

Distribution of Housing Values

In this study, the distribution of housing values compared to that of 1990 and 2010. Istanbul's population to grow rapidly after the 1950s and 1980s due to the economic development and globalization, urban socio-economic and physical structure has led to undergo a wide range of transformation (Dökmeci and Berköz, 1994).

This transformation in the city, providing new business opportunities and revenue growth, has led to changes in the internal dynamics of housing prices (Dökmeci et al., 2003). In addition, inflation is higher than in previous years, as well as in other developing countries with similar conditions as Istanbul, safe and efficient as an investment in the real estate market has developed rapidly (Önder, 2000).

Socio-economic differences between the districts of the city, has caused the 3 focal points with high housing prices.

(1) With the world-renowned natural beauty and rich mansions and also important companies, the three universities and the second biggest shopping centre, close to the Bosphorus coast

(2) Situated on the west of Istanbul, such as the three largest shopping centre in Istanbul Ataköy and the establishment of a housing estate, which started life in the modern city with easy access to the centre and the ring roads Bakırköy

(3) In the countryside and the sea coast with luxury homes, 10 km. long street in Baghdad, including the luxury shops and entertainment facilities around the neighbourhoods with enhanced luxury, Kadıköy (Dökmeci et.al., 1996).

Three common characteristics of these high-demand residential areas are; geographical located on the seaside, once the summer resort for high-income families, Istanbul's richest income layer regions are preferred to locate, commercial shopping centres contain the most luxurious styles, that they have a highly acclaimed modern apartment buildings and villas. In 2010, the city-wide distribution of housing prices is not only beaches but also the luxuries of sites around the city have also seen that the high housing price.

These new residential units, close to the new sub-centres in the surrounding area, a high level of socio-economic environment, social facilities, and the physical environment on a regular basis to present a new way of life plays a role in the increase in housing demand and prices. In these examples, an international award winning and low density residential unit, Istanbul

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Istanbul project, and on the Anatolian side of Istanbul, a very luxurious life with a high level of density "Up-Hill" project.

With newly emerging sub-centres of these settlements have a mutual interaction in terms of rent, the prices that provide dynamic and productive investment opportunities. In addition, to overcome the deterioration of the historic centre, investment in infrastructure has increased the house prices. Cihangir and Asmalı Mescit are given as an example for economic developments.

These developments are become opportunity to invest at the level of districts, but many neighbourhoods are not yet developed. Municipalities of Fener and Balat districts improved infrastructure in order to attract investors and accelerate urban transformations In addition, residential areas of Istanbul, which is surrounded by the sea on three sides of city, offers the opportunity to urban transformations.

For example, Salacak and Harem Coasts, world-renowned view of the famous Topkapi palace, real estate prices highly effected. In addition, the planned development of the socio-economic environment is the most important factor affecting the prices. For example, in the areas of slum housing prices, there are major differences between the prices of housing sites developed and planned.

Spatial Distribution of Office Rent Values

Economic accumulation of real estate investments is an important part of the people in Turkey (Önder, 2000), and this rate of investments in the office is increasing. After the 1980s, economic restructuring and globalization, international trade relations, the increase in per capita income and a strategic location between Asia and Europe in Istanbul, has led the size of the increase in the number of companies and therefore has encouraged the growth of the demand for office space. Istanbul office areas, in parallel with the development of the commercial potential of the city since 1970, with the support of the Bosphorus bridges and roads grow to the north of the city.

In particular, banks and insurance companies need a new and larger office spaces, between the years of 1960-1985, Karaköy-Salıpazarı-Fındıklı were satisfied with the built office buildings during this period, Turkey's largest corporate groups and foreign companies settled in these regions.

On the other hand, during the same period office needs of small and medium-sized firms, find their place formerly Taksim-Sisli, and later in Şişli-Gayrettepe axis obtained by converting housing into office space (Pamir & Soyuer, 1996). Since 1985, a

significant increase in the flow of foreign capital, consequently opening of the financial sector under the leadership of Turkey's economy booming emerging needs of modern office building, which was built Barbaros Boulevard and Büyükdere axes, were met with Class A office buildings (Pamir & Soyuer, 1996).

Istanbul's main office areas that make up the new sub-centres are described below:

Levent Zone

The presence of the ring road links to the Bosphorus bridges, with old industrial plants have large plots of Istanbul, the due to its proximity and easy access to other sub-centres (Maslak, Mecidiyeköy, Zincirlikuyu) Istanbul's developed a prestigious office buildings, multi-national companies, became the centre of a preferred business holdings. In 2000, the opening of the subway, and Levent and Etiler shopping areas, restaurants, cafes, social and cultural facilities, the presence of the attractiveness of the social demand for the region is become higher (Aksoy, 2005). Therefore, this region is the region of at least the vacancy ratio and the highest rent values.

Maslak Zone

Development axis from south to north in the Central Business area of Istanbul represents the most northern point. In Maslak, surrounded by forest areas, it is impossible for CBD further enlargement Maslak business development centre, has pioneered by Alarko Company which had built new office buildings across ITU campus.

Istanbul's most luxurious office buildings and hotels built with high precedent for this has been the most important business centre. In 1995, the Istanbul Stock Exchange moved to new premises in İstinye, banks and brokerage firms were effective for the demand office space near Maslak. As Levent, Maslak, the presence of a wide range of suitable land and the accompanying high building permits, have allowed for the construction of high-rise office buildings.

Airport Zone

Airport, the surrounding low-rise office buildings are being developed on the E-5 and TEM motorways. Completed in 2001, the World Trade Centre of Istanbul, the largest office park in the region is an important investment increases the stock of office (Kuzeybatı, 2004). The development of this region, the large press and broadcasting organizations "Press Express Way" that centres on the support organizations that want to be close to them, as well as buildings in the area close to the factories tend

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to move factories are effective in the management units (Aksoy, 2005). In the region vacancy rates are more than the other centres and rental values are significantly low.

Kozyatağı Zone

The richest region in terms of office stock in the Anatolian side is equipped with a combination of many different land uses. This region began to develop after 1995, and the presence of empty land, to be the intersection point and the surrounding commercial uses due to features such as luxury housing settlements primarily been a point of attraction for large shopping centres.

Besides regional commercial developments (Metro, Carrefour and Bauhaus) as well as the majority of this period, there has been a Class A office space development took place. (Çelen, 2003). In particular, the demands from multinational and foreign company's plazas began construction in 1997; the majority of office was put into service in 1998-2000.

The main reasons for foreign companies to choose this area are, accessibility, proximity to E-5 and TEM motorways and white-collar workers employed in these companies, the vast majority (65%) has the Anatolian side residence. In addition, the upper-middle income group experienced Kozyatağı residential areas (such as Ataşehir) office in certain areas not separated by a boundary, office space provides integration with other urban areas of activity. Residential, office and other commercial uses of the coexistence of urban scale, enabling the region to be active at any time of the day, although a certain degree of synergy between land uses (Çelen, 2003).

Altunizade Zone

Altunizade zone, starting with Koç Group and its companies have started to develop with a combination of administrative centres. Altunizade region that requirement when being closer to the city, the majority of which is classified as B, the occupancy rate varies according to economic conditions, mainly the structure of the company has an office administrative centres are located. Altunizade, suitable for the establishment of a new regional centres TEM connection with the company, but the height of the buildings limited due to prevent the negative effect on silhouette Camlica, the stock of the building cannot fully meet the needs of the market (Aksoy, 2005). Although one of the least vacant office stock, the rental value of the lowest in the city.

Kavacık Zone

Kavacık Zone is recently evolving office market as an alternative in the Asian side. Because of being near to Fatih Sultan Mehmet Bridge and close to Maslak region, Kavacık played a role in the development of the business centre. However, residential buildings, particularly the lack of permits, as well as the region's transport, energy, telecommunications, infrastructure and social facilities, such as a number of deficiencies and have lower standards of office in this region prevents the formation of high-quality tenant profile (Aksoy, 2005; Çelen, 2003). Office market rents rising on the European side, as well as the emerging demand for central of operations began for a new offices, and residential areas.

Still, Uskudar district, converted to industrial areas, large office buildings, with lower rental rates, especially banks and retail companies settles operations centres (Çelen, 2003). However, the planned new centres are needed and unplanned developments cause the loss of customers and revenue.

Distribution shopping centres in Istanbul

Istanbul, Turkey's largest and richest city due to a very lively and has a variety of types of retail trade. This commercial wealth of traditional trade routes between continents for centuries on the extremely important due to the fact that having a strategic position. In addition, the economic restructuring of the 1980s in Turkey as a result of displacement of resources and trade in the city of Istanbul has increased the participation of the world capitalist economy (Tokatli & Boyaci, 1999).

As a result, consumer culture, these changes due to the rapid increase in population and income, which has great potential for the development of retail trade in the city of Istanbul, the restructuring of commercially viable form, and encouraged the formation of new sub-centres and shopping centres (Terzi, Mutlu, & Dokmeci, 2006).

Retail trade constitutes 40 to 45% of the consumption of families and consumer spending rose from 8.8% in 2005, to 9.6% in 2006. 19th Middle of the century, department stores, has created an evolution in the development of trade. Shopping, entertainment an enjoyable way to spend time became the new bourgeois aims(Bowlby, 1985).

At the same time, large stores in major cities, the people as a symbol of prestige, prepared an environment plays a role in the creation of the national middle class culture. New community of people in big cities to impose themselves from clothing,

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upholstery homes until every issue became a focal point of directing their lives (Miller, 1981).

Today this trend, with the effect of globalization on the international level, in the form of mega-markets, and increasingly continue. Recently, the mega-markets opened in Istanbul and their great potential in this area reveals that the interest. Increase in the level of income and car ownership, a new way of life and consumption met through the internet and TV people that require large investments in order to meet the demand for a wide variety of shopping centres have been established (Erkip, 2003). Istanbul for the first mega mall, Galeria, was founded in 1988 Bakırköy. Then the numbers began to increase rapidly, and today has reached 56.

In particular, the mixed-used, i.e. in the form of land use, commercial, office, residential and shopping centres are planned in the form of (Akmerkez, Kanyon and Metrocity, etc.) seems to be very successful. The highest rental values, it is a successful shopping malls. Be explained by the spatial distribution of shopping centres in Istanbul rings. 1 Radius of 10 km from the centre. 1, which is ring, shopping centres, there are 46% and 50% of leasable area. This region represents 44.32% of GDP. 2 positioned around the first ring in the ring, shopping centres, and 54% of the leasable area is 50%. This area represents the 41.93% of the GDP. Although, leasable area is divided equally among the regions, shopping centres clustered particularly in rich districts. 12 units are not currently shopping centre located in the county. Their commercial potential is calculated, which are close to high-income neighbourhoods inhabited districts of the layers was found to have more potential (Terzi et al., 2006).

ALTERNATIVE METHODOLOGY FOR ISTANBUL LAND USE PATTERN

A city consists of different functions that serve different purposes and affect each other. Spatial layout of the city includes a wide range of elements in a network of relationships. Individuals, private firms, public sector, they all want to be close to the sources of labour and services. Therefore, based on a wide variety of purposes cities complex planning system according to one aspect is not possible. One of the most important tasks of urban planners is to determine the places, a variety of functions related to each other in an effective manner by objectives. Planning of these functions independently of each other is not possible. An error on one objective, not only for that functions, but may also be related to an effect on the other functions of the city in terms of functional and economic development. At the same time, the city may lead to an increase in operating costs. In

contrast, the selection of a function itself to be successful in the right place, as well as the development tool environment can be, for example, have the tool, such as the conservation of Historical Peninsula City Gardens surroundings.

A wide range of multi-purpose land use models are available for site selection. Carver (1991) on the selection of Land use in the multi-purpose assessment techniques, contrary to each other, according to the criteria and objectives for the evaluation of alternatives, combined with the use of GIS technique. In another study, solve the traffic congestion in an area, or if there is congestion and housing to solve the balanced distribution of work force planning technique is developed to describe in a multi-purpose modelling (Horner and Muray, 2003).

Location models previously developed a wide range of multi-purpose land use objectives to take into consideration, but ignore the impact of different land uses. Whereas this purpose, a number of functions play a major role in the selection of, for example, the minimum distance to a residential site and to benefit from the increase in value and as well as a proximity to a large shopping centre. Hence, in this model, two objectives are to evaluate alternative land use scenarios have been considered in the choice of: (1) the maximum of profit, and (2) to be the minimum distance between the inter-related functions (Dökmeci, et al 1993).

The first goal in the selection of an area of land use to do is to get the maximum profit. According to this purpose, the value of a plot of land in the surrounding environment due to the use of the land as it depends on the value of investments in the plot. For example, some of the other more suitable for the selection of land plots in residential, commercial and entertainment facilities of the place because they are more likely to. Therefore, this objective is being determined by the land use, so as to make maximum profit will be assigned based on the settlement.

Earlier (Alonso, 1964) and Mills (1972) studies, showed that a plot of land value changes according to the distance from the city centre. This assumption is valid for a single-centre city. However, the development of multi-centre cities, as a result of a plot of land in the vicinity of the city around the type of land use, these variables can affect more than the value of the land. For example, the value of a plot of land around the trade may vary according to whether residential or industrial. As a result, the structure of the city, urban functions arising in the competition for the selection of the most efficient in the use of land formed by the selection. Therefore, the purpose, the proceeds from a plot, it and the surrounding land to be a result of the interaction between land

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use types have been formulated by the adoption. For example, the luxury residential as well as commercial area next to the park is located next to or higher than the rest of the district (Dökmeci, et al 1993).

On the other hand, creating some of the industry as well as environmental pollution, land use types have been caused a decrease in the relative values of the surrounding land. Therefore, the effect of any kind from the environment must be taken into consideration. Based on this purpose, the maximum was based on an investor's profit. This objective has been formulated as follows:

$$Max\ z = \sum_{i=1}^{r} \sum_{j=1}^{r} \frac{V_{ij}}{1 + d_{ij}^{\alpha}}$$

Z: The total revenue from land use in the region,
V_{ij}: i and j are the interaction of land use types in terms of value,
d_{ij}^{α}: the distance between i and j types of land use. α is taken as 2

As a secondary aim, functions as an important factor influencing land use decisions has been considered to be the minimum distance. In the city, more or less of each land use type has a link with the other. Thus, each unit of land use creates a harness around the relationships between units of transport. Thus, every unit is, relative to the location of each unit, so tightly bound to the other units. This is the minimum movement of goods and people between the units; the second purpose of this model is formulated as follows:

$$Min\ T = \sum_{i=1}^{r} \sum_{j=1}^{r} u_{ij} d_{ij} b_{ij}$$

Wherein,

T: total transport in the region,
u_{ij}: transportation between units i and j, the amount of land use,
b_{ij}: i and j bij = 1 if land use transport link between the units, or bij = 0

The choice of two very different purpose of land use, exposes two very different outcomes. For example, the use of land in a way that accessibility priority, residential areas gathered around and business centres and industry. If we choose to use the land in a way that the maximum gains, residential areas, gathered around commercial activities, parks and water elements. Therefore, the aim of balancing the conclusion that both arrive, a multi-purpose decision-making method is needed. This multi-use decision making method can be as follows:

$$E(a) = \sum_{k=1}^{n} u_k e_k(a)$$

Wherein,

$E(a)$: (a) the total activity of the alternative,
u_k: k coefficient indicating the importance of the purpose,
Additive (a): (a) the alternative of k according to the intended activity,
n: Number of goals

Indicating the importance of the objectives coefficients were determined by sensitivity analysis. Accordingly, the first goal and the second goal weight coefficient 0.25 and 0.75 respectively. These coefficients are within reach of the investments made and the different types of land use, value of time lost in traffic will vary depending on the time according to the coefficients. According to an alternative with the highest total efficiency of both purposes, is considered to be the best choice in the land use.

Alternative for Istanbul Sub-Centre Silivri:

A multi-purpose land use, site selection model applied to Silivri, the newly designated sub-Centre for Istanbul. Consists of housing development, including university-industry-trade areas, recent development plan are taken as reference. The main function is planned to be placed in 4 different areas of transportation and value for interaction was prepared for. University, Industry, Trade and residential areas were evaluated according to the model of the fourth alternative. 250 meters of grid is taken as basis for cell size, the proposed plan is 5 km wide on seaside. Average lot size in the region is from 225 to 275 meters.

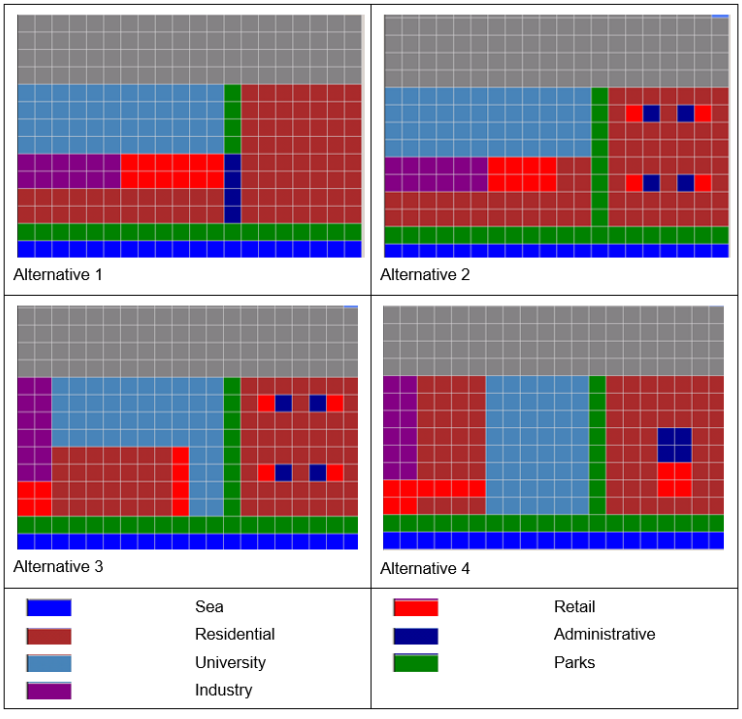

Figure 1. Different Land Use Model for Istanbul Silivri Sub-Centre

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Table 1. The Amount of Transportation Between The Types Of Land Use Matrix (Arslanlı, 2016)

	Sea	Residential	University	Industry	Retail	Administrative	Parks
Sea	1	1	1	1	1	1	1
Residential	1	2	3	7	5	3	4
University	1	3	1	3	2	2	1
Industry	1	7	3	4	5	2	2
Retail	1	5	2	5	3	3	2
Administrative	1	3	2	2	3	2	1
Parks	1	4	1	2	2	1	1

Table 2. Value Interaction between Different Types of Land Use (Arslanlı, 2016)

	Sea	Residential	University	Industry	Retail	Administrative	Parks
Sea	0	10	10	10	10	10	10
Residential	0	5	3	10	2	6	8
University	0	3	5	1	6	5	7
Industry	0	-7	6	10	6	5	6
Retail	0	8	5	-1	10	8	7
Administrative	0	10	5	-3	8	10	8
Parks	0	8	6	3	6	6	10

Table 3. Total Values of Different Land use Alternatives (Arslanlı, 2016)

Land Use	**1. Alternative**	**2. Alternative**	**3. Alternative**	**4. Alternative**
Accessibility	0,0837	0,0819	0,0840	0,0847
Revenue	0,9990	0,9805	1,0932	1,1874
Total	1,0827	9,8870	1,1772	1,2721

Different from each other in different land use choices by considering four alternative land use evaluation method was developed and evaluated, and the results for each lot are given in Table 5. A single centre, two sub-centres and a large number of land use alternatives developed by the sub-centre activity was calculated. According to these results, based on the centre second and forth alternatives are higher than the current plan. Other second and third alternatives; expansion of trade, although with increased accessibility weakens the effect of the increase in value. In contrast, the effect of the increase in value as a single centre; decreased availability and are limited to only around the centre. Therefore, an alternative to the settlement with the two sub-centres, it can establish the best balance between the two objectives for the activity is the highest.

Although here, only two main objectives, land based location problems formulated, the purpose is based on the development of multi-criteria modelling. Balancing the conflicting interests of the various groups of land use objectives in the presence of solutions to the problem of selection, the goal is difficult as their numbers grow. For example, the slum transformation project varies according to each individual purpose. Decisions on this issue in accordance with the principles of democratic decision-making procedures are required to submit a multi-purpose (Ligtenberg et al., 2001). In this case, the model results, needs to be adapted according to other purposes.

Furthermore, we examine here only in models of land use, land use in the selection of the most efficient in order to meet the demand has been developed. However, nowadays, the choice of a town in the land use of a region, a country, or with the effect of globalization on the international level need to be determined in response to society needs. It will be for the creation of a new land use, as can be in the form of conversion of existing land use.

In.addition, by evaluating alternative land uses; density, transpor -tation, energy consumption and environmental pollution, on the one hand, increase better economic development, on the other hand site selection models are better for the development of sustainable land use patterns. At the same time, the decision of the density of residential, private and public facilities, schools, recreational facilities, fire brigade is also important for the determination of effective site selection. Over time, emerging technologies can be adapted to the requirements of land use systems have the flexibility to provide the efficient use of resources. Advances in transportation and communication; caused large-scale changes in the land use at the 19th century. In this context, developed 'smart growth' concept aims to reduce the negative impact of the spread of a city (Holcombe and Stanley, 2001), and a wide range of land use in the future will affect the choice of the cities.

However, the choice of land use patterns in the results of the decision-making process should be considered initially for solid economic fundamentals, and then fit the model taken into consideration social, political and other conditions should be adapted. Land use patterns in the selection of design, economic, sociological, and research and evaluation of the results of the traffic load as the subject of the proposed research to be conducted in the future.

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Distribution of Population in Istanbul

One of the most important goals of planners is, taking into account the connection between the elements that make up the space within the city. Residential areas and business districts are considered as the most important elements that make up that structure (Özus, 2005).

There are a wide variety of variables that influence the choice of location of residential areas. Supply and demand for housing depends on the development of residential areas in the city (Green et al., 2005). Housing supply: is effected by, vacant land, land, and the price of housing, housing types, distance to work places, social facilities, socio-economic status, and the status of the buildings (Malpezzi & Mayo, 1997).Demographic and social characteristics of the population of a country are based on the demand for housing as well as economic factors. Variables related to the demand for housing, population growth, birth rate, marriage rate, age at marriage, family size, income, tax, interest rate, inflation rate, unemployment rate, (Arimah, 1992).

In order to predict future land use and density in a precise way, the past and the present land use and transportation system, depending on the density of the collected data must be evaluated. For the modelling of the whole urban area, each containing homogeneous function areas are divided into small areas, for example, residential, office, park, such as commercial and industrial areas. Therefore, the appropriate unit of area on the census can be considered as the basic units of the neighbourhood (Özus, 2005).

While there are many variables that influence the choice in residential areas, often models on this issue, using a small number of variables that have the greatest impact. Increase the cost of a very large number of variables, such as the use of the calculation process is also difficult. In this regard, based on the models of gravity theory, for a small number but they are formulated according to the data strongly preferred. Hansen is one of the models of this type of model. According to this model, the development of a residential unit, is inversely proportional to the distance from the business center, business center and the surrounding empty fields is proportional to the number of employees. The distance between the place of business of housing, especially in western countries, research, housing is emerging as an important factor in the choice of location (Levinson, 1997; Cervero, 2006).

Hansen Model formula given below:

$$G_j = G_t \left[\frac{L_j A_j}{\sum_{j=1}^{n} L_j A_j} \right]$$

wherein,

Gj: j district population to settle
Gt: City population growth
Lj: j district vacant land
Aj: Attractiveness Index

Of J Attractiveness index is formulated as follows.

$$A_j = \sum_{i=1}^{n} \frac{E_i}{D_{ij}^{\lambda}}$$

wherein,

Ej: j district, the number of employees
D_ij ^ λ: the distance between i and j districts

This model, as a result, increasing the population of the city districts that have empty fields, business opportunity, and how other districts will be divided according to the distance. Here the number of houses in general, can be calculated by dividing the number of households, the average number of population in the district. More specifically, the residential neighbourhoods to choose different types of families of different sizes for the calculation of the distribution must be taken into consideration, for example, unmarried and childless families, neighbourhoods close to the centre, garden houses or sites to choose the environment, such as families with children (Kim, Horner, & Marans, 2005) (Hoshino 2010). In addition, the income level of families to settle in the new districts and the distribution of both types of residential neighbourhoods, the distribution must be taken into consideration. Therefore, the demographic and socio-economic characteristics of families preferred neighbourhood characteristics are needed to be investigated (Dökmeci and Berköz, 2000).

The results obtained with the model of Hansen residential areas are in need of social, cultural, economic, and recreational areas can also be used in the planning. Establishment of new settlements and the growing population of the city of new centres to be built in these areas can lead to the restructuring of the business relationship of housing all over the city. This model could be run as sequentially until, residential and business areas

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as a result of the implementation of certain land use change obtained.

In addition, the scope of the variables in this model can be expanded or different aspects can be addressed. For example, the space used to refer to the 'L' variable does not exist or is empty in less dense areas, the density to be increased at any time, the difference between the target density and current density can be expressed in the formula (Özus, 2005).

Model adjustment (calibration), coefficient α by giving different values, different times as a result of the model by comparing the value detection are carried out as the best expression of the real trend. The distance can be expressed as the Euclidian or time of commute (Özus, 2005). Generally, individuals seek a balance between the theoretical cost of land and transportation (Alonso, 1964). But the key to this, as well as other features that relatives and the social environment (Dökmeci and Berköz 2000), school quality, commercial facilities, green spaces, leisure facilities, prestige zones (such as Baghdad street) and revitalization projects (in Beyoğlu etc.) may influence the choice of residential location.

Population Distribution Model

TURKSTAT employment data is used in the model for 32 district of Istanbul. Recently Istanbul districts changed to 39 with 7 newly established administrative units. Due to the data constraints previous 32 districts date employed. Assumed to be 3 million people added to the population and employment in the total population of 15 million will be allocated according to Istanbul (Table 1). Districts with more free space available in the European side are one of the most highly populated districts. Küçükçekmece the second largest free space (14.4%), and the third largest in the labour force (6.39%) will have the highest population (26.56%). In the meantime, Eyüp, both empty fields (2.19%) as well as labour force (1.76%), the second largest population group, although more (24.54%) allowed to produce its own due to its central location. Eyüp district to the free space (2.4%) as well as labour force (3.8%) due to its central location, although it is less than the third largest population group (12.12%) will attract. Nevertheless, the Silivri district of Istanbul, the largest free space (38.5%), although with the lack of employment opportunities (1.0%) due to its distance from the city centre much less population (2.77%) be allowed to produce its own.

Table 4. Population of Istanbul Districts (Arslanlı, 2016)

Districts	Population	Model Population	Employment	Empty Land Ha
AVCILAR	97904	421924	33252	676
BAKIRKÖY	89446	374367	57647	113
BAĞCILAR	23255	792727	69625	21
BAHÇELİEVLER	33207	681592	78109	35
BAYRAMPAŞA	52023	380290	52786	35
BEŞİKTAŞ	16812	268881	76277	14
BEYKOZ	4490	287760	18547	36
BEYOĞLU	17741	341868	69480	10
EMİNÖNÜ	5363	80598	107345	3
EYÜP	736340	1073726	33474	375
FATİH	17447	561225	44582	15
GAZİOSMANPAŞA	363750	1285327	73323	423
GÜNGÖREN	65917	441104	83251	35
KADIKÖY	19942	931597	136278	55
KAĞITHANE	27615	494481	65421	33
KARTAL	46201	504486	62108	305
KÜÇÜKÇEKMECE	797083	1610095	121556	2466
MALTEPE	98287	560426	42188	537
PENDİK	24282	570146	49878	180
SARIYER	11924	336615	13749	69
ŞİŞLİ	31730	405715	177858	35
TUZLA	105782	244623	39472	1450
ÜMRANİYE	5940	617775	81128	158
ÜSKÜDAR	28679	713714	55210	27
ZEYTİNBURNU	13924	345024	84524	25
ESENLER	38350	635895	30857	36
SULTANBEYLİ	6921	248604	12442	78
BÜYÜKÇEKMECE	112741	192423	86604	2168
ŞİLE	802	36739	1775	75
SİLİVRİ	83227	166054	19506	6581
ÇATALCA	22877	58595	21163	913
Total	3000000	15664396	1899400	17067

The model considered to have a more balanced distribution on the Anatolian side. Tuzla (3.52%) and the Maltepe (3.27%) counties circles break, even if a higher proportion of the population, ranking sixth and seventh are required on the

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European side. Üsküdar and the effect of the precedent raised to increase the space and tries to give the new sub-centre.

As a result, this model calculates empty areas in the districts, the potential labour force, and taking into account the distances to the centre of Istanbul's growing population. Among them, particularly, Küçükçekmece, Eyüp and Gaziosmanpaşa have great potential in the future development of the districts. Then the model reveals their potential for transformation in slum areas. Therefore, the model results, investors, planners and managers of great importance for the city and the region.

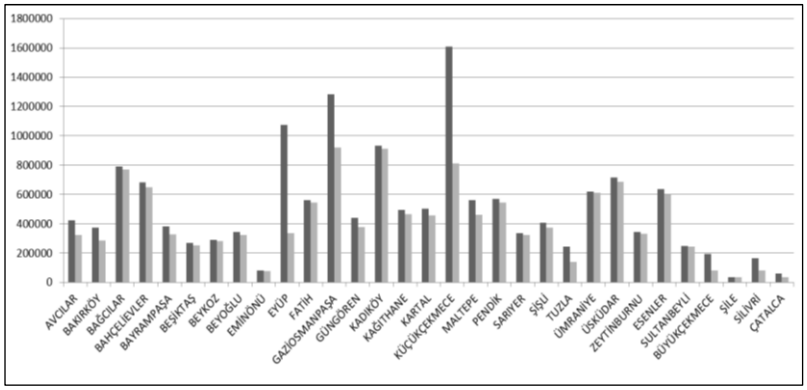

Figure 2. Model Projection and Actual Population in Istanbul

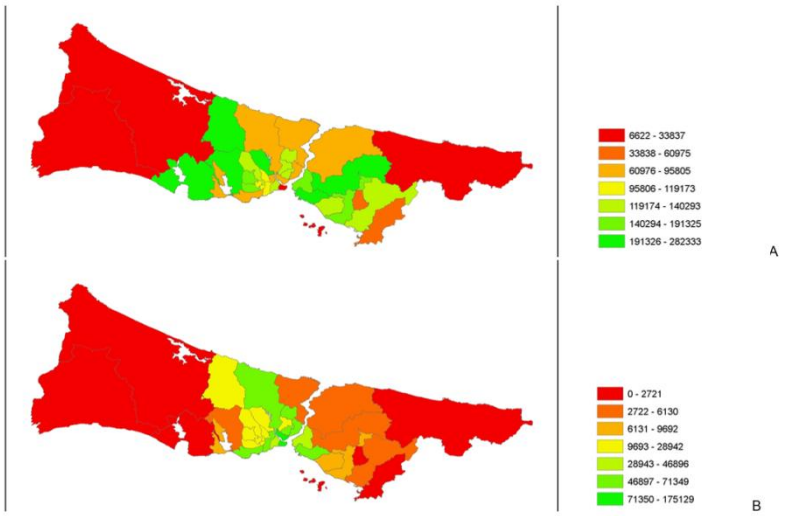

Figure 3. A-Actual Population of Districts, B-Distribution of Population according to Model in Istanbul

CONCLUSIONS AND RECOMMENDATIONS

Istanbul, population and income growth, the service sector, based in the city's development as a result of advances in transportation and telecommunications, the restructuring of the city, and this encourages residential, commercial and office create opportunities for investments Land use decision-making process is a very complex includes site selection. Estimates of population growth, starting from the development potential on

the one hand, depending on the location of the settlements, and the physical, socio-economic, legal and political characteristics of the functional needs of the city overlaps with each other to create the most effective form is required.

Hansen Model applied to Istanbul districts and increasing the distribution of the population of 3 million were calculated. Küçükçekmece district attracts largest population due to its workforce and empty land. Eyup and Gaziosmanpaşa become second and third, although have small empty land and business areas because of closeness to the center. However, with the most available space Silivri, labour, and far from the center because of the potential to be less able to attract population. On the Asian side, in order to create a new sub-centers, Ümraniye and Atasehir population increased.

Multi-purpose land use, site selection model, applied to a portion of the of Silivri district. Developed four different alternative land use. These alternatives are developed, one in the center, the two sub-center and calculated in two different activities according to the purpose of each alternative. As results being evaluated, including two sub-center was the highest efficiency alternative. single center alternative is not satisfactory in terms of accessibility. Thus, settlement plan with two sub-center has a satisfactory result in terms of both purposes.

In studied together these models can be used to complete each other. At the same time, it is possible to use these models as a dynamic, new development areas designated for the city-wide appeal to all business centers, taking into account new population density of each sub-region, centers and essential services, and this process can be calculated as a result of any change. Thus, when the size of a city-wide alternative settlement proposals, taking into account all the most effective results can be achieved as a result of the evaluation.

In addition, the sub-centers produced a gradual effect of the interaction and the environment as a result of a lot of alternatives for the purpose of evaluating the size of the new centers and, instead, may be decided taking into account the dimension of time. Thus, the development of the whole city and the economic development of the system to provide the most effective when planned. By investing just as it is today, at certain points, and the creation of high-quality urban services bringing the speculation, raising the quality of life of city-wide, but can provide a healthy socio-economic development.

Furthermore, we examine here only in models of land use, land use in the selection of the most efficient in order to meet the demand has been developed. However, nowadays, the choice of a

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town in the land use of a region, a country, or with the effect of globalization on the international level need to be determined in response to a need. It will be for the creation of a new space, as can be in the form of conversion of existing space.

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Resume

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Libraries and Accessibility: Istanbul Public Libraries Case

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Abstract

In the study; the assessment of accessibility has been conducted in Istanbul public libraries within the scope of public area. Public libraries commonly serve with its user of more than 20 million in total, spread to the general of Turkey, having more than one thousand branches in the centrums and having more than one million registered members. The building principles and standards covering the subjects such as the selection of place, historical and architectural specification of the region, distance to the centre of population and design in a way that the disabled people could benefit from the library services fully have been determined with regulations in the construction of new libraries. There are works for the existent libraries such as access for the disabled, fire safety precautions etc. within the scope of the related standards. Easy access by everyone is prioritized in the public libraries having a significant role in life-long learning. The purpose of the study is to develop solution suggestions for the accessibility problems in the

Keywords: *Library, accessibility, universal design, public library, Istanbul.*

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public libraries. The study based on the eye inspection and assessments carried out within the scope of accessibility in the public libraries subsidiary to Istanbul Culture and Tourism Provincial Directorate Library and Publications Department within the provincial borders of Istanbul. The arrangements such as reading halls, study areas, book shelves etc. have been examined within the frame of accessible building standards. Building entrances, ramps and staircases, horizontal and vertical circulation of building etc. have been taken into consideration within the scope of accessible building standards. The subjects such as the reading and studying areas and book shelf arrangements for the library have been assessed within the scope of specific buildings. There are a total of 34 public libraries subsidiary to Istanbul Culture and Tourism Provincial Directorate on condition that 20 ea. of them are in the European Side.

INTRODUCTION

Public libraries being the most important resource for the society to reach information are the information centers aiming to reach every section of the society with its network expanding to the smallest settlements. As it is emphasized in United Nations Educational, Scientific and Cultural Organization UNESCO Public Library Manifesto (1994), it is the local information center providing the information to the users voluntarily (UNESCO, 2015). Giving support in reaching service to those having problems in reaching information without any discrimination is among their duties. They aim to give service to every section of the society with their flexible physical structure and content that could renew itself in parallel to the changing usage and that is in accordance with the contemporary needs. The provision of every kind of conditions necessary in the supply of information and access to information is the basis for the libraries. Physical sufficiency, collection being in a status that is accessible for every level and competent personnel service are the elements affecting the benefit from the library.

Considering accessibility in a physical meaning and in a wider meaning out of the principles dependent on the user characteristics shall positively affect the libraries' property of being a local information resource. For instance; the conditions such as arranging the usage areas of the children in parallel to the perception structure, considering the ergonomic conditions in physical dimensioning, providing the expansion of the handicapped usage as visual, audible and tangible surface in the library, providing easy, defined descriptions, directions and usage in which the difference of education level is taken into consideration etc. shall also have an encouraging role as well as facilitating the process of the society for reaching information. The precautions and spatial arrangements to be taken within this

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direction in the new library buildings are in an easily applicable status. Many physical, structural etc. difficulties could be existent against the new arrangements regarding the usage and provision of the necessary conditions in physical terms in the existent libraries.

ACCESSIBILITY AND LIBRARIES

Accessibility could be defined as the methods used in access to the elements such as the product, activity, service and building related to the physical social, economical, environmental etc. levels to be perceivable, available and usable by everyone. Accessibility is not only limited to the physical conditions. Relating only the disable to accessibility is also not sufficient. It could be thought that it covers all the related areas taking the benefit of each person from the fundamental rights and freedoms as the basis. The difficulties in reaching the fundamental rights taking place in The Universal Declaration of Human Rights (1949) could also be related to the accessibility from a point of view.

Access to the libraries within the scope of *"Participation to the cultural life, resting, free time activities and sport activities"* and taking the necessary precautions within the scope of the provision of *"access to the information with freedom of thought and expression"* take place in "Contract On the Rights of Persons with Disabilities," (Engellilerin Haklarına İlişkin Sözleşme, 2009) approved in 2009 as International Contract.

In the Law on the Disability, accessibility is expressed as *"the buildings, open areas, transportation and information services and the information and communication technologies to be safely and independently accessible and usable by the disabled"* (Engelliler Hakkında Kanun, 2005). The process of adaptation to the law regarding being accessible for the disabled in the existent buildings in the same Law in which the libraries also take place within the scope of the buildings giving service as open for public have been determined as eight years. Accessibility could also be related to the Universal Design in the process of building places physically. Seven principles (equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, size and space for approach and use) determined within the scope of the Universal Design principles include the fundamental issues regarding the physical elements in terms of accessibility (Story, Mueller, & Mace, 1998). The library should be accessible for all people in the country. The users can be characterized with different age, culture, education and other specifications such as being physical or mental difficulties. In the designing process, all user criteria should be

taking consideration for success of accessibility. According to universal design, equitable use shows that design should be useful and marketable to people with different abilities. Flexibility in use is also related with easy use. The design should be accommodates a wide range of individual preferences and abilities. Low physical effort is another principle that important for accessibility. The design should be used efficiently and comfortably and with a minimum fatigue (Story et al., 1998). Making accessible library is depending to design and design parameters. There are some studies and assessment checklists for accessible library. Most of accessibility studies are related directly person for disable. But on the other hand universal design criteria's is more inclusive and related with wider section of the population.

The library accessibility checklist for persons with disabilities, progressed by International Federation of Library Associations and Institutions IFLA (2005) is settled physical access, media format and service and communication mainly (IFLA, 2005) (Table 1). The physical access focuses outside library, getting into the library and access to materials and services. Media formats topic is related special media for person with disabilities. Service and communication is related with training staff, special service for and providing information to disabled patrons. The accessibility of library as physically is related architectural design directly. Taking consideration universal design criteria into designing process is important for making accessible library. United States Access Board's, ADA Accessibility Guidelines (ADAAG) is included library buildings also, including reading and study areas, stacks, reference rooms, reserve areas, and special facilities or collections (ADA, 2016). American Library Association ALA has studies titled "ADA and Libraries" and with The Association of Specialized and Cooperative Library Agency ASCLA has developed "Library Accessibility –What You Need to Know" toolkit series of fifteen tipsheets to help librarians in all types of libraries understand and manage access issues (ALA, 2016). Disability Law Center (DLC) has created an (Americans with Disabilities Act) "ADA Checklist" for libraries, which is related with physical aspects, including drinking fountains, telephones, lavatories, stalls, doorways and passages, rooms and spaces, horizontal circulation, reading and studying areas, entrance, ramps, route of travel and parking and drop-off areas (DLC,2016). The checklist is also parallel with IFLA (2005) sample. In the same way, it also takes place in the Contract Regarding the International Disabled Rights in which universal design could be benefited.

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Table 1. Access to libraries for persons with disabilities – Checklist Summary IFLA (IFLA, 2005)

Access to libraries for persons with disabilities – Checklist		
Physical access	Outside the library	Sufficient parking space, distance to main entrance, clear signpost, adequate lighting, smooth and non-slip surface at the entrance, if needed suitable ramp with both side railing, entry phone for deaf users at the entrance.
	Getting into the library	Sufficient space in front of the door, Entrance door wide enough for wheelchair, No doorsteps, Glass doors marked to warn visually impaired persons, Suitable security checkpoints, Stairs and steps marked with a contrasting color, Pictogram signs leading to elevators, Well lighted elevators with buttons and signs in Braille and synthetic speech, Elevator buttons reachable from a wheelchair
	Access to materials and services	The physical space, Toilets, Circulation desk, Reference/information desk, Children department, Department for person with reading, hearing and other disabilities
Media Formats	Special medias for person with disabilities	Special media formats for persons with disabilities
	Computers	Accessible computers for public use
Service and communication	Stuff Training	Organization of staff meeting for library users; Information distribution to staff about library services to specific disability groups; Staff orientation programs
	Special services to disabled patrons	Home delivery services, Outreach services, Reading and scanning services, regular consultations for reading disabilities
	How to provide information to disabled patrons	For visually impaired persons, deaf or hearing impaired persons, persons with reading difficulties (persons with dyslexia or weak readers), persons with physical disabilities and cognitively disabled persons
	Cooperating with disability organizations and individuals	A formal invitation to cooperate on various projects, A joining "brain storming" meeting, Planned activities in the library, Regular meetings with organizations and/or individual patrons to discuss future initiatives, Joining development projects and joining media contacts

PUBLIC LIBRARIES

The design of the public libraries in integration with the universal design criteria and valid spatial regulations is significant in its being an information center serving as a whole with its content and administrative structure. Subjects such as regulations in building standards, spatial organization research and material opportunities affect the libraries positively in physical terms. Apart from the opportunities in new library formations, improvement works to be done within the scope of accessibility in the harmony of the existing buildings to the current situation. It might be possible to do these kinds of studies together with the improvements in the factors which are structural and non-structural.

Rules and principles of the physical regulations to provide accessibility to all buildings and nearby for the disabled and people who have limitation of movement have been identified in a detailed way with the standard (TS 9111) published in the title *"The requirements of accessibility in buildings for people with disabilities and mobility constraints"* (TSE, 2011). The subject regulations make contribution as an important input in the period of designing and applying new building. It is possible to handle accessibility as a system of structured environment outside the building, buildings and transportation physically. In terms of accessible environment, it could be ordered as pedestrian ways, ramps, stairs, crosswalks, parking areas, open and green areas. In terms of accessible building, internal regulations of the building, regulations related to the buildings within special use (hospital, library, transportation, etc.) and existing buildings might be considered (TSE, 2011). The areas related to transportation and public transportation are from the areas where accessibility is dealt in informing-pointing (TSE, 2011). Service areas such as entrance to buildings, the entrance door, ramp and staircase regulations, horizontal and vertical circulate inside the building, corridor and halls, toilet and kitchen are in subject in terms of accessible building. It is possible to extend the accessibility factors within buildings according to the function of the building.

Public libraries are an important center in disseminating information to society. Its existence during the historical process, basis developed with the Republican era, its existence and development in the structure of community centers in the process following the foundations of community centers are the processes affecting the maintenance of duty as center which provides the need of information of the society in today's settlements. Public library is open to every type of user. It is the

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center providing accessibility to opportunities such as improving the habit of reading in society, reaching information people need and participating in cultural activities.

"In The Regulations of Public Libraries" (Halk Kütüphaneleri Yönetmeliği (2012), these duties taking place in library duties reveal and highlight the importance and place of public libraries in social life. Apart from benefiting from books, it might be considered as the local information focus undertaking an important role in the development of social life and sociocultural structure. Within this scope, it comes forward that evaluating the accessibility in public libraries with all dimensions is important.

PUBLIC LIBRARIES IN TURKEY

There are 1121 public libraries subject to The Ministry of Culture and Tourism, General Directorate of Libraries and Publications (KYGM) all across the country (KYGM, 2015). 34 of them are in Istanbul. 6 of the libraries in Istanbul serve as the district public library directorate, 10 of them being subject to the district public library directorate. 6 of the libraries are children's library. In public libraries where the number registered members all across the country exceeds one million, total number of users is getting closer to 21 million according to the statistics of 2014 (KYGM, 2015), (Table 2). The number of children and adults is close to each other in public libraries (TÜİK, 2014).

Table 2. Public Library Statistics according General Directorate of Libraries and Publications (KYGM) (KYGM, 2015)

Public Library Statistics 2014	
Public library	1 121
Book	17 111 825
User	20 787 765
Registered User	1 209 766
Lending material	7 600 807

In public libraries where the number of books exceeds 17 million, the material being lent is close to 8 million (KYGM, 2015), (Table 2). The books are generally in the areas of literature and rhetoric, social sciences and history (TÜİK, 2014). Libraries are not only limited to utilizing the books and material other than books but also the focus of using library is enhanced with the cultural activities. Reading days, creative drama and reading activities are organized in the activity points in or outside the library; in this way; the processes of book, library, and acquisition of knowledge are shared with the society.

In the process of choosing a place for the public libraries of which building principle and standards are identified by (Halk

Kütüphaneleri Yönetmeliği (2012) In The Regulations of Public Libraries the condition has been attached which says the settlement population should be 50 thousand at least. Minimum sizes (branch minimum 500m^2, minimum for the center library 1200m^2) for branch or center library buildings have been determined with the same regulations. In the regulations highlighting the disabled users benefiting from library services completely, in the part of building and equipment principle and standards, one reader table and four chairs have been proposed for every eight square meter area in reading halls. Nowadays, the distribution and sharing of the information sources in electronic media show increase and also the desire to reach the pressed information sources still stands. Besides, not only reaching the information resource but also the inclination to use the information center increase. Young population in the education period uses the libraries both as the information resource and information home. They also benefit from the study areas and internet opportunities. Updating the public libraries to meet the need of today's world will support the information exchange, being together and studying together.

CASE STUDY: İSTANBUL PUBLIC LIBRARIES AND ACCESSIBILITY

The study evaluates the public libraries within the provincial borders of Istanbul in physical scope in terms of building accessibility. The assessment is based on accessibility to library. The literature review of the study contains the process of observation and examination in situ and interview with the related units. In situ examination has been done in public libraries subject to Istanbul Provincial Directorate of Culture and Tourism Library and Publications Branch within the provincial borders of Istanbul. It includes the determination and evaluations based on external observation. The physical access evaluated that according to accessible buildings standards and (IFLA, 2005) checklist for person with disabilities and TS 9111 (TSE, 2011). All of them are parallel with Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities also (ADA, 2016).

In the study, the entrance to building, ramp and staircases, horizontal and vertical circulation etc. have been taken into consideration in the evaluation within the scope of accessible building standards and IFLA (2005) checklist in general. The subjects such as reading, study areas and book shelf arrangements for the library have been assessed within the scope of specifical buildings. Historical building using as library is also assessed in the study at same scope and concept of

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reusing historical buildings. In situ examination has been done in September- December 2015.

Istanbul Public Libraries: There are 34 public libraries being subject to Istanbul, the Directorate of Culture and Tourism in total. 6 of them are children library. Libraries are in a situation settled inside the building having different typology such as with different institutions, independent building, and historical building. Variability in the selection of the examined sample has been paid regard such as being in different areas, use of historical building, use of independent building and accessory use with other public institutions. 13 libraries in total have been examined in situ as 6 being in the Anatolian side out of 34 libraries subject to Istanbul Directorate of Culture and Tourism (Figure 1). 6 of the samples are directorate and 2 are children libraries. 2 of the selected libraries have been placed in the historical buildings (Figure 2). One of the samples is in the historical peninsula.

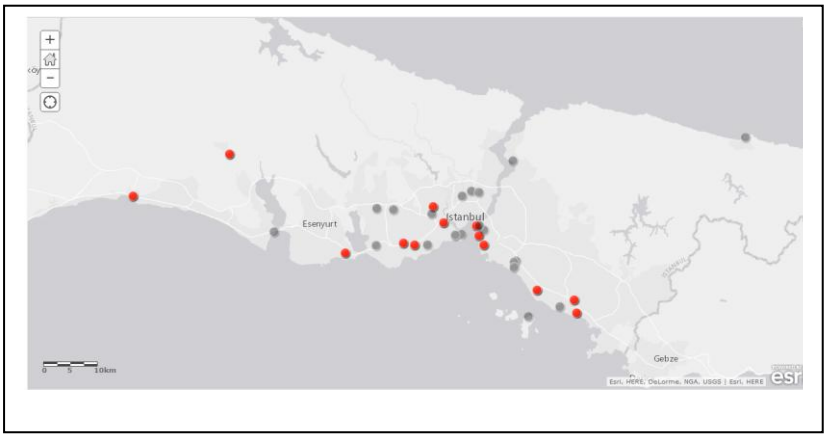

Figure 1. Map of Public Libraries in Istanbul (Red: examined, Grey: not examined)

Figure 2. Public Library in Historical Buildings 2 of the selected libraries have been placed in the historical buildings (Yücel, 2015)

Public Libraries specification: The level of research is in the primary and high school level mainly in the examined libraries. Primary and high school students use public libraries mainly in order to utilize internet, do homework and study. The age range of users differs in the areas where libraries take place. Different

profile in the age range affects the use and regulations depending on the physical conditions for each library. The crowding of the use of libraries changes from period to period and generally it increases in education periods. The libraries except for two which were examined serve during the work hours every day except for Sunday. The time of staying in library of the library users differ depending on use type. The users loan book exchange might be considered as the users with the shortest time. It is followed by the ones who come to do research and use as study area. It has been stated that there are readers who use the library whole day with the aim of preparing for the exam. The type of use also differs according to the place of library.

Building accessibility: The entrance to building, ramp and staircases, building entrance door, horizontal and vertical circulation, book shelves and table regulations in reading halls have been dealt with in the scope of accessible building standards in physical terms in the evaluation. In the samples, there are samples involving the suitable regulation for the disabled access in the entrance of building; also there are samples having difficulties in terms of improving the situation by the place (Figure 3).

Figure 3. Public Library Entrance Samples (Yücel, 2015)

Tactile paving application is seen in the samples examined but not common. It has been encountered more in the buildings in common use. In the samples where building entrance is not on the same level with the pavement, samples having ramp application outside the staircase have been observed. In the situation where there is not the opportunity for required area in ramp regulation, it has been detected that there is difficulty in providing the standards. However, solution has been developed to the access difficulty to the building originating from these elevation differences in libraries having a second entrance. Even though the situation of leaving enough platform is seen in some samples in the relation of entrance doors with entrance platform, pavement distance and building settlement especially in the city samples might make it harder. The location, the existence of

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enough open area such as garden affects the arrangement of the building entrance platform positively.

In the examination of horizontal and vertical circulation, although circulation is simple and defined for the libraries in independent buildings, different situations might emerge in common use conditions. Especially the situation that the library is located upstairs except for the basement affects the access and recognition negatively. Supporting the library with guidance and halls in distinctive and apparent way will be useful for the users. Especially guidance in the case with common use with different function other than education, culture and art etc. should be supported with enough tools. The location and physical structure of the ladders are convenient in the samples with independent building usage in the arrangement of the vertical circulation tools, ladders, ramps and elevators; and the existence of the equipment such as elevator etc. that may be necessary changes depending on the age of the structure. In some part of the examined samples, the elevators added later have been regulated by focusing on the disabled. In common use with other units and in new structures, there are elevators in enough equipment. The situation of adding this type of vertical circulation equipment later depending on the date of built of the structure brings out the necessity to regulate with the interventions such as structural improvement in the structure and measures with fire focus. In this process, the ownership becomes important and affects the process.

Library interior design: In most of the samples, even though the table heights and suitable spaces between tables are considered sufficient in reading and studying areas, the sufficiency of accessibility to reading and studying areas should be preferential. Dense shelve order developed in area insufficiency creates difficulty in use and makes it harder to be in the required standards of the study areas. Book shelves have been solved integrated with reading halls (Figure 4, 5, 6).

Figure 4. Reading hall view bookshelves and tables arrangement (Yücel, 2015)

Although book shelves and study tables are in the same hall in some samples, separate grouping has been done. It has been observed that the separation of reading and studying halls is not

done in the library samples involving one hall. Although shelf distances are sufficient in terms of accessibility to book shelves in most of the samples, in some samples sufficient blanking order could not be made between shelves because of the narrow area.

Figure 5. Reading hall view bookshelves and tables arrangement (Yücel, 2015)

Figure 6. Bookshelves Arrangement the bookshelves should be arranged enough width (Yücel, 2015)

The sufficiency of circulation area in reading and studying halls arranged with shelves should be controlled. The fact that the fixed partials in the structure in the samples in historical structure meet the needs of today's poses a challenge in cases requiring especially wide use areas. Therefore, it is important that special analysis of spatial arrangement and furniture design according to the features of the place in the use of these kind of buildings. Mobile solutions other than the special closed area and desktop computer might provide flexibility in the use of internet. It has been observed that the activity areas are limited in most of the samples. It could be prescribed that it is arranged in the ground floor in multi-storey libraries and it is open to these kind of use by creating flexible use areas inside the library. The location, access and evacuation convenience of the activity area should be considered.

CONCLUSION

Public libraries are important sources in accessing information which serve in the smallest settlement with the number libraries exceeding a thousand serving every level of society and having a number of user exceeding twenty million. It is preferential to provide accessibility in physical, social and environmental components during the process of being in inclusive feature of all

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the society. In this way, the barrier of the physical structure in reaching information easily in every age and every situation will disappear. In regulations to be done for the existing libraries, first the regulations of accessing to the building and inwards building regulations are important. Ramp regulation in suitable conditions should be considered in accessing the building. It has priority to providing the required standards in terms of accessibility building circulation and providing the suitable opening way and size to entrances in doors in the improvements to be done. Use regulations and accessibility opportunities in ground floors should be developed for the conditions that improvements in vertical circulation elements are not possible. The applications such as pointing and perceivable surface not involving large scale interventions are in easily applicable quality for the existing libraries.

It should be in the forefront that dimensional and cycle opportunities are in the suitable size and disposal order for the user of every level in the indoor movable furniture. The sizes and placing of furniture should have the opportunity of arranging in a way open to flexible use depending on the features of use type, the structure of building and user. In the process of realizing the suitable regulations for today's conditions in the existing public libraries, structural sanitization, providing the fire safety and structural precautions in the scope of preparation for the disaster should be planned together. It has priority to arrange the children parts in public libraries for users in suitable physical condition and location.

There are some difficulties in libraries which is settled in historical building. Interior arrangements and some horizontal and vertical circulations standards may be restricted because of physical conditions. The originality of building should be protected during the adaptation progress in the historical buildings. The capacity of library should be take into account while reusing decision for historical buildings.

Public libraries are the centers including utilization of publication, reaching information and also social integration and cultural exchange. It should be supported with spatial arrangements to strengthen the social ties. The location of public libraries in the settlement affects the use and the user. Being located near the cultural center, museums, social center and education structures etc. will affect its use positively. Taking precautions to identify and decrease the large scale risks integrated with the environment and building is one of the factors affecting the safety of user, collection and personnel. The personnel of public library should be supported with education in parallel with the tools and changing habits of use of the day.

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Resume

She graduated from Istanbul Technical University, Architectural Faculty in 1985. In 1988, she received master's degree in Istanbul Technical University, Institute of Science and Technology Department of Architecture and Urbanism, Building Technology Program. She completed her doctorate in Yıldız Technical University, Institute of Science and Technology, Department of Architecture, with a thesis entitled "Earthquake and Physical and Social Vulnerability Assessment Model for Settlements: Case Study Avcılar District". In 2013 she worked as an Assistant Professor at Namık Kemal University, Faculty of Fine Arts, Design and Architecture, Department of Architecture. She has been working in Istanbul Gelişim University as an academic staff of department of Architecture since 2015.

Article

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Assessment of Satisfaction and Environmental Preferences of Students

Navid Khaleghimoghaddam*

Abstract

This study seeks to explore the role of university campus quality in art students' satisfaction. Environmental satisfaction is one of the key criteria by which the extent of university educational quality may be determined. An educational environment of high quality campus conveys a sense of satisfaction with university environment that may be physical, social and symbolic. Satisfaction and dissatisfaction from the art students' point of view can be used as criteria for the campus planning, design and management to improve participation in environmental interaction and desire to more artistic performance. Data collection of the research was undertaken through a field study using photography, behavior monitoring and a questionnaire filled in by a sample of art students in Tabriz Islamic Art University. Descriptions and analysis of the results shows that the art students' satisfaction with their university campus environment is at a mid-level identity and legibility, access in the campus, sociability, livability, territoriality & control are of the main physical-psychological factors

Keywords:*Environmental quality, environmental preferences, environmental behavior, students' satisfaction, university campus.*

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that may influence students' environmental satisfaction. According to the character of artistic creativity, contact with nature can have a positive influence on art students' environmental satisfaction.

INTRODUCTION

Tabriz Islamic Art University was established in 2000 for Islamic arts education and research around Iran and Islamic countries. The main campus of the university is located on the historic place of Khosravi Leather factory of Tabriz. The purpose of the university is to improve the situation of arts and artists in Iranians' life through educate students in various art fields, to do researches, to offer artistic as well as scientific services to different organizations and institutions, to establish cultural, artistic and educational relations, to exchange information with other educational organizations inside and outside the country and finally to provide educational facilities for knowledge seekers. Considering the problems facing contemporary university development in Iran, a better understanding of the students' environmental preferences and satisfaction has become necessary.

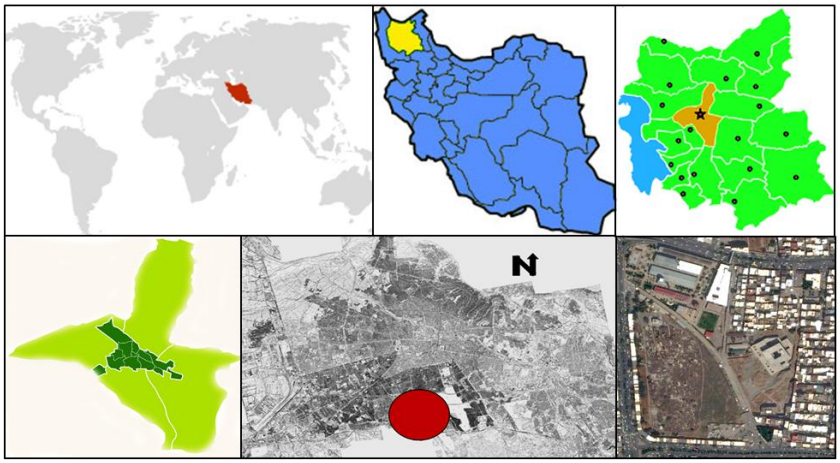

Figure 1. Location of the city of Tabriz and location of the Tabriz Islamic Art University (Technical office of Tabriz Islamic Art University, 2011)

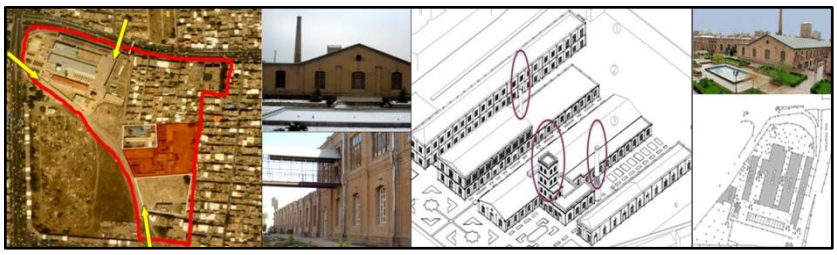

Figure 2. Tabriz's historical leather industry factory's collection (Tabriz Islamic Art University) (Technical office of Tabriz Islamic Art University, 2011)

University like other forms of learning environments, like language, defines and facilitates the relationship between Student and his/her environment. The term university campus refers to an institutional space that is designed for use in the education and residence of college students (Isiaka & Siong,

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2008) and includes the building and other physical elements found in the associated area (Shamsuddin et al., 2007). Existing university campuses require further development from time to time, based on the objective that must be achieved. The physical development planning of a campus can be considered to be successful if the project goals are achieved (Razak, Abdullah, Nor, Usman, & Che-Ani, 2011). The buildings and grounds of campuses represent a rich physical record of changing design innovations and architectural norms. Architectural features are likely to become symbols for the university or college, or state or province (Bell, 2001). Art universities in Iran which are located in the well-known metropolises such as Tehran, Isfahan and Tabriz, have different design style on building architecture and campus landscape characteristics. It seems that art students have different environmental preferences and art universities needs to more sensitive campus design in relation to art students' desires, needs, preferences and satisfaction.

Therefore, this study is aimed to assess Tabriz Islamic Art University campus in identifying and analyzing the patterns of behavior from the perspective of providing satisfaction and environmental preferences in determine the quality of the campus and its development. History of modern design and development capabilities of wide-site university is dating back to the period after the Second World War (Gharavi, 2008). However, no research has been done on the satisfaction of students in campus. In a similar study, Ali Sharghi (2011) has worked on the effects of university campus landscapes on learning ability of students. In another similar study, urban planner and designer Raziyeh Rezazadeh (2002) in her research on the views of some streets in Tehran, asserts that, designer and users are experiencing and evaluating the urban place differently. In the research, which held on the rural places, it is related that the users' mental structures and preferances are affected by cultural specifications.

Figure 3. Applied arts faculty, sport complex, central library amphitheatre (Khaleghimoghaddam, 2016)

Figure 4. Library entrance students' park physical fitness facilities. (Khaleghimoghaddam, 2016)

RESEARCH METHOD

As the main assumption, the university architecture and campus landscape can influence the students' educational perceptions and behaviors in relation to artistic creativity. Environmental assessment broadly encompasses efforts to describe environments or their components (Craik & Feimer, 1987). Objective environmental quality indexes (EQI) Monitor quantitative environmental dimensions such as pollution levels, noise levels, property deterioration and other objective characteristics. Perceived Environmental Quality Index (PEQI) is designed to facilitate comparison of trends in the same environment over time, comparison of different environments at the same time and detection of aspects of the environment that observers use in assessing quality (Bell, 2001).

Students' satisfaction evaluation is an experiment of reality that depends on reasonable documentations such as field survey and filled checklists and questionnaires. Some researchers believe that planning and design evaluation is one of the best professions in problem solving. Due to the importance of art education and development of art universities in Iran, in this study we have tried to explore university campus design in relation to students' satisfaction evaluation. Students satisfaction can be determined by how well their university atmosphere meet their learning and educational expectations.

The present study uses the method of evaluation after implementating and investigating the environmental preferences and satisfactions, according to the evaluation criteria. Field data is documented in the face of buildings and open spaces. The evaluation of satisfaction and in the analysis of qualitative factors and preferences, the methods of giving questionaires and interviews were used. In the analysis of behaviors, the method of subtle viewing and recording the cognitive-environmental mapping were used. Maps were provided at different hours and motion diagrams with patterns of social behavior on the campus map were implemented. Reasons and objectives of presence in the different places are observed, assessed and analyzed.

UNIVERSITY CAMPUS DESIGN

Environmental evaluation is one of the most important tools to improve the quality of university environments. This article presents an environmental psychology approach to university campus evaluation. It is clear that in art education such as other fields of higher education, four main points should be noted as important and determinant factors: instructor's situation and conditions, student's artistic motivation and capabilities,

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educational content and educational space and facilities. Some characteristics such as educational technology development, existence of various facilities, materials for practical experiences and technical resources and equipments and new educational methods have important role in art universities. Art education such as the other fields of learning occurs in places where it is the designated purpose of the setting (school, seminars, practice fields, libraries, conservatories, museums, training grounds, etc.) and in places where learning According to an statement of Le Corbusier,1939, " *The ... campus is a world in itself, a temporary paradise, a pleasant stage in life".* Art universities are centers of creativity and novelty ideas in the public forms thateverybody can make a relationships with them. According to Dober(1963), there are three main parts of a campus, which include the buildings, outdoor spaces and supports elements such as utilities and circulation systems.

The effect of the design of university campus on the students' perceptions, cognitions, behaviors and affect within them has been of great interest to university quality researchers. Studies have indicated that the complexity of a university campus design can affect students' arousal and performances. Especially in art campuses, too many stimuli may distract students, create overload, or increase environmental fatigue. Some researchers believe that extremely simple campus environment may be boring and equally detrimental to performance (Sommer& Olsen, 1990). However some others arguing that having more stimuli and opportunities for environmental exploration provide an enriched environment that facilitates learning. The next model shows the main relationship between university environmental affordances and students' satisfaction.

Figure 5 . Some campus open spaces as the students' environmental preferences (Khaleghimoghaddam, 2016)

According to the importance of artistic creativity in art university curriculum, the students' environmental preferences and satisfaction can have an important role as a planning and design guideline to improve the university campus quality. Based on the idea that people prefer scenes that are engaging and involving rather than simple or boring, Kaplan & Kaplan (2003) devised a framework to environmental preferences according to four elements: coherence, legibility, complexity and mystery. Coherence refers to the way that objects in a scene come together to form some sort of understandable context. Legibility refers to the level at which an individual is able to understand or

categorize the scene and the object within it. Complexity relates to the number and variety of elements within the scene. Mystery is the degree to which a scene contains hidden information or begs exploration (Kopec, 2006).

STUDENTS' SATISFACTION EVALUATION

The arrangement of space conveys information that can make environments more interesting and attractive, facilitate way-findings, and enhance opportunities for exchange among individuals. People are attracted to environments that permit exploration and understanding and that offer nature with its restorative properties. Destinations that allow people to carry out meaningful actions, even purposes as simple as obtaining groceries, are also attractive. Thus, knowing what people prefer is important to each aspect and more likely to provide settings that encourage active engagement (Kaplan & Kaplan, 2003)

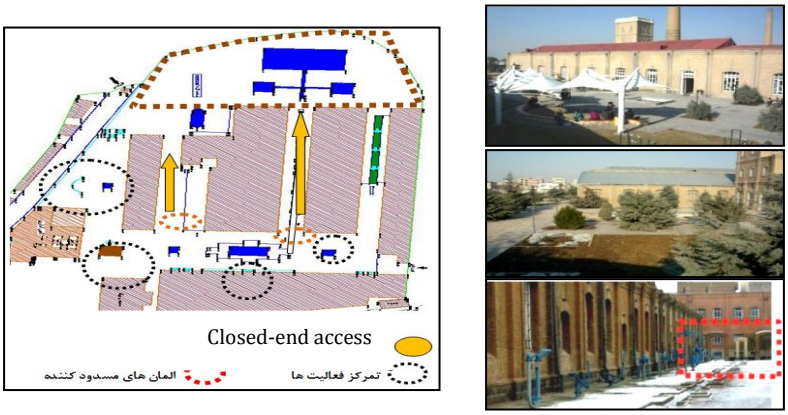

Figure 6. Samples of activity zones and closed-end routes in the campus (Khaleghimoghaddam, 2016)

The students of TIAU are in Architecture (both BSc. And MSc.), Industrial Design, Carpet Studies. At present, TIAU is training students in 2 PhD fields (Islamic Architecture and Islamic Urbanism), 6 MSc. & MA fields in Architecture, Islamic Architecture, Islamic Art, Industrial Design, Urban Design, and Art Research, and 7 BSc. &BA fields in Architecture & Urbanization, Industrial Design, Islamic Art, Carpet Studies, Crafts, Multimedia, and Restoration. . Research is started to examine and recognize the qualities of places/buildings with a professional point of view.

The research finds a connection between users and designers by oberserving the users' responses to the designers' ideas. Public space is a multidimensional concept that affects social life (Rafiean and Khodaei, 2009). In the comprehensive approach, there are three criterias between man and the environment, when satisfaction is concerned (Daneshpour, 2004). The first field is "Formal Features" that includes components of the

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physical environment like perspective and views, scale, legibility, and permeability. The second field is "Activity Features" that includes components of noise, need, behavior, sociability and livability. The third field is "Meaning Features" like quality, definition, beauty, attachment and identity.

According to the results of the studies conducted by Baba and Austin (1989) as well as Bently Ian (2003), factors such as accessibility, continuity of passages, views, legibility, permeability, diversity and sociability in the utility and quality of space and user satisfaction are included. To evaluate students' preferences and satisfaction in campus, a survey was applied and a the following qualities related to campus open spaces environments were determined in parallel to the data obtained through the review of the literature:

- Art students' behaviors, needs, expectations
- Identity and legibility / Access in the campus
- Sociability / Livability / territoriality & control

Questionnaires were given to 102 students and they were asked to answer the questions. After combining and gathering the qualitative datas they had decoupled, an analyzation is made and the results are matched with the hypothesis of the research and other findings. The students in the survey were mostly consisted of the 3rd grade bachelor degree students (70%), and the others were master degree students (30%). The average age of the participants were between 22-27 and the average response time was 6 minutes. The places where the surveys took place in the space between the educational buildings and in free space. Since most of the students are generally at the campus area in the middle of the day, the survey was conducted afternoon.

Table 1. The sample suestions related to the questionnaire (khaleghimoghaddam, 2016)

Formal Features	Activity Features	Meaning Features
My university in terms of form and symbol is legible.	*The landscape of my university has a sense of novelty and freshness.*	*I am fascinated by the beauty and fascination of my university places.*
My university has a useful space accessibility.	*I feel safe while walking and sitting in my university.*	*In terms of memories and a sense of attachment, my university has a unique identity.*
My university has good and memorable view and prospect.	*Designed spaces in my university are sociable. allows to meet and interaction.*	*In most cases, The spases of my university are defined.*
In terms of closeness, my university has good scale and feel safe.	*The sound of water and plants makes me happy.*	*I am proud of my university and I love it.*

During the field study, investigations were carried out in order to check whether campus spaces are responsive environments for the art students' desires, needs and expectations. The questionnaire was a set of some open-ended questions about students' experiences and environmental preferences and satisfaction in different open spaces of the university campus. In the table below, there is a citation about the results of free comments committed by the participants related to the assessment of satisfaction and environmental preferences of students.

Table 2. Assessment of satisfaction and environmental preferences of students (Khaleghimoghaddam, 2016)

Spacs / Evaluation Criteria	Central courtyard & Service spaces	Backyard & Ancillary spaces
Permeability	*68%*	*8%*
Accessibility	*63%*	*12%*
Legibility	*69%*	*19%*
Sociability	*64%*	*2%*
View and prospect	*71%*	*14%*
Livability / Novelty	*67%*	*6%*

CONCLUSION

The findings of the literature research and field studies showed that students 'environmental satisfaction can be divided into three main parts: functional-environmental, structural-infrastructural and spatial-aesthetical factors. For creating more artistic atmosphere in Art University campuses more interaction should be manage between students, staff and the university campus environment. Environmental exploration, meaningful actions and restoration are some of the conceptual factors which can help to planning and designing more responsive campus environments meeting art students' satisfaction. The article argues the conceptual pattern of reasonable person model (Kaplan & Kaplan, 2003). In addition to environmental factors that are based on the way the space is organized, this article also highlights the particular role played by natural environments. In the university campus, it is the content—the trees, water, vegetation—that has strong positive impacts on students' preferences and satisfaction. Improving Moreover, the

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documentation procedure of different institutional requirements of art faculties can be used as a guide to environmental design of the campus. More studies needs to explore the different environmental characteristics for satisfaction in relation to different arts education.

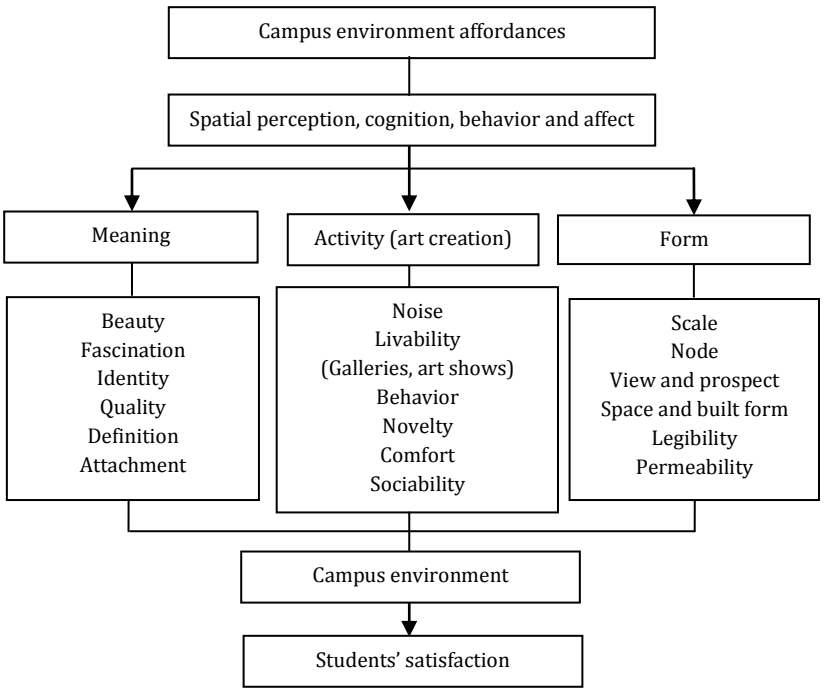

Diagram 1. The model of students' environmental satisfaction in art university campus (Khaleghimoghaddam, 2016)

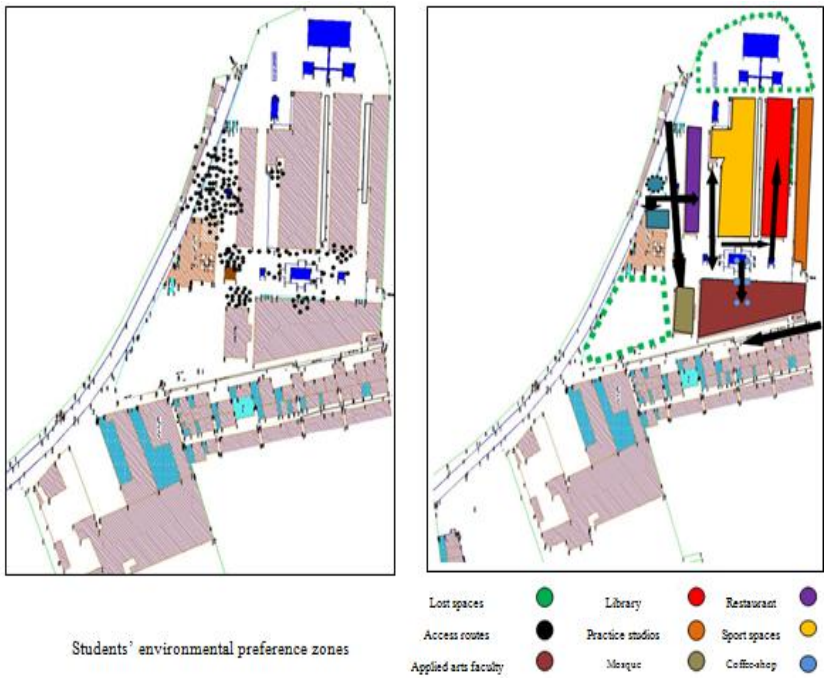

Figure 8. The historic well- leather factory of Tabrizhas been revitalized as the main campus of TIAU from 2000, yet is one urban landmark in Tabriz historic urban context. (Khaleghimoghaddam, 2016)

Satisfaction and dissatisfaction from the art students' point of view can be used as criteria for the campus planning, design and management to improve participation in environmental

interaction and desire to more artistic performance. Data collection of the research was undertaken through a field study using photography, behavior monitoring and a questionnaire filled in by a sample of art students in Tabriz Islamic Art University. According to table 2 descriptions and analysis of the results shows that the art students' satisfaction with their university campus environment is at a intermediate level. This finding means that the university campus needs to develop and complete with the other faculties around it and many open spaces in the campus needs to new responsive environmental design in relation to students needs and preferences. For example the university in the last 3 years has bought some of the neighborhood derelict industrialized factories around the university and has started to develop the university campus. Legibility, access in the campus, sociability, livability, territoriality & control are of the main physical-psychological factors that may influence students' environmental satisfaction. The finding of the presented pictures in the article shows that the preferred campus spaces always are designed with nature contact. According to the character of artistic creativity, contact with nature can have a positive influence on art students' environmental satisfaction. In the next pictures are presenting some of the main university community open spaces.

Figure 9. The university campus has been a leather factory 30 years ago and the students mension the important historical industrialized identity of the campus. (Khaleghimoghaddam, 2016)

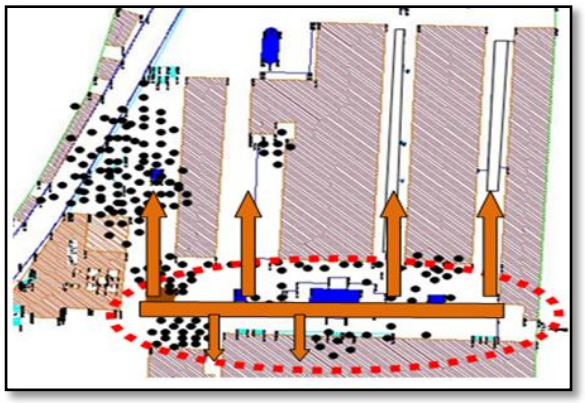

Figure 10. The most livable spaces of the campus the access routes. (Khaleghimoghaddam, 2016)

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Resume

Navid Khaleghimighaddam, is a PhD Student in Architecture at Selcuk University in Konya, Turkey. He is also a lecturer in selcuk university in Turkey as well as in several universities in Iran. He is working on Environmental Psychologhy, Cognitive Psychologhy and Environmental Perception for his Doctorial thesis. He has been writting several articles on environmental psychologhy since 6 years ago in his academic career. He is interested in to work on Environmental Psychology, Perceptual-Behavioral characteristic of Place in (such as Learning Environments, Open public spaces, Residential Environments and Healing Environments), Creativity and Environmental Characteristics and Architectural Education. He has done several research projects for government organizations in Iran. He admissioned of excellent student with no examination for M.A Degree, Under Ministry of Science, Research and Technology & State Education Evaluation Organization and he Obtained the First Rank in the field of Architecture In the 4 semester of Bachelor, at University of Yazd in Iran.

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An Architectural Self - Criticism: The Accessibility Analysis of Berlika Park Swimming Pool

Özlem Demirkan*

Abstract

Urban designers and architects have to clearly understand the physical features and needs of the people they are designing for. In the designing process fields such as anthropometry, biomechanics, ergonomics, biology and physics require scientific verification. But it can easily be forgotten that there are physically-challenged persons. All users have to experience any place by using their ability to move and perceive. If designers don't take into account the special circumstances for physically-challenged persons, the accessibility of the places become impossible. At the same time a sustainable and an accessible place is truly a sign of urban rights. In this context, human rights are not only important for disciplines such as law, sociology, psychology and political sciences but also they must be important for design disciplines such as architecture, urban design and interior design. This research based on the rights to exercise for physically-challenged persons aims to analyze the accessibility of the place. The Facility-Berlika Park Swimming Pool-chosen for this study-was designed by DKN Yapı and I

Keywords: *Accessibility, architecture, human rights, swimming pool, urban rights.*

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was a member of the design team and today an active user of the facility. As a research method photographs were taken of different areas of the facility and the conformity of TSE standards -TS9111 - TS 12576 was discussed. Within this context, the structure was examined in terms of mobility constraints under the titles of accessible route, the arrangement of immediate surroundings of the building, arrangement of the entrance of the building, arrangement of the accessibility inside the building, signs, elevators, and fire emergency alert systems. The problematic areas of the building were identified and analyzed. This research aims to make case-study-building more accessible place and a new modification project has been planned. But it is necessary to examine the buildings or the environment during their design process and solve the problems without the need of renovation project. The design standards for everyone should be considered in the contracts. At the same time, the accessibility plates should be asked from the architects.

INTRODUCTION

Urban area exists in parallel with the experience capacities of all users. Architecture is one of the disciplines that users have a potential to increase the experience capacity. The urban sociologist Robert Park defined the city, as "man's most consistent and on the whole, his most successful attempt to remake the world he lives in more after his heart's desire" (Harvey, 2012). The degree of success should be measured by the architect's designing capacity for all users. Within this context, the right to the city is a right that can be demanded by all users (Lefebvre, 1972). According to Harvey, demanding the right to the city is the demand for decisive power on how the urban is shaped and reshaped during the process of urbanization. The respondents who demand the right to the city are not only the politicians but also the architects, interior architects, and urban planners, who are the practitioners of design principles. Adopted by the Congress of Local and Regional Authorities of the Council of Europe in 1992, the first European Urban Charter is important in terms of the urban and the right of urban citizens. Among its articles, it is suggested to provide a harmonious order among road users such as mass transportation, private cars, pedestrians, and bicyclers in order not to restrict the freedom of movement and mobility. It is also suggested to provide facilities of sport and leisure for everyone no matter what their age, ability and income is (Palabıyık, 2004). Within this context, meeting the right of sport for each individual and providing an accessible route for everyone is an urban must.

Impairment and disability is viewed from two theoretical background: The medical and the social (Bromley, Matthews, & Thomas, 2007). When we look at the medical side, disability is

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defined as a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on your ability to do normal daily activities (URL1). In contrast, the social model defines it as the restriction of physically handicapped or mentally retarded people in the environment they live in. At the same time, it involves the disabled people's recognition of their rights and abilities, finding job opportunities, being effective in politics, and their recognition of physical barriers around them. World Health Organization defines the social model as: The social model of disability, on the other hand, sees disability as a socially created problem and not at all an attribute of an individual. On the social model, disability demands a political response, since the problem is created by an unaccommodating physical environment brought about by attitudes and other features of the social environment (WHO, 2002).

As can be understood from the definitions, the real disability shows itself in social life. Poorly designed environments turn the impairment people into disabled people. Similarly, the Turkish Standards Institution view the definitions of impairment and disabled as two different terms. TSI 9111 defines the "impairment" as a person who has difficulties in adapting to the social life and in meeting daily needs due to the loss of physical, mental, psychological, sensory and social capabilities at various levels by birth or by any reason thereafter and who therefore needs special physical reforms in structures and areas. The impairment and disabled are two different terms. Disabled is defined as restriction or inexecution of roles expected from an individual in parallel with age, sex and social and cultural factors due to impairment or a disability. When the limitations of impairment constraint the social life, the impairment individual becomes disabled. TSI 9111 also explains the mobility constraints. According to TSI 9111, disabled, temporary disabled, elders, pregnant, people with baby carriage, children, people carrying heavy goods, enormous or overweight people and too tall or short people are in this group. The mobility constraints of people will be removed through accessibility arrangements on the environment including the buildings and their surroundings, and the mobility of people in this group will be possible, easy and comfortable (TS 9111, 2011).

Within this context, a number of theorists defines the disability as the constraints designed by the architect (Goldsmith, 1997). In their study investigating the accessibility of the city centrum by wheel chair, Bromley, Matthews and Thomas concluded that 60% of the users felt handicapped because of the planning faults as a result of 150 detailed interviews (Bromley et al., 2007). Evcil (2009) studied on the users of wheel chairs using analysis

questions of Useh, Moyo, and Munyango, and she discussed the accessibility of state buildings in Istanbul for wheel chair users (Evcil, 2009).

When the literature is reviewed, it is seen that a variety of issues such as the examination of infrastructure mobility constraints of stadiums through EWA (ergonomic work analysis) method (Yazıgı, Resende, & Yazıgı, 2015), the effort to understand the barriers of disabled people through interviews (S. Abdulkadir & M Jamaludin, 2012; Lid & Solvang, 2015; Taylor & Jozefowicz, 2012) the inclusion of disabled children into the urban area (Abdou, 2011), the educational awareness (Evcil, 2012), state buildings and standards (S. Abdulkadir & M. Jamaludin, 2012), and the mathematical calculation of accessibility (Church & Marston, 2002) focused. All of these studies discus the accessibility. However, it is necessary to examine the building or the environment during its design process and solve the problems without the need of renovation project. At the same time, the managers, state, users and designers should be aware of the disabled individuals (Abdulkadir, Jamaludin, & A., 2011). When the project process of state buildings and social facilities in Turkey is examined, it is seen that the projects are given to designers through direct supply or competitions. There is no article about meeting the accessibility conditions in the contracts. Therefore, the architects may not meet the accessibility requirements although they are mentioned by TSI.

STANDARDS AND STATUARY REGULATIONS

Turkish Standards Institution determined a variety of standards in order to eliminate the mobility constraints in urban and environment. The application of the standards in urban areas is necessary to provide the mobility. The local municipalities are required to make arrangements appropriate to the disabled individuals under the decree-law no 572. Some provisions about the accessibility (elimination of physical obstacles) are added to Zoning Legislation. Accordingly, pavements, walk ways, residence and public buildings are to be constructed in a way that is appropriate to the accessibility of the disabled people. The standards involve the practice details and material specification. TS accessibility standards are as follows (URL 2):

-TS 12576 Structural preventive and Sıgn (Pictograph) design criteria on street, boulevard, square and roads for disabled people and elderly persons in urban areas.

-TS 12460 Rail rapid transit system in urban part 5- design criteria of facilities for disabled and elderly people.

-TS 12574 Rail road transit system in urban areas Part 10: Graphs and signs in station

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-TS 12575 Rail rapid transit system in urban areas part 14: Design and layout criteria of station seats.
-TS 9111 Specifications for Designing Residential Buildings for the Disabled.
ICS .11.180.01.9104030 Turkish Standard was prepared by TSI Construction Specialization Group and was accepted in 22 November 2011. The referenced standards involved TS 12576 Structural preventive and Sıgn (Pictograph) Design Criteria on street, boulevard, square and roads for handicaps and elderly persons in urban areas. The terms of impairment, disabled and mobility constraints are defined in content. Although the word ''Physically challenged people'' is suitable for these people worldwide. In this research the word impairment and disabled are used for physically challenged people according to TSI standards.

SAMPLE AND METHOD

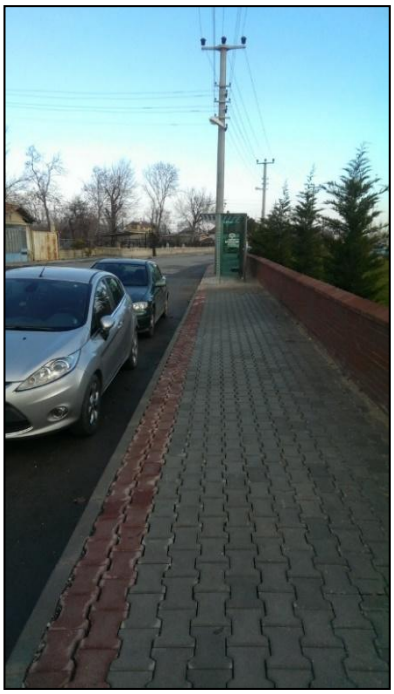
Berlika Park Swimming Pool, which was tendered by Meram Municipality, was chosen as the case study since I was one of the project owners and in the design team during my working period as a company partner, chief executive and architect in DKN Structural Engineering – Architecture Limited Company in 2010. The facility is located in sheet number M28, block number 37362, plot 2 in Meram district of Konya. It is a 100000 m^2 project with a two semi-olympic pools, wedding saloon about 6000 m^2 ,landscape and a theater. Swimming Pool's construction is 6000 m^2. The structure was constructed using reinforced concrete carcass. The facility was designed as two symmetrical pools. There are two semi-olympic pools, training pool, fitness center, pilates center, dressing rooms, bathrooms, showers, lifeguard rooms, Turkish baths, saunas, and steam rooms inside the building.

The facility was photographed in a specific route. This specific route was determined in accordance with the main items of TS9111 and TS 12576. First of all, the approach to the building was examined. Assuming that the disabled people would arrive at the facility using motor vehicles such as buses, bus stops were examined first. Then, road-pavement connections, approach to the building and the main entrance were examined respectively. Afterwards, help desk, dressing rooms, elevator, stairways and access to the pools inside the building were examined respectively. Within this context, the structure was examined in terms of mobility constraints under the titles of accessible route, the arrangement of immediate surroundings of the building, arrangement of the entrance of the building, arrangement of the

accessibility inside the building, signs, elevators, and fire emergency alert systems.

The problematic points on the photos taken were marked according to the relevant TSI standard, which determines the problems. Renovation projects about the problematic points were prepared.

ACCESSIBILITY ANALYSIS OF BERLIKA PARK



Photograph 1. Approach to the Building (Demirkan, 2015)

1. There is no handrail (TS 12576 Article 5.8).
2. There is no backrest above 45 cm of the seat (TS 12576 Article 5.5.1).
3. The width of the pavement is less than 300 cm in bus stops (TS 12576 Article 5.5.1).
4. It is not banned for other vehicles to stop or park within the bus stops by horizontal and vertical signs (TS 12576 Article 5.8). The information in the information board is missing.
5. No information about the route plan of each bus, the closest cabstand and important phone numbers on the information board (TS 12576 Article 5.8)
6. No tactile surface on the pavements (TS 12576 Article 5.1.5.1)
7. Power pole is in the middle of the pavement without any warning sign.
8. The curbstone isn't made with different material and color from the pavement overlay (TS 12576 Article 5.1.7.2).
9. The sidewalk of the bus stop isn't high enough, so there is a level difference between the pavement and the landing area (TS 12576 Article 5.8).

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10. No space for a wheelchair adjacent to the seats in the bus stop (TS 12576 Article 5.5.1.)
11. There is no shiny, colored and reflective strip with 15 cm thickness and at a level of 100 and 140 cm (TS 12576 Article 5.8).

Photograph 2. Approach to the Building (Demirkan, 2015)

1. The guideboards aren't made of flat material and there isn't enough lighting (TS 1257 Article 5.6) (TS 9111 Article 4.8.6)
2. The screws used for the setup of power poles and traffic signs to the ground aren't arranged so that they aren't dangerous for the pedestrians (TS 12576 Article 5.1.7.1)
3. When the sidewalk behind the ramp isn't between 90 and 122 cm, a ramp of 1:12 (8%) should have been built in order to decrease the height of the pavement (TS 9111 Article 4.4.3.1) (TS 12576 Article 5.2)
4. No roadblocks are placed on the curbstone to prevent the car parking.
5. The ramps (above 5% slope) aren't covered with firm, non-skid and slightly rough material (TS 12576 Article 5.2.3).
6. There is no yellow-black warning sign is present during maintenance and repairs (TS 12576 Article 5.6).
7. No signing for the visually impaired individuals at the start and end of the ramps (TS 9111, Article 4.4.3.4)
8. The curbstone isn't made with different material and color from the pavement overlay (TS 12576 Article
9. No drainage gutter and grate on it to remove the surface water (TS 12576 Article 5.1.7.3)
10. In the event of maintenance and repair on the pavement, there is no audial and light warning, and the maintenance area

isn't surrounded with an obstacle at least 10 cm height (TS 12576 Article 5.1.6)
11. On two sides of the 150-cm pavement, there is no emergency lanes, 50 cm on the curbstone side and 25 on the property side (TS 12576 Article 5.1.1)

Photograph 3. Approach to the Building (Demirkan, 2015)

1. The signs and symbols aren't perceivable and there is no information with braille alphabet. Similarly, they aren't visually understandable for hearing impaired individuals. (TS 12576 Article 5.6)(TS 9111 Article 4.8.15)
2. There is no sign, which shows the accessible routes, on walkways, important cross-roads and parks (TS 12576 Article 5.6)
3. The use of inappropriate material for the access from parking lot to the building
4. There is no at least one accessible route from bus stop, accessible parking lot, accessible kiss and ride zone, streets and pavement to the accessible entrance of the building (TS 9111 Article 4.3.1)

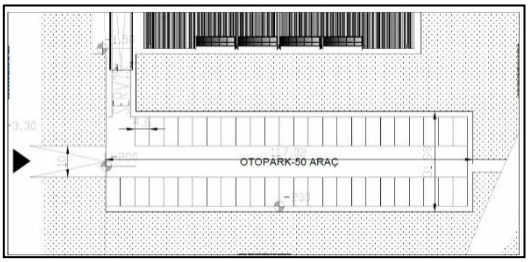

Figure 1. Plan of the park area (Demirkan, 2012)

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Photograph 4. Approach to the Building (Demirkan, 2015)

1. The parking lot for disabled individuals isn't protected against weather conditions such as snow and ice (TS 9111, Article 4.4.1)
2. The ratio of handicapped parking space is less than 5% (TS 9111, Article 4.4.1) (TS 12576 Article 5.7)
3. There is no secure kiss and ride zone that has an access to the building (TS 9111, Article 4.4.1)
4. The size, quality and the signs of handicapped parking lot cannot by questioned (TS 9111, Article 4.4.1)

Photograph 5. Approach to the Building (Demirkan, 2015)

1.There is no additional lights or opposite colors and information board with perceivable surface at important decision-making points, which would help find the way or provide orientation (TS 9111, Article 4.4.2.2)
2.The walkways to the buildings around and between the buildings have straight, firm and non-skid (wet/dry) surface and free of drainage grate (TS 9111, Article 4.4.2.2)

3. There is no visual, audial and perceivable information boards in the site with the aim of orientation and finding way (TS 9111, Article 4.4.2.2)

Photograph 6. Approach to the Building (Demirkan, 2015)

1. In front of the ramp, there is no floor covering of 60 cm wide on three sides of the pavement which shows the ramp (TS 9111 Article 4.4.3)
2. The perceivable surfaces don't have opposite colors with their surroundings
3. There is no at least one accessible route from bus stop, accessible parking lot, accessible kiss and ride zone, streets and pavement to the main entrance of the building (TS 9111 Article 4.3.1)
4. There is no perceivable surface on the pavement (TS 12576 Article 5.1.5.1
5. The ramps (above 5% slope) aren't covered with firm, non-skid and slightly rough material with different colors (TS 12576 Article 5.2.3)
6. The height of curbstone isn't between 3 and 15 cm
7. There is no perceivable warning surface on the ramp which decreases the height of the pavement (TS 9111 Article 4.11.1.3)
8. There is no roadblocks are placed on the curbstone to prevent the car parking.
9. When the sidewalk behind the ramp isn't between 90 and 122 cm, a ramp of 1:12 (8%) should have been built in order to decrease the height of the pavement (TS 9111 Article 4.4.3.1) (TS 12576 Article 5.2)

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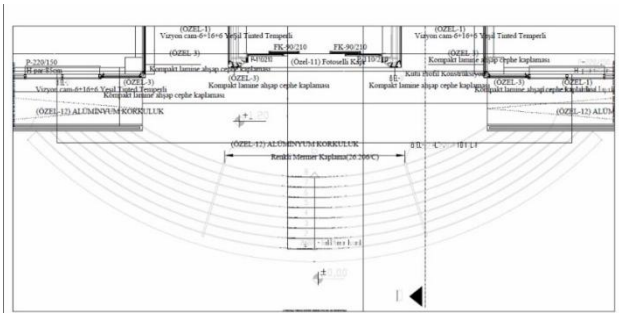

Figure 2. Entrance (Demirkan, 2012)

Photograph 7. Approach to the Building (Demirkan, 2015)

1. There are safety rails on both sides of the exterior stairway (TS 12576, Article 5.3)
2. There is no warning surface at the beginning and the end of the stairway (TS 12576 Article 5.3.2)
3. The front of the steps should be nosing and round (TS 12576 Article 5.3.3)
4. When the width of the stairs is more than 300 cm, there should have been a safety rail in the center of the stairs
5. The points of the rails aren't open, and they aren't in U shape (TS 12576 Article 5.3.3) (TS 9111, Article 4.7.1.3.3)

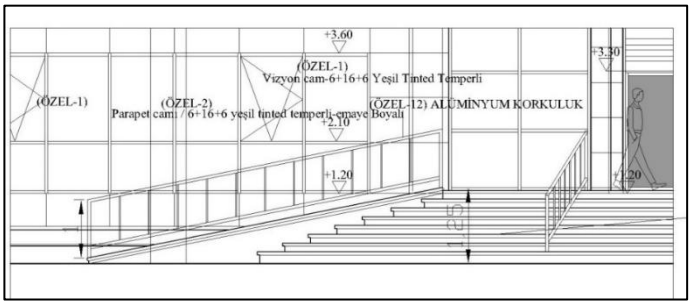

Figure 3. Ramp (Demirkan, 2012)

Photograph 8. Ramp (Demirkan, 2015)

1. When the level difference is more than 100 cm, the slope of the ramp should have been 1:16
2. When the level difference is more than 100 cm after the ramp ends, the slope of the ramp should have been 1:16 and it should have been 30 cm longer (TS 9111)
3. The width of the ramp is 130 cm (TS 9111 Article 4.4.3.2)
4. The rail doesn't go 30 cm more than the ramp in the beginning of the ramp (TS9111, Article 4.4.3.4)
5. There is no first level rail of 70 cm height on the both sides of the ramp (TS 9111, Article 4.4.3.4)
6. There are second level rails of 90 cm height on both sides of the ramp (TS 9111, Article 4.4.3.4)
7. The ramp sign isn't consistent with the international signs (TS12576 Article 5.6)

Photograph 9. Ramp (Demirkan, 2015)

1. The floor coverings are made of slippery materials (TS 9111, Article 4.6.1)
2. The carpet is thinner than 1.3 cm

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Photograph 10. Information desk (Demirkan, 2015)

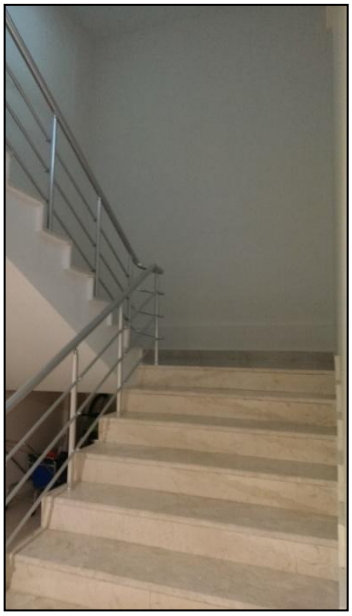
1.There is no at least one disabled information desk which is 90 cm width and 86 cm height (TS 9111, Article 4.10.3.2)
2. The floor coverings are made of slippery materials (TS 9111, Article 4.6.1)
3. There isn't a foldable shelf system on the desk, on which the disabled people can write (TS 9111, Article 4.10.3.2)
4. The necessary equipment isn't labeled by signs for hearing impaired individuals (TS 9111 Article 4.8.15)
5. There is no guidance plan or floor plan near the main entrance

Photograph 11. Entrance to the pool (Demirkan, 2015)

1.There isn't a space of 90 cm width and 220 cm height without obstacles inside the corridors.

Photograph 12. Elevator (Demirkan, 2015)

1. There isn't a space of 122 cm width and 76 cm deep for approach from the side (TS 9111, Appendix A).
2. There isn't two-way communication systems in the elevators (TS 9111, Appendix B)
3. The elevator call panel isn't placed between the height of 90 cm and 137 cm. TS 9111, Article 4.7.1.2
4. The size of the elevator cage doesn't fit the size of 150 cm width and 150 cm height (TS 9111, Article 4.7.1.2)
5. There is no accessible elevator (with all qualities) sign (TS 9111, Article 4.7.1.2)
4. There is no evacuation elevator in the building (TS 9111, Article 4.2)
5. There is no warning "don't use elevators during fire" in the elevator since there isn't an evacuation elevator. (TS 9111, Appendix B)



Photograph 13. Staircase (Demirkan, 2015)

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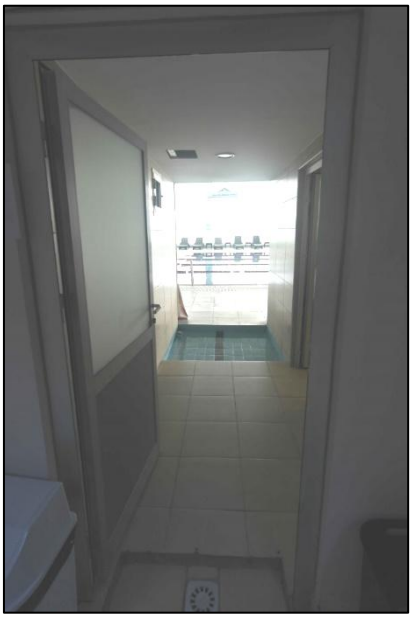
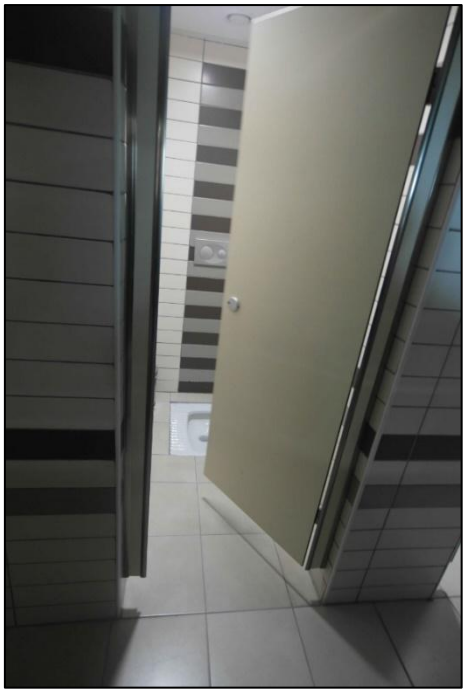
1.There is no information signs with braille on the railings.
* Since there isn't warning surface on the landing, warning tapes aren't placed on landing in rectangle and shape and crosswise *The stairs doesn't fit the formula of 2a(riser) +b(the depth of stair)= 60-64 cm * No landing for each 8- 10 stairs (TS 9111, Article 4.7.1.3)
2. There is no 30 cm and 60 cm length perceivable surface at the end and beginning of the stairs and on the landing, respectively (TS 9111, Article 4.7.1.3)
3. There is no non-skid tape on any of the stairs (TS 9111, Article 4.7.1.3) The stair material is composed of slippery and shiny materials (TS9111, Article 4.7.1.3)
4. There is no visual warning tape (preferably yellow) on the first and last stairs of stairway and on the landing (TS 9111, Article 4.7.1.3)
5.The front of the stairs is nosing (TS 9111, Article 4.7.1.3).
6. There is no rail at the height of 70 cm on the railings (TS 9111, Article 4.7.1.3)



Photograph 14. To the pool (Demirkan, 2015)

1.There isn't a space of 90 cm width and 220 cm height without obstacles inside the corridors.
2. Floor coverings are made of slippery materials (TS 9111, Article 4.6.1)



Photograph 15. Toilets (Demirkan, 2015)

1. There is no protective plate of 40 cm height under the door. (TS 9111, Article 4.6.2)
2. Floor coverings are made of slippery materials (TS 9111, Article 4.6.1)
3. There is no U shape pushing handle between the height of 80 and 110 cm on bathroom doors (TS 9111, Article 4.6.2)

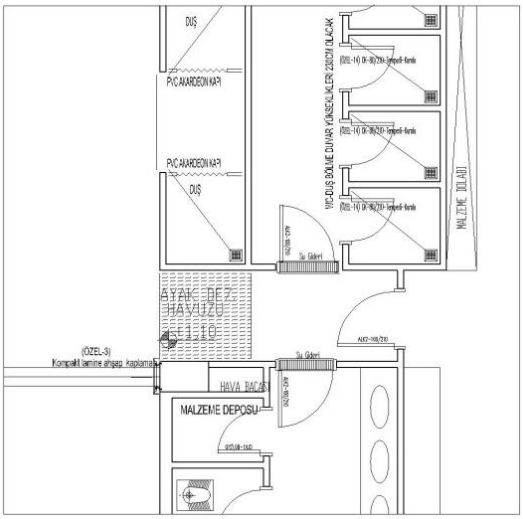


Figure 3. Baths (Demirkan, 2015)

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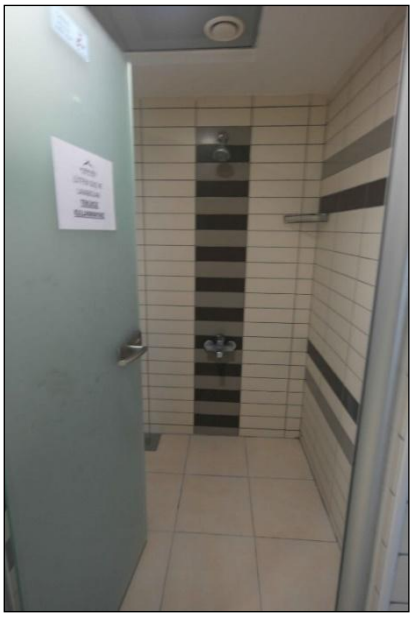


Photograph 16. Baths (Demirkan, 2015*)*

1. The height of the soap dispenser isn't between 80 and 110 cm (TS 9111, Article 4.7.3).
2. The doors are made of glass and there is no singing for visually impaired individuals (TS 9111, Article 4.6.2).

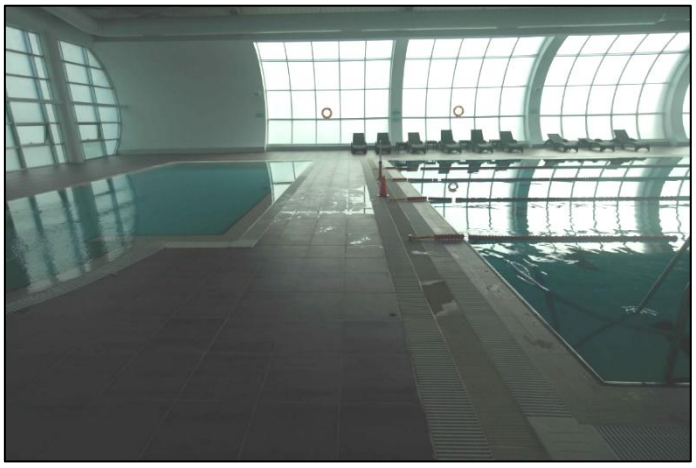
Photograph 17. Baths (Demirkan, 2015)

1. The distance from sink to tap is more than 30 cm (TS 9111, Article 4.7.3).
2. There is no enough space under the lavatory so that a wheelchair could enter (20 cm depth 75 cm height) (TS 9111, Article 4.7.).
3.The height of the lavatory front from the floor is more than 86 cm (TS 9111, Article 4.7.3).
4. The floor covering is slippery (TS 9111, Article 4.6.1). The height of the bottom of the mirror from the floor is more than 90 cm (TS 9111, Article 4.7.3.)
5.The height of the soap dispenser from the floor isn't between 80 and 110 cm (TS 9111, Article 4.7.3)

6. There is no handle bar on the edges of the lavatory for people who have difficulty in standing * The height of tissue dispenser or hand dryer from the floor isn't between 80 and 110 cm (TS 9111, Article 4.7.3.).

Photograph 18. Hamam (Demirkan, 2015)

1.The doors are made of glass and there is no singing for visually impaired individuals (TS 9111, Article 4.6.2)
2. There is an obstacle of 4 cm height on the entrance.
3. There is no visible alarm system.
4. There is no hearable audio alarm (TS 9111 Article 9.1)



Photograph 19. Pool (Demirkan, 2015)

1. There is no hearable audio alarm. Article 9.1
2. There is no visible alarm system.
3.There is no necessary warning sign.
4.There is no perceivable floor. (TS 12576 Article 5.1.5.1)
5.There is no pool elevator or lift for disabled individuals.

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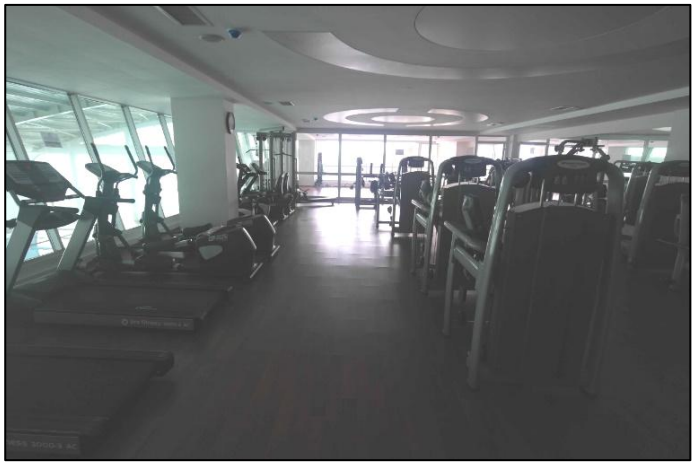
Photograph 20. Pool (Demirkan, 2015)

1.The guideboards aren't made of flat material and there isn't enough lighting (TSE, 2011)
2.There are obstacles on accessible route. One of the pool entrance is cancelled; a locker is placed there.



Photograph 21. Fitness (Demirkan, 2015)

1.There is not enough information about fire exit.
2 .There isn't enough room for maneuver of wheelchair
3. The place hasn't got enough lighting.
4. There is an obstacle on the way to the terrace.
5. There is no necessary warning sign.
6. The necessary warning boards and signs that show the fire exit is absent.

CONCLUSION RECOMMENDATIONS

The problems about accessibility of the building are caused by the lack of measures taken during project and construction process. The project provision doesn't involve the route to the building. Moreover, there are ramps on the route, which weren't in the project. Within this context, some changes have to be made on the accessible route to the building. The bus stop and the height of the pavement have to be redesigned in accordance with

TSI standards. The necessary signboards should be placed on the bus stop. It is a must that there should be at least one accessible route to the building. Therefore, the necessary measures should be taken about approach to the building. Since the width of the stairs on the entrance is 6 meters, an additional railing should be placed on the stairs. The railing and the handrails should be designed on 70 and 90 cm, and the hand rail should be 30 cm longer. The width of the ramp is appropriate but the slope is not. The ramp should be reconstructed. In the interior space, the floor material should be non-skid and perceivable. Also, necessary arrangements for visually impaired and people with wheelchairs should be done on the information desk. According to TSI standards, the current elevator should be replaced by an accessible one. The elevation differences on the floor should be restored. The necessary signings should be placed around the pool. Also, pool elevator for disabled people should be placed, and the necessary signalization measures should be taken against emergency. On the first floor, the elevation differences between fire-escape stairs and fitness saloon should be rearranged using stairs and ramp. Fitness equipment should be rearranged by considering the maneuver room for the individuals with wheelchairs.

Within this context, the relevant renovation projects were prepared for the structure. On the ground floor, the space between two showers was used for a new shower for disabled people. At least one accessible route was provided on the renovation projects. Some arrangements were done about building entrance, interior space accessibility, signings and elevator.

When we consider the developments in Turkey, it can be said that the governments are now more conscious about the accessibility than the past. The accessibility is tried to be provided especially in public buildings by renovation projects. However, these efforts are limited by placing an accessible elevator, and this isn't enough. Therefore, it is necessary to examine the building or the environment during its design process and solve the problems without the need of renovation project. The projects are given to designers through direct supply or competitions. However, there is no article about meeting the accessibility conditions in the contracts. The design standards for everyone should be considered in the contracts. At the same time, the accessibility plates should be asked from the architects. It is recommended that the government units and local governments along with the experts should check the accessibility plates during the project process. A control mechanism which will operate during the construction process should be formed.

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URL2 https://intweb.tse.org.tr/standard/standard/standardara.aspx

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The Emergence of Studio Apartments

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Merve Özkaynak**

Abstract

The first studio-type residences that emerged in America have become widespread throughout the world in the coming years. The studio flourished as an American culture in Turkey, in order to meet the need for single-person living. During the 19th century, immigrants from America and other European countries, mostly from Great Britain and Ireland, have been migrated. The search for solutions to these housing problems has created studio-type apartments. Immigration has resulted in millions of people coming to the media in bad conditions and bringing legal solutions to the agenda. In this study; the socio-cultural and architectural qualities of the concept of the studio apartment in America, which is frequently seen in recent years in Turkey, have also been examined.

Keywords: *America, studio apartment, Immigration, tenement housing.*

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INTRODUCTION

Social, cultural and economic conditions are affecting the needs of the individual. In this interaction, changes are felt in the culture of sheltering. At the beginning of the physical needs, sheltering is constantly changing and developing with the influence of the socio-cultural and economic factors.

Globalization has brought about the diversification of cultural life, and the fact that it is the only person living in America (apart from family), identified with Western culture, has found its place in our culture over time. The desire to live alone resulted in the emergence of a residential model as 1+1 different from the usual 2+1 or 3+1 houses. Nowadays, the number of these houses which are called "studio type" and which is in great demand with the new way of life that follows is quite high today. These studio-type residences first appeared in America.

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The city experience also changes significantly with globalization. The deepening of the gap between the rich and the poor, the diminishing of differences among societies, the spread of consumption cultures, the development of a uniform culture and lifestyle and the emergence of differences, confusion, social polarization are the most obvious effects of globalization on urban life (Yaylı, 2012).

In terms of lifestyle, the societies are becoming more and more similar, in other words, "Americanization" (Talaş & Kaya, 2007). As a result of being integrated with each other's culture is a product of American culture on Turkey in the first 1+1, which is the largest city in Turkey's construction was begun in Istanbul. Görgülü (2003); mentioned that studio type apartment were designed for the people who separated from the nuclear family and separated from the divorce, the living alone and the young

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people who want to live separately from education or family, and that these new houses are made up of living and living spaces. According to Oxford Dictionary, studio apartment means a house containing a main room (https://en.oxforddictionaries.com, 2016). Studio type apartments are 1+0 or 1+1 housing, consisting of living, sleeping and a bathroom. In the 1+0 housing, living and sleeping space are designed together and in addition there is a bathroom. In contradistinction to studio type (1+0), in 1+1 apartments; the living space and the bedroom are separated. In the 2+1 and 3+1 houses, the separate toilet and bathrooms merged into 1+0 and 1+1, and became the only bathroom.

Although studio-type apartments first appeared in America, they began to spread in other countries over time.

THE EMERGENCE OF STUDIO APARTMENTS

Great Migrations to America

De Forest and Veiller (1903) described the great immigration to America: "The migration from 1806 to 1816 during the war period is unusually low. But in 1817, arrivals from foreign countries reached a number of approximately 22,000 immigrants at various unexpected entrances. At that time immigration was mainly from Great Britain and Ireland. In 1820, migrants from these countries had 72% of all migrations, and a large proportion of them were Irish. By 1827 immigration had increased rapidly and the number of immigrants from all ports registered 3 times since 1817 continued to increase to 1834, which was about 68,000. Important German immigration began in 1834. "

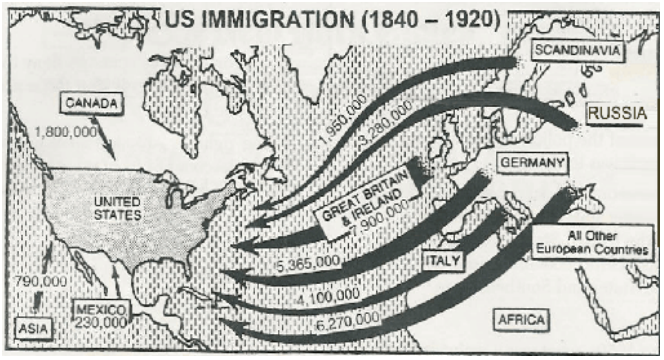

Figure 1. Migration to America between1840-1920 (http://ennettsworld.blogspot.com.tr/2011/02/immigration-act-of-1924-introduction.html, 2011)

After the 1830s, immigrants to the United States provided the unemployed worker with the necessary skills to cause the country's economy and cities to expand physically (Lubove, 1963). During the first years of the civil war, although immigration had fallen, it increased between in 1863 and 1864 (De Forest & Veiller, 1903).

The migration to America has been the largest population movement ever known. Approximately 26 million people have emigrated to America since 1820. The number of those between 1870 and 1905 has doubled. In 1906 1.100.735, in 1907 1.285.349 and in 1908 732.870 people migrated. About 6 million of 26 million people have come in the last 6 years (Edwards, 1909).

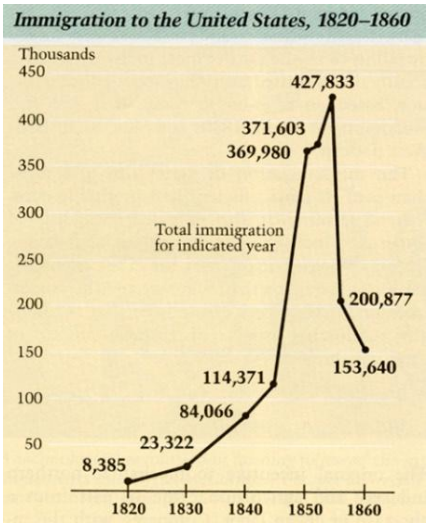

Figure 2. Immigration to America between 1820 and 1860 (www.latinamericanstudies.org, 2016)

O'Rourke (1995); in his article "Immigration and Living Standards Since famine in Ireland"; The most important of the crises of Western Europe history is the Irish Potato Shortage, which was in 1845-1849. In O'Rourke (1995); mentioned that when 1.5 million people left Ireland before the famine, the immigration from Ireland suddenly rose after the famine, and the population of 8.2 million in 1841 fell to 4.4 million in 1911 and a total of about 60 million people in America between 1820 and 1914.

Tenement Housing in America

America's immigration has come to an end in the need for extraordinary housing. In the first place, it has been tried to be solved with tenement housing.

Figure 3. Tenement Blocks of New York's East Area in 1900 (Veiller, 1903)

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According to Veiller (1903), it is not known when the first tenement housing was built in America. From about 1830 to about 1900, almost all of the tenement housing were built in New York, almost all of them bad. These houses are dub-bell types, with a solid straight railway type with no light clearance, the second with very narrow shafts that provide virtually no ventilation to poor rooms and practically no light (Murphy, 1915).

Figure 4. Tenement Housing in 1865 in America (Riss, 1890; www.latinamericanstudies.org, (2016)

Tenement Housing Plan Types

Three plan types of tenement houses were examined in this section.

First type; a typical tenement housing drawn by W. D. AUSTIN (Collins, 1904); It consists of four floors. This type of ground floor consists of three 1+0, the upper floor consists of one 1+1, two 1+0. There is only one toilet on each floor, but no bathrooms. In the first plan type 1+0, the air shafts were opened to allow the room to receive light. This plan type (1+0) consists only of living space. The second plan type (1+1) consists of living room and bedroom.

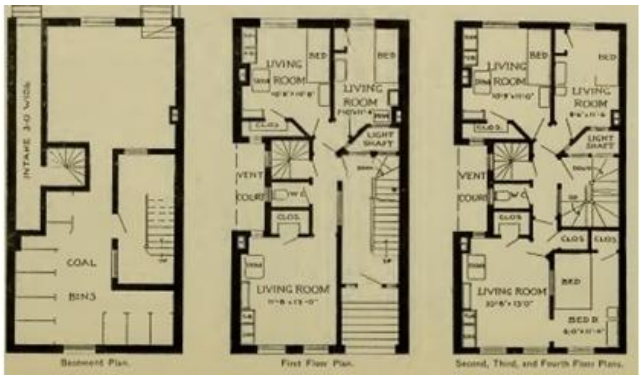

Figure 5. First Plan Type (Collins, 1904)

Second type; tenement housing cornered by W. D. AUSTIN (Collins, 1904); It consists of five floors. This type of 4 side is surrounded by road and is resolved as 4 blocks. Room types are

1+1 or 2+1. Light shafts were opened as a solution for the rooms to take light. There is only one toilet on each floor, but no bathroom. Organizing the rooms is quite simple. There is no hol yet, and there are transitions between rooms. This plan type is a very common tenement housing in America.

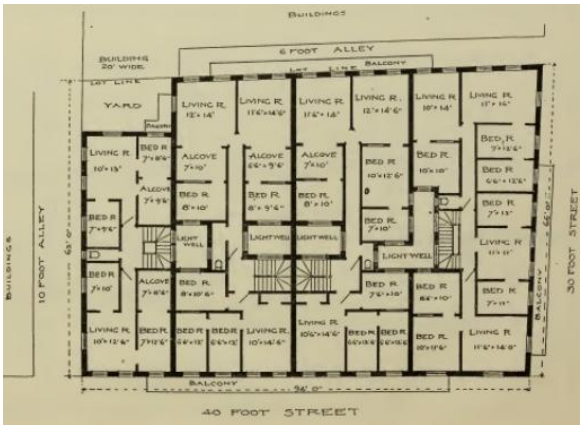

Figure 6. Second Plan Type (Collins, 1904)

Third type; another tenement housing drawn by W. D. AUSTIN (Collins, 1904); It consists of 4 floors. Considering the floor plans of this type, there are three 1+1, four 2+1 on each floor. There are 4 stairs in total. Each apartment has a toilet that can be reached from inside the living area. Unlike other dwellings, living spaces and bedrooms can light.

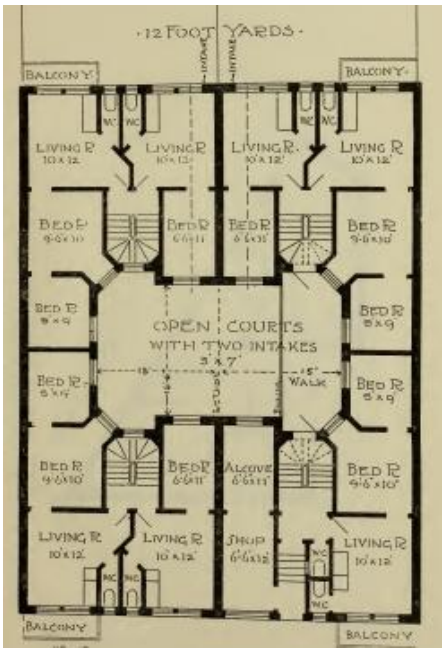

Figure 7. Third Plan Type (Collins, 1904)

The Assessment of Qualifications of Tenement Housing

Since 1842, the 1 + 1 housing system for rent has grown due to the increasing migration. In 1864, the number of New York immigrants was 486.000, while the number of tenement housing was 15.511, while in the same city in 1900, the number of

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immigrants rose to 1585 and the number of tenement housing increased to 42.700 (De Forest & Veiller, 1903).

In 1900, more than 80,000 homes were built in New York and about 2.3 million of the total population of about 3.4 million homes were home to a population of two-thirds (http://www.history.com/topics/tenements, 2016).

Gallatin (1880); He explained that tenement housing in New York should be examined and that this tenement housing system is referred to as a disease called "the rotting of tenement housing ", and that the search for the cause of this disease and finding a solution would be the most useful job for the city.

In the book "Report of Civics Committe" (1912) by Chicago Woman's Club and "How The Other Half Lives" by Jacob RISS (1890), the problems of New York's tenement housing are described. The problems of tenement housing reflected in the media. In the "Report of Civics Committee" (1912) citizenship committee report prepared by Chicago Woman's Club, the current conditions of tenement housing have been examined. In this report, the bad situation of the houses and the streets in which they are located has been identified. According to this report; It is told that the garbage is poured into the streets, the narrow roads are full of wastes, half of the examined structure is dark, there are no windows in the part used as bedrooms, iron fire escapes are not available and the situation which is not suitable for the living is quite grave. In each building 90 people and their 50 children have taken into consideration that the houses in which they live together are in such a bad condition that they can not survive, and they have prepared a report that children have skin diseases and that there are more than 4 people in single rooms.

Figure 8. Tenements Living in Bad Conditions (Riss, 1890)

The problems of tenement housing, which are the result of increasing immigration to the United States, are increasing crime rates, increasing environmental damage, increasing poverty, degrading standard living standard and various diseases. As a result of the reflection of these problems in the media, many public institutions have decided to go for improvement in these buildings.

Establishment of "Tenement Housing" Commission in 1901 and Tenement Housing Museum

As a result of the reflections and awareness of the media, in 1865 the hygiene council made the first act for tenement housing. The first step was the establishment of the metropolitan health board in 1866 and the act of tenement housing the next year.

With the movement that began in 1865, the 1901 law was enacted in America and the definition of tenement housing was made:

“A tenement house is any house or building, or portion thereof, which is rented, leased, let or hired out, to be occupied, or is occupied as the home or residence of three families or more living independently of each other, or doing their cooking upon the premises, or by more than two families upon any flor, so living and cooking, but having a common right in halls, starways, yards, water-closets or privies, or some of them.” (Fryer, 1901).

This law has become essential in every building fire escape. Article 29 mentions:

“Every now existing non-fireproof tenement house, unless provided with fireproof outside stairways directly accessible to each apartment, shall have fire escapes located…” (Fryer, 1901).

As a result of the decisions taken at the commission, an out-of-window requirement has been introduced to prevent dark rooms:

“In very tenement house hereafter erected the total window area in each room, expect water closet compartments and bathrooms, shall be at least one-tenth of the superficial area of the room. “ (Fryer, 1901).

The 1901 Tenement House Act has begun to see many changes in tenement housing. In the bedroom rooms the windows became obligatory and the solution to the dark room was found.

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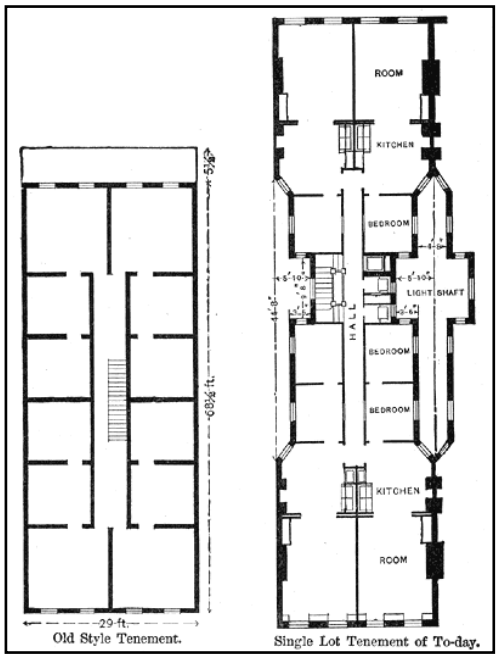

Figure 9. An Old Style Tenement Housing and Tenement Housing Building after the Law

The first studio apartments that were built for the people who came to America with immigration were now turned into museums.

In 97. Orchard's Street the tenement housing, more people lived than people living in 20 countries from 1863 to 1935, was purchased by Ruth J. Avram in 1966. This housing was restored in 1988 as a tenement housing museum describing different periods of migration (http://www.nytimes.com, 2013).

Figure 10. Tenement Housing Museum (https://www.tenement.org, 2014)

Figure 11. Tenement Housing Museum (http://www.nytimes.com, 2013)

Figure 12. Tenement Housing Museum (http://www.nytimes.com, 2013)

CONCLUSION

In this study; how the studio-type houses first appeared, the reasons for the first construction in the history and the first users were investigated. In the 19th century, there were three major migrations to America. These great migrations; one from Great Britain and Ireland, the second from other European countries such as Russia, Poland and Italy, and the third from China. As a result of these three migrations, about 26 million people came to America.

Among the first problems of immigrants are unemployment and housing problems. The settlement solution has been found with one room and these houses have caused many problems. Problems such as the lack of open windows, the lack of light and air, the lack of water for cleaning, the emergence of various diseases, and the high rates of crime are reflected in the media, and as a result, legal regulations are required.

In the study, a general plan type and three sample plan types of tenement housing were examined. Many problems, such as dark rooms in these plan types, have been tried to be solved by improving with legal regulations. "The Tenement Housing Act" came into action in 1901. A new plan type has emerged as a

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result of the legislation, which requires a window to be opened outdoors in the living room and in bedrooms to prevent light and air problems. Today these housing are used as museums.

Studio-type residences that emerged as a result of American culture; Turkey was made as a necessity. Today, these buildings are in demand by students, single living persons and newly married couples who are studying separately from their families. Studio type residences; especially Konya, Eskisehir, such as the student population, was made.

Acknowledgement

This study is based on the master's thesis titled "Development of Studio Apartments: The Case of Konya" prepared by Merve Özkaynak in partial fulfillment for the master' degree at Selcuk University Graduate School of Sciences. Konya, 2016 (Advisor: Assoc. Prof. Mine Ulusoy)

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