AN ARCHITECTURAL STUDY ON MINIATURE PARKS AND MINIATURE MODELS: MINIATURK

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ABSTRACT

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This thesis is an architectural study surveying on miniature parks and miniature models exhibited in them and particularly focuses on Miniaturk - the first miniature park of Turkey- located in Istanbul. It is established as an environment containing a group of miniature models of buildings and landscapes, which display the variety, and richness of the cultural tradition of the previous and contemporary Anatolian civilizations, and especially Ottoman grandeur. In this study, it is argued that Miniaturk stands as a hybrid category between a museum, a public park and entertainment centre. Miniaturk is also conceived as an architectural environment providing a possible ground to discuss the conceptions, misconceptions and presuppositions about architecture in the popular realm and in the professional and disciplinary framework. Thereby, Miniaturk is investigated through the processes of its production including the initial design idea and all the stages of its construction.

This study also tries to discuss the miniature models from different points of view. Whether they are considered as tools of architectural representation or not by the professionals, the popularity and the communicative advantage of these models can be used to arouse interest in the cultural and historical heritage as well as the contemporary architecture. The daily life of man on the street is strictly connected with architecture; therefore Miniaturk requires recognition as an environment for realization of these connections and relations.

Keywords: miniature park, miniature model, scale models, architectural representation, and presentation.

ÖZ

MİNYATÜR PARKLAR VE MİNYATÜR MAKETLER ÜZERİNE MİMARİ BİR ÇALIŞMA: MINIATURK

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Bu tez, minyatür parkları ve orada sergilenen minyatür maketleri inceleyen mimari bir çalışmadır ve özellikle İstanbul'da konumlanmış olan Türkiye'nin ilk minyatür parkı Miniaturk'e odaklanmaktadır. Anadolu uygarlıklarının kültürel geleneklerinin çeşitliliğini ve zenginliğini ve özellikle Osmanlı'nın ihtişamını yansıtan bir grup yapı ve coğrafyanın minyatür maketlerinden oluşan bir mekan olarak kurulmuştur. Bu çalışmada, Miniaturk'ün, müze, kamusal park ve eğlence merkezi arasında duran karışık konumu tartışılmaktadır. Miniaturk, aynı zamanda, hem halk arasındaki mimarlık, hem de profesyonel anlamda mimarlık disiplini çerçevesi içindeki kavramları, olası yanlış fikirleri ve varsayımları ortaya çıkartabilecek mimari bir ortam olarak ele alınmıştır. Bu nedenle, Miniaturk'ün başlangıçtaki tasarım ilkelerinden, inşasındaki tüm aşamalara kadar bütün yapım süreçleri incelenmiştir.

Bu çalışma aynı zamanda minyatür maketleri de farklı açılardan tartışmayı deniyor. Profesyoneller tarafından mimari temsilin araçları olarak görülseler de görülmeseler de, bu maketlerin popülerliği ve sağladığı kolay iletişim avantajları, kültürel ve tarihi mirasın yanında güncel mimariye duyulan ilgiyi arttırmanın aracı olarak kullanılabilir. Sokaktaki adamın günlük hayatı mimarlıkla doğrudan ilintilidir; dolayısıyla Miniaturk, bu bağlantıların ve ilişkilerin farkına varılabileceği bir ortam olarak değerlendirilmelidir.

Anahtar Kelimeler: minyatür park, minyatür maket, maket, mimari temsil, sunum.

To My Family

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INTRODUCTION

1.1. What is "Miniaturk"?

Miniaturk is a miniature park located at Golden Horn in Istanbul. It includes 105 "miniature models" of the existing or demolished buildings in Turkey and in the territories of the Ottoman Empire in 1/25 scale.[1]

The dictionary meaning of "park" is a large, usually grassy, enclosed piece of land in a town, used by the public for pleasure and rest. Miniature as an adjective, defines the size much smaller than normal. As a noun it is a thing that is much smaller than normal. Its origin comes from the Latin *minium*, 'red lead, vermilion' (which was used to mark particular words in manuscripts).[2] In miniature parks, these two definitions and functions come together. They are enclosed pieces of land used by the public with very small copies of buildings and landscapes. The International Association of Miniature Parks defines a miniature park as "any group of model or miniature buildings that come together with an idea in a landscape open to the public", and continues: "Some miniature parks are scale models of whole

[1] In this study, the models in miniature parks will be named as "miniature models". Actually, any model could be called a miniature as a small-scale "visual" reproduction of a real thing. Sometimes this real thing is an idea and sometimes a building. In this case, real things are important buildings that have architectural and historical value, reproduced with extreme detailing. However, in order to differentiate the models of miniature parks from the rest of the models, as it will be explained in more detail in chapter 2, they will be named as "miniature models".

[2] www.askoxford.com (20.11.2004)

towns and cities; other parks are gardens with some made-up buildings in them".[3] This differentiation will be explained in the following chapters. Miniaturk as a group of miniature models on a park, is more close to the second definition.

According to this definition, Miniaturk is a group of miniature models of buildings and landscapes that express the variety and richness of the cultural tradition of the previous Anatolian civilizations and especially Ottoman grandeur. Location of these miniature models in the park is almost arbitrary; therefore there is no designed relation between them considering their historical and geographical positions. Each miniature building or landscape is considered as a single object of an exhibition. This approach of Miniaturk makes it different from the other miniature parks on the world. From this point of view it looks like more to an open-air museum.

At the 10th general conference of the International Council of Museums, held in 1974 in Copenhagen, it was made clear that museums throughout the world are coming to regard themselves less and less as self-contained professional units and more and more as cultural centres for the communities within which they operate.[4] Saying that museums are no longer considered to be merely storehouses or agents for the preservation of a country's cultural and natural heritage, but powerful instruments of education in the broadest sense can summarize this change. According to Kenneth Hudson, what a museum is attempting to achieve has become more important than what it is.[5] This trend makes the definition of a museum increasingly difficult and perhaps increasingly pointless.

[3] www.miniatureparks.org (10.08.2004)
[4] John Urry, *"*Gazing on History*"*, *Representing The Nation: A Reader Histories*, *Heritages and Museums,* ed. David Boswell and Jessica Evans, (London: Routledge, 1999), 210.
[5] Ibid. 210.

ICOM (International Council of Museums) defines the museum as an institution, which serves the community. It acquires, preserves, makes intelligible and, as an essential part of its function, presents to the public the material evidence concerning man and nature. It creates opportunity for study, education and enjoyment."[6]

But in last 30 years there are some changes about this definition: Kenneth Hudson states that the first is a growing feeling that the past and the present shade off into one another and that a sensitivity to the achievements of the past can be a great help towards understanding the present. The second change compared with 30 years ago, is a willingness to accept the fact that museums can be appreciated emotionally and sensually as well as intellectually. The Museum of Fine Arts in Rio de Janeiro says, "Today's museum is a place in which visitors acquire experiences and receive impressions which stimulate their powers of thought and their creative ability."[7]

According to these definitions - considering the museum as an opportunity for study, education and enjoyment, appreciating it emotionally and sensually as well as intellectually and seeing it as a cultural centre for the communities – Miniaturk can also be defined as a museum, but the material it presents to the public is open to consideration. There are also some aspects that differentiate museums and miniature parks. For example, the intellectual effort required in museums is different than the one required in miniature parks, or the visitors relate themselves to the displayed object in different ways. However in order to be able to make such an evaluation, it is necessary to a make a more detailed study on museums. The primary concern of this study will be Miniaturk, and its status as a hybrid category between a museum (toy museum, architectural museum or archaeological

[6] Ibid. 210.
[7] Ibid. 210.

museum), a public park, and an entertainment centre. They will be discussed in the later sections of the thesis to understand the characteristics of miniature parks.

1.2. "Heritage Industry"

At the 11th Biennial Conference of International Association for the Study of People and Their Surroundings, held in METU, Ankara, in June 8-12,1990, Uzzel from the University of Surrey, analyzed the interpretation and the representation of the past. He argues that the last twenty years has seen a remarkable growth in public interest in the past. According to him, some would say that this has been generated by the tourism sector to develop what has become known as the "heritage industry". In this respect it can be said that, heritage has been redefined, reconstituted and repackaged by tourism, public relations and marketing professionals.[8] Uzzell states that the representation of the past is problematic and he refers to Wallace who has recent explanations in "Industrial Museums and the History of Deindustrialization" in order to explain these problems. According to expressions of Wallace, the tendency of seeing the past as something that is finished should be avoided. Today the past has just a nostalgic, academic or entertainment value. To overcome this view, better connections between past, present and future should be established. He also thinks that moments in the past should be considered as larger processes that are still in operation.[9]

Uzzell puts forward that the aim of representation of the past is to enable us to co-ordinate with those who has gone before us and to see the world from their point of

[8] D. Uzell, "Interpretation and the Re- Presentation of the Past", *Culture/Space/History*, (Ankara: The Faculty of Architecture Press, METU , 1990).
[9] Ibid. 77.

view.[10] This is attempted by “passive representations” such as exhibitions and audio-visual representations, and “three-dimensional evocations” such as historic displays, role-playing or what is called “first-person” interpretations.[11] It is the British tourism where heritage plays an important role than any other country. The number of the heritage centres in England was 41 in 1990.[12] Bekonscot in England, which is the first miniature park on the world, represents the rural life of 1930’s through 6 miniature villages.

Although it is possible to point out the differences from the British examples, it can be said that Miniaturk in Turkey is an attempt to create a heritage centre. However In Turkey, “heritage industry”, generated by the tourism sector, is not widespread yet. Although Istanbul and other historical sites attract visitors from abroad, as a result of the geographical location, Turkey is popular in the market mostly as a sun, sand and sea resort. However it seems that Turkey will also be included in this rush for commercialising history in the mass tourism even in the southern coast. After the official opening of Miniaturk on April 23, 2003, Minicity was opened on May 29, 2004 in another tourism centre of Turkey, Antalya. Just in one-year period, the number of the visitors of Miniaturk, was more than 1.000.000 people. It attracted attention much more than even the expectations of founders. Being a popular site to be visited, Miniaturk stands as an object of inquiry for various disciplines.

1.3. Why Should “Miniaturk” Be Investigated?

When the publications about Miniaturk are studied it will be possible to point out different emphases that is shaped inaccordance with the orientation of the media.

[10] Ibid. 77.
[11] Ibid. 77.
[12] Urry, John. *“Gazing on History”*, op. cit., 210.

Most discussions of the meanings of Miniaturk minimize the importance of the location and type of the architectural space in which the models are exhibited. It is possible to observe such unawareness in the publications issued by the owner of Miniatürk, Kültür A.Ş. related to the park. There is a magazine named *Gezinti*, which is published in 3-month periods. *The Showcase of Turkey: Miniaturk* is another publication that was introduced and distributed at the opening day of Miniaturk. The information can be found about the design criteria but the name of the architect does not exist; there is no clue that an architect designed this space. Actually in these publications, discussions are about the meanings of the miniature models and the significance of the park for Turkey. These magazines are used as kinds of marketing tools for Miniaturk. Therefore it may be meaningless to search for such kind of information in these publications. Moreover there is a CD including the music specially composed for Miniaturk by Fahir Atakoğlu that accompanies visitors during the tour trip. There is also a VCD including an introduction film dubbed by Kenan Işık who is a well-known actor in Turkey, and a photo-album named *Zamanda Yolculuk* produced with the photographs of a professional photographer İzzet Keribar. All of these publications of Kültür A.Ş. concentrate on the importance and the meanings of what the miniature models represent.

On the other hand, not only the meanings but also the miniature models were totally ignored by the architectural periodicals. Mostly, they do not give any importance to the exhibited models; they are just interested with the space in which models are exhibited. In some articles published in the architectural periodicals this lack of interest is related with the temporariness of the models.[13] Anyway, in all

[13] Nuray Togay argues that Miniaturk became popular with its miniature models and thoughts behind the selection of the models. She believes that the exhibited models will be replaced by new ones according to the ideologies of new municipalities, because Kültür A.Ş. is a

publications, Miniaturk was considered just from one of these points of views; as an exhibition space or as a group of miniature models through which the history and architecture of Turkey and Anatolian civilizations were represented. In this study, it is attempted to investigate these miniature models as objects of an exhibition from architectural point of view. Therefore, it seems necessary to analyse this park with all its components.

Miniaturk can be questioned within the scope of many disciplines. For example one of them can be a cultural study searching for investigation of the identity that is tried to be constructed through architecture in Miniaturk. Hall articulates that there are two models of production of identity, where the distinction is historical and strategic.[14] The first model is trying to discover the "authentic" and "original" content of the identity. The struggle over representations of identity here takes the form of offering one fully separate and distinct identity in place of another. But the second model emphasizes impossibility of such "fully constituted, separate and distinct identities". As Hall puts it, identities are always relational and incomplete; they are in process. The existence of authentic and original identities based in "a universally shared origin or experience" is not possible. Identity is always a temporary and unstable effect of relations that define identities by marking differences.[15] Related with the second model of Hall, Grossberg argues that the emphasis here is on the multiplicity of identities and differences rather than on a singular identity and on the connections or articulations between the fragments or differences. As Lawrence Grossberg says, "Here struggles over identity no longer involve questions of

company connected to the municipality. Nuray Togay, "Miniaturk, Kütlesi Olmayan Bir Mimarlık", *XXI,* vol.14, July-Augustus 2003, 44-49.

[14] Lawrence Grossberg, "Identity and Cultural Studies: Is That All There Is?" refers to: Stuart Hall, "Cultural Identity and Diaspora", *Identity: Community, Culture, Difference*, ed. J. Rutherford, (London: Lawrence and Wishart, 1990), 222-237.

[15] Lawrence Grossberg, "Identity and Cultural Studies: Is That All There Is?", *Questions of Cultural Identity*, ed. Stuart Hall and Paul Du Gay, (London: 1996). 87-107.

adequacy or distortion, but of the politics of representation itself. That is, politics involve questioning how identities are produced and taken up through practices of representation." Then he puts that the work of identity in cultural studies is obviously defined by the second model of Hall. However this model does not define a singular theoretical position or vocabulary. On the contrary, the space within cultural studies that has theorized the problem of identity that is defined by a number of different, overlapping, intersecting and competing figures.[16] According to these, Miniaturk can be questioned as a practice of representation that is trying to construct an identity, which is beyond the scope of the existing study.

The context or the vision of Miniaturk can be analysed in order to shed light on the following questions. What were the criteria for the selection of buildings to be represented in the complex? Why is the number of buildings from Republican period much less than that of the other periods? Why does architecturally and socially insignificant building's miniature models, like a gas station, exist? The social profile of visitors, how it was covered in the media are other important issues to uncover the scope of Miniaturk.

All those aspects mentioned in the previous paragraph are possible topics of discussion. However, the miniature models of that park and their relation with the discipline of architecture will be the main concern of this study. Whether Miniaturk is an architectural work or not will be questioned in the thesis in order to uncover the conceptions, misconceptions and presuppositions about architecture in the popular realm and in the professional and disciplinary framework of architecture.

[16] For more information about these different, overlapping, intersecting and competing figures, look at to Lawrence Grossberg, "Identity and Cultural Studies: Is That All There Is?", op. cit., 87-107.

In order to accomplish the goals in the previous paragraph, the subject of architectural representation and architectural scale models will be studied in the first chapter. In the second chapter, the architectural model is tried to be discussed from different points of view. Being aware of the categories of scale models and the terminology of modelmaking, it will be easier to locate the miniature models of the miniature parks into this theoretical framework. In the third chapter the main concern is to introduce the examples realized abroad, to point out the similarities and differences between them and Miniaturk. Among all of the miniature parks mentioned in this chapter, which are members of International Association of Miniature Parks (IAMP), four examples will be analysed in detail. What makes these four miniature parks significant for this study is that they were taken as primary examples for Miniaturk. All of them played very important roles in the design and construction process of the park. In the fourth chapter, Miniaturk is investigated through the processes of its production including the initial design idea and all the stages of its construction. In the fifth chapter, the architectural value of Miniaturk and its miniature models are discussed. In the conclusion, the different frameworks of architects and the common people in terms of the role and the perception of models are discussed within the context of Miniaturk. One outcome of this study is that, whether they are found architectural or not by the professionals, these miniature models have contributions in establishing the relation of architecture with ordinary people. This popularity and the communicative advantage cannot be ignored and could be used by architects or professional organisations such as the Chamber of Architects to arouse interest in the cultural heritage as well as contemporary architecture.

CHAPTER 2

MODELS AS ARCHITECTURAL REPRESENTATION

Architectural model can be considered as a representation of an existing or an anticipated reality. We see these representations as miniaturization of a larger reality of environment.[17] The tools of architectural representation -drawings and models- mostly have independent meaning and value from the represented object or idea. In other words, representation techniques and tools can be accepted as architecture as much as the building itself. When represented building has a historical and architectural value or if this building does not exist any more, meaning and power of the representation increases, because from that moment on, it becomes a nostalgic object.[18]

2.1. Architectural Representation

The most important part of representation studies about architectural design starts with the expression of the reality that does not exist yet. To make this possible, firstly there is need to think about and design in mind, then manifest this visually, so that this reality could be appreciated.[19] The first representation of the architectural idea comes out at this point. This type of representation, either two or three dimensional drawings or scale models includes few data that are open to comments and need to be developed. They are very abstract expressions that bring up the

[17] P. Laseau, *Architectural Representation Handbook: Traditional and Digital Techniques for Graphic Communication*, (USA: McGraw-Hill, 2000). 2.
[18] Ibid. 76.
[19] P. Laseau, *Graphic Thinking for Architects and Designers*, (New York: Van Nostrand Reinhold Company, 1980).

investigation and experimental side of designing. These, beyond the visualization of mental ideas, are active participants of the development of the idea of designer. The form of design continuously progress through the way of representation of the idea and thinking on the represented reality. The unclear abstract representation initially, includes more data gradually and becomes more concrete. At this point, representation can be easily conceived by standard technical drawings. With transferring data and being objective, this representation would canalise other members of design group, and at the end can be used in the process of construction.

Beside these, there is need for design product to be approved by the employer, client or user; it should be represented in order to be admired, publicised and sold. Presentation of the representation should be absolutely photogenic, because it is an object of image and admiration. Therefore it is permitted to be more aesthetic and different from what it is. Consequently, professionals never trust these "professional" studies that are produced to attract those who are not architects.[20] These studies, which are illusory, easily covered of mistakes and showing spaces larger than they are, reached to unbelievable dimensions with new design technologies. Actually, if this progress of technology is used for good purposes and used for the presentation of a good work of design, high-quality results arise. However, mostly they show up as hoodwinking and photogenic representations of ordinary and average designs. These techniques make representation close to reality and gives false concreteness.[21] So architect commonly becomes sacrifice of this while he is connoisseur of hoodwinking.[22]

[20] Türkan Uraz, "Mimar ve Temsil: Oyunda 'Usta' veya 'Kurban' Olmak, ya da...", *Arredamento Mimarlık,* April 2002, 77-80.
[21] Ibid., 77-80.
[22] Ibid., 77-80.

The people who know the best hoodwinking methods are architects, so they do not believe in these representations. When the image of a representation approaches to the reality and its abstractness decays, design process comes to end. When the whole design process is perceived as an effort for creation of the thing that does not exist physically yet, delaying the production of the last product consciously can be accepted as an attempt for contribution to the design process.[23] For architects who give importance to the design process and preliminary research studies, these representations are not tools for design anymore, but facility of marketing. Because of this, these ornamented last product representations have less value for them. This thought is more acceptable for scale models and coloured perspectives. Architects often do not want to consider these representations as an architectural product, especially if professional model makers or three-dimensional animators make them.

2.1.1. Models in the History of Architecture

When the significance of representation within design process in antiquity is considered, it can be seen that three dimensional model studies usually were expressions of that design process instead of modelling the last product of design. During Renaissance, it is known that three-dimensional models usually made out of wood were produced to be presented to clients and especially to be presented in project competitions.[24] For that reason, they were used commonly and taken seriously by architects. However, for Alberti, the model with assisting technical drawings was neither facilitating the approval of employer nor being a tool for

[23] Ayşen Savaş, "'Tasarlayarak Sergilemek': Bir Temsil Nesnesi Olarak Mimarlık", *Arredamento Mimarlık*, April 2002, 87-91.
[24] H. Millon, *Italian Renaissance Architecture,* (London: Thames & Hudson, 1994).

construction. It was just an important step of design process.[25] Leon Battista Alberti's *Ten Books on Architecture* contains a description of the type of model he found useful in his design process. He says: "I would not have the model too exactly finished, not too delicate and neat, but plain and simple – more to be admired for the contrivance of the inventor than the hand of the workman."[26] Therefore, at those times, even the final models were left abstract and incomplete.

Afterwards, in the history of architectural representation, there was a tendency towards using the models just as explanatory tools for customers. Drawings became more important; models were preferred to be built at the end of the design process just to give an idea about the outer form. From aesthetical point of view, pictorial effect of the elevation and silhouette replaced three-dimensional characteristics of the form. At this period, coming up to early 1900's in guidance by Beaux- Art, architectural design was the elective repetition of the styles and orders of Renaissance and previous periods. Representation techniques could not go further than beautifully coloured elevation and section drawings. At this time, Bauhaus initiated the search for new methods in design education against the two dimensional presentation approaches. Bauhaus intended to bring designer and craftsman to work together again. Besides geometrical knowledge and technical drawing techniques, it was given much importance to model making as the representation of a new space and reality. Relation of architectural thought and material was set in a very simple and abstract level.[27] After 1920, the Modern Movement's rejection of a Beaux-Arts academism had paralleled a revival in the use

[25] Uraz, "Mimar ve Temsil: Oyunda 'Usta' veya 'Kurban' Olmak, ya da...", op. cit., 77-80.
[26] Tom Porter, *The Architect's Eye: Visualization and Depiction of Space in Architecture*, (London: E&FN Spon, 1997), 13.
[27] Uraz, "Mimar ve Temsil: Oyunda 'Usta' veya 'Kurban' Olmak, ya da...", op. cit., 77-80.

of scale models.[28]

After this retrospective look in history of spatial representation, it can be said that representation is an abstraction of reality in every condition. Therefore it is far from expressing the reality exactly. Designing more details creates a more concrete project. Today it is possible to take a trip inside and outside of three-dimensional models in digital environment. Virtual space can be experienced not only visually but also through its all-perceptual effect. This impressive progress in getting concrete of representation enriches our spatial experience. Moreover, it provides the designer with an awareness of his mental pictures more strongly and quickly. Although these spatial games are far from the real space experiences, they provide experimental enrichment for design as a type of representation. Furthermore, designer can imagine the architectural object with all characteristics more easily through these spatial games.

Design is a process between designer and representation. Therefore, sometimes the architect has more close relations with the representation as a product of design rather than the constructed architectural product.[29] Most of the times, the architect cannot look at his product objectively because of such a close relation with it. Therefore he should play with the level of abstractness and concreteness of the presentation products in order to make reliable evaluations.

It is obvious that scale models are one of the most important modes of architectural representation. The aim of this study is not a re-evaluation of the design process or a research of the effects of the architectural scale models to this process. In order

[28] Porter, *The Architect's Eye: Visualization and Depiction of Space in Architecture*, op. cit., 21.
[29] Uraz, "Mimar ve Temsil: Oyunda 'Usta' veya 'Kurban' Olmak, ya da...", op. cit., 77-80.

to research their relations with each other and architecture and deliberate whether they are products of the design process or tools for marketing or something else, we should be aware of their terminology first. It will be easier then to determine the characteristics of the models in miniature parks within architectural representation models.

2.2. Scale Models

According to Akiko Busch, who analyses the different aspects of architectural models in his book, the world in miniature is more easily manoeuvred and manipulated, more easily observed and understood.[30] Hence *the world in miniature* gives us a sense of authority.[31] He also argues that, when we fabricate, touch or simply observe the miniature, we enter into a private affair; the sense of closeness and intimacy is implicit.[32]

Models have a place both in our childhood and adult life. It is a controlled environment, so models appeal to the builder in all of us, at all ages. Through miniatures such as dollhouses and complex railway systems we develop our notions of the environment and our place in it in our childhood years.

In his analysis of miniatures Busch gives examples from non-western cultures, which may shed light on the role of miniatures. For the Japanese adults, the landscape of miniature expresses a more spiritual sense of placement. Busch claims that the arrangement of rock and sand and perhaps a single shrub in

[30] Akiko Busch, *The Art of the Architectural Model*, (Hong Kong: Design Press, 1991), 11.
[31] By the term "the world in miniature", Akiko Busch means all productions and reproductions smaller than their original size and scale. Busch, *The Art of the Architectural Model*, op. cit., 11.
[32] Ibid., 11.

traditional Japanese stone gardens may evoke a panorama of mountains, valleys, rivers and oceans.[33] For him, "such a condense representation of the natural world is not meant simply to represent or re-create nature, but to symbolize the spiritual enlightenment one might find there".[34]

Busch also gives the example of Persian and Indian miniature paintings that represent a microcosm of the splendours, horrors, and erotica of religious myths, folk legends and court life. But according to him, it is the scale of the paintings that gives these stories their intimacy and he argues that, "Indeed, the viewer marvels all the more at the epic nature of these narratives when they are conveyed through such condensed, articulate images and frames".[35]

In recent years, numerous artists and sculptors have chosen variations on model making as a means of more social and aesthetic discourses; the architectural models have become a common format for this. Josephine Gear, director of the Whitney Museum of American Art at Philip Morris, has a debate on the exhibit "Miniature Environments" shown at the museum between August 2 and September 27, 1989:

> "The miniaturization of scale is a strategy for making art unintimidating and approachable and for inducing physical- and emotional- proximity. The affective nature of miniature artworks comes from childhood associations, which the toy-like scale activates, and from the sense of secretiveness or of sharing private visions that smallness endangers."[36]

The models constructed by architects have a completely different set of concerns and seem to have little in common with other miniatures. Nevertheless they are the

[33] Ibid., 11.
[34] Ibid., 12.
[35] Ibid., 12.
[36] www.whitney.org (20.11.2004). Josephine Gear is also an instructor at New York University and gives the course "Museum Studies II: Museum Collections and Exhibitions".

most efficient way to translate the ideas and a way of collecting and articulating the precise spatial information about a proposed building. Busch asserts that if architecture is ultimately and inevitably a public statement, then the architectural model is a preliminary and more intimate dialogue with the facts of building.[37] In other words, since models have more approachable quality that induces the physical and emotional proximity that causes an authority on the models, people get in touch with architectural models more easily than the finalized construction.

It is obvious that a floor plan is an abstract drawing that is very difficult for most of the people to understand. More pictorial representations such as elevations, axonometrics and perspectives provide realistic images in communicating a project, but none of them can be compared to a model in terms of realism and intuitive impact.[38] The model is the only medium that allows people to project themselves into the design and to visualize what the proposed design will look like.

However, when it is the model of an existing building or of a building demolished later on, people may have seen it on its original location. Then, such a model is not a medium for imagination of what the proposed design would be like. Although it is a building that we already know; encountering with its model is like the first meeting with the actual building. Visual perception of the model may be the first contact with the building for most of the people. Building itself has the power of enclosing or enfolding people. However, in the case of experiencing the model, unlike architecture, people have the power to cover and embrace them.

[37] Busch, *The Art of the Architectural Model*, op. cit., 13.
[38] Fuller Moore, *Modelbuilder's Notebook: A Guide for Architects, Landscape Architects and Interior Designers*, (USA: McGraw Hill, 1990). 5.

2.2.1. Types of Models

There is hardly any standardization of the classification of model types. However, in terms of the role they play, it can be said that general categories of two kinds are used: design study models and presentation models - models built after the design is finalized.[39] When the designer works with a very rough model construction just for visualization of his design, this division is more distinctive. Once the design is finalized, the construction work of the final model is assigned to a "professional" model builder, which is usually outside the design office. In fact, in practice, models "presented" to others display high level of craftsmanship. Therefore it can be said that study models are also presentation models. Regarding these two types of models, model building stands as a significant practice in the representation of architecture.

Pattinson's classification of different types of models is useful to elaborate this issue. He has written a guide to professional architectural and industrial scale model building and offers a more articulate classification and terminology to understand the different function of models.[40] According to him models can be classified in the following categories: study, display, presentation, industrial, topographical, site, miniature, sales, contour, animated, lighted, structural, schematic, section, breakaway, reverse scale, interior, exterior, product and equipment models.[41]

According to Pattinson, a *study model* as its name implies, is made for or by architect, designer or engineer in order to make different analyses during the design

[39] Moore, *Modelbuilder's Notebook: A Guide for Architects, Landscape Architects and Interior Designers*, op. cit., 1.
[40] G. D. Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, (New Jersey: Prentice- Hall, 1982), 5.
[41] İbid. 5.

process.[42] These analyses are to reveal the mass relationships, traffic flow, utilities location and etc. Usually the proposed buildings are only studied as block configurations in order to allow for studying different arrangements. When it is a model of a product or a building, it would display overall form as a preliminary concept without detail. For a study model it is important to be constructed quickly, because it is this speed of construction that encourage designer to test the design in model form during the preliminary stages.[43]

Criss Mills, in his comprehensive guide for making and using architectural models, focuses on study models. He states that the purpose of study models is to generate design ideas and to act as vehicles for refinement.[44] They can range from quick, rough constructions to resolved models, but the term "study models" implies that they are always open to exploration and enhancement. Mills classifies study models into two groups; *primary models* and *secondary models*. For him, primary models are abstract in concept and are employed to explore different stages of focus. They are, sketch, diagram, concept, massing, solid/void, development and presentation/finish models. Secondary models are used to look at particular building or site components. Mills puts site contour, site context, entourage/site foliage, interior, section, façade, framing/structure and detail/connection models into this group.[45] He says, "The primary models has to do with the level of stage of design evolution, and the secondary models refers to particular sections or aspects of the project under focus".[46]

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[42] Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, op. cit., 5.
[43] Moore, *Modelbuilder's Notebook: A Guide for Architects, Landscape Architects and Interior Designers*, op. cit., 2.
[44] C. B. Mills, *Designing With Models: A Studio Guide to Making and Using Architectural Design Models*, (USA: John Wiley & Sons, 2000), 11.
[45] Ibid., 11.
[46] Ibid., 11.

While study models are considered as instrumental in the design phases, Pattinson regards *display model* as the finalized version of the study model. The whole architectural details allowed by the scale are shown on that model. Accessories such as human figures and cars are installed and the landscape is also represented.

Actually a *presentation model* is not a particularly descriptive term, because almost all types of models are produced in order to represent something; an idea that soon will come into reality, an existing object or building. Pattinson says that, the members of a church parish, for example, would probably be presented with a *display model* with architectural detail and landscaping as an aid to fund-raising. On the other hand, the building committee of that same church might have first been presented with a *study model* of the same project completed or detailed only to the extent necessary to show the architect's concept of requirements.[47] In other words, it can be said that all types of models are representation models at the same time. Moore says that, in one sense, presentation models are the record of achievements of the design process.[48] They are also the most literal, realistic, and sensible medium for communicating a proposed design to a client. A display model was defined as a finalized version of the study model. A "presentation model" differs from "display model" at that point. A presentation model is not necessarily built at the final stage of the design. It can be made at the earlier phases of the process with the aim of presenting it to the client.

During the construction of the study models, durability of the model is not considered as an important criterion. The speed of building and the expression quality are more important for the design process. However, stability and strength of

[47] Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, op. cit., 6.
[48] Moore, *Modelbuilder's Notebook: A Guide for Architects, Landscape Architects and Interior Designers*, op. cit., 5.

both display and presentation models are very significant because their existence should be longer than study models. The models of Miniaturk are also produced to be more durable and strong to open-air conditions.

Industrial models are those that architectural details, if any, become subordinate to the purpose of the project. Architecture plays a relatively small part in the overall picture. Models of manufacturing plants, processing facilities, quarries or sanitation fills are such industrial ones.

FIGURE 1. The miniature model of Mardin in Miniaturk. Photograph by Haluk Zelef. This model of stone houses of the town can be considered as a topographical one.

Pattinson defines *topographical models* as models of large areas in small scale. According to him a model of a large real estate development, an extensive area of

natural terrain, or of a town or city could be called topographical.[49] The model of Mardin in Miniaturk can be given as an example for such type of model. (Fig. 1) Models of natural landscapes like Pamukkale and the fairy chimneys of Cappadokia can also be defined as topographical models. (Fig. 2) Similar to the topographical models, *site models* usually are thought as small-scale models of an entire site of ownership.

FIGURE 2. Miniature models of Pamukkale and fairy chimneys of Cappadokia in Miniaturk. Photograph by Esin Osmanoğlu. Models of natural environments can also be considered as topographical ones.

About *miniatures*, Pattinson thinks that they are scale models in which every practicable detail is shown, as in a historic town site, an amusement park, or interior of a living room in a private residence showing period furniture and complete furnishing.[50] Miniature parks are also the sites of these miniature models. Practicable detail means all detail reasonably possible with available equipment,

[49] Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, op. cit., 6.
[50] Ibid., 6.

considering the scale. Actually any model could be called a *miniature*, because each one is a “visual representation” of the object, building itself in a smaller scale or an idea. For miniature parks the term representation can only be used for the exterior view of the miniature models, because the way of construction, the materials used and interiors of the models are not the same with their originals. The only considered point was the exterior appearance of the building. For a successful representation, building models durable to open-air weather conditions and similar to the view of their originals to the smallest detail are enough. Whatever the purpose of construction is, there is no place for interpretation of the model-builder. Therefore it may not be very extraordinary to name these miniature models as “reproductions” of their originals. According to Pattinson the term “miniature” is confined to those, which might be said to be the result of a meticulous effort to attain *complete realism*.[51] It is good that extreme detail is not required for fulfilling by far the greater number of purposes for which models are built. (Fig. 3)

Sales models are for attracting visitors. Actually they can be anything that is used to convince consumers that they will have one. Display site models of real estate developments and larger scale models of individual dwelling units, with lift-off roofs have both been used to promote sales, both before and after the project has been started.

Contour models usually show open contours for studying the terrain. They are generally preferred where considerable changes in natural grade will have to be bulldozed into finished grade before structural improvements can be built.

[51] Ibid., 6.

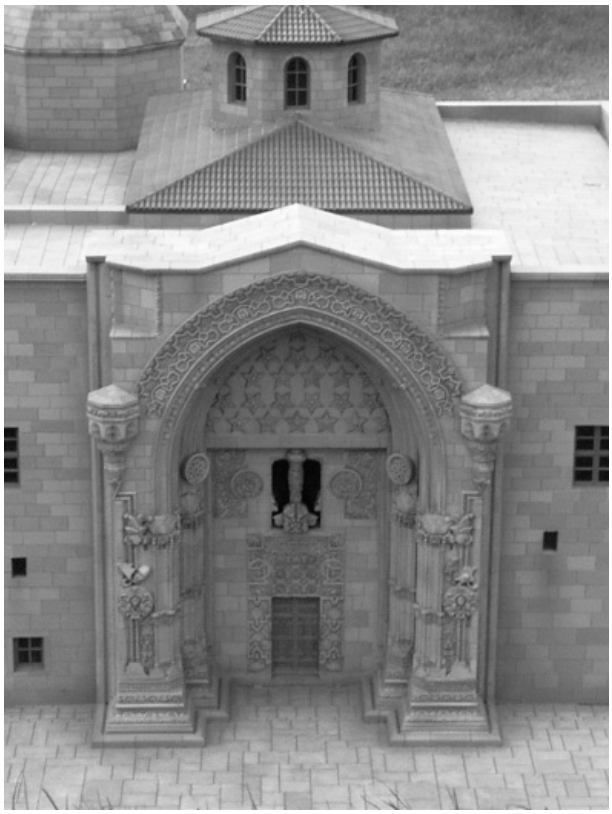

FIGURE 3. Miniature models require extreme detailing. Photograph by Binnur Tulga.

Animated models contain automatic movements of parts or accessories, and they are mostly operated electrically. As an example, an operating railway, an activated sales model or a model with flowing water can be given. In Miniaturk, two different types of animated models are included. First one is the cross section of TEM (Trans European Motorway), which is 12 m in length and has 65 vehicles that travel along it. (Fig. 4) The road has an artificial mountain at each end, in which the vehicles of the four-lane highway turn. The other animated model in Miniaturk is the railway system that includes many steam locomotives. In Mini- Europe –a miniature park located in Brussels-, for example, there are many examples to animated models. A 1/25-scale fireman can be seen putting out a fire in the port of Barcelona, or Mount Vesuvius, the only remaining active volcano on the European continent erupts through pressing a button.

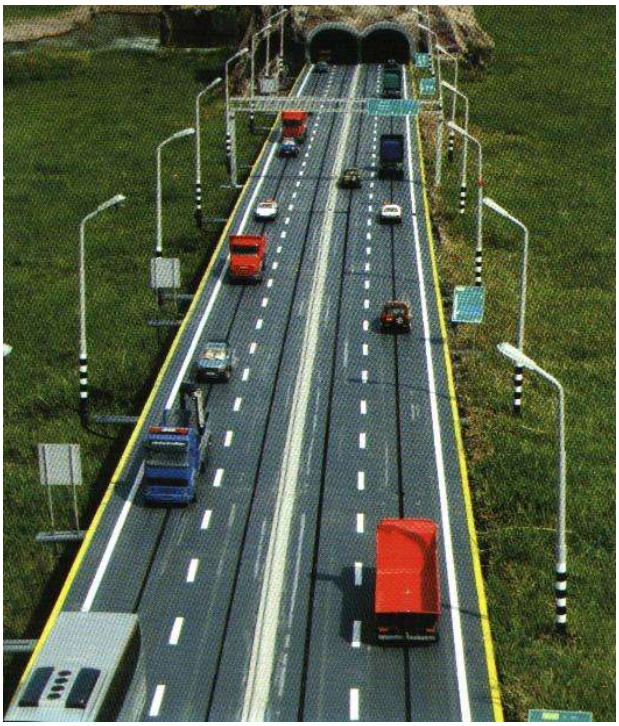

FIGURE 4. The miniature model of TEM in Miniaturk. Photograph from "The Showcase of Turkey: Miniaturk".

Lighted models are those containing provision for lighting of interiors, street lamps, etc. They may employ different sources such as fluorescent, incandescent or neon for different effects. They may have hidden spotlights trained on features of the project. Pattinson gives the instance of an airport tower having a flashing light on the roof, which also makes it an animated model.[52] In Miniaturk when dusk falls the cars on TEM put on their headlight and the overhead lamps on the highway come on.

Structural models are those in which the structure of improvements is left open to view for the observer's analysis or appreciation of structural system. The framing system of a private residence is a good example for the structural models.

Schematic models are those depicting the processes, systems, methods or layouts using non-authentic elements without regarding for final location except details

[52] Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, op. cit., 6.

necessary to explain or demonstrate principles. They may be defined as the first steps of designs, the preliminary studies; or as depicting ideas of a finished project or building. Whole stages of the primary models, defined by Mills, can be put into this group also. Sketch models that can explore basic relationships between numbers of program components or massing models that depict volume and are typically devoid of openings can be given as examples for this group of models.[53]

Breakaway models are used for viewing the interior planning or structure. The most common breakaway model is the one with lift-off roof of a private residence. However, depicting interior arrangements, facilities and furnishings as an aid toward obtaining the best space use or interior decoration are the subject of *interior models*. They are built with or without regard for the exterior treatment. Another type is the *exterior model* that is the most common, having the interior shielded from view.[54]

Section models are built for supporting aesthetic or structural analysis of one portion of a building.[55] It can be a single facade, an entrance architectural screen or a portion of a colonnade. It is built to study relationships between vertical spaces. Section models are related to interior models in that they reveal interior spaces. One of the main differences lies in their vertical orientation, in contrast to the plan or top view usually offered by interior models. When they are concerned with a single vertical plane or façade as on a moving picture lot, they can be called stage set models. In Miniaturk, the representation of Yerebatan Cistern can be given as an example for such a section model. (Fig. 5)

[53] Chris Mills, *Designing With Models: A Studio Guide to Making and Using Architectural Design Models*, (USA: John Wiley & Sons, 2000). 12-15.
[54] Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, op. cit., 6.
[55] Ibid., 6.

FIGURE 5. The miniature model of Yerebatan Cistern in Miniaturk. Photograph by Esin Osmanoğlu.

*Product a*nd *equipment models* are mostly used for sales purposes. They are usually built as accessory items for display models. The model of a lighted electronic score board, a lighted corporate sign or an advertising sign with movable surface can be given as an example for such models.[56]

The last type of this classification of models is the *reverse scale model*. They are blowups of items, which in life size are too small to be self- explanatory. A good example is the blow-up of a star element of a transducer or a model of a cellular DNA.

In these descriptions and definitions of model types, there are ambiguous points. Pattinson states that it is possible to say that a contour model could also be

[56] Ibid., 7.

considered as a topographical model or a site model.[57] There can also be combinations of these various types. None of the authors, who tried to define model types, claim that their definitions should be accepted as an authority. All of them accept that there are no strict standards for model types. However, the classification included in this chapter provides the terminology.

As a conclusion, it is seen that there are differences in the use and character of models depending on when and why they are built. Moore says that “It is perhaps most convenient to think of the various model types as a continuum ranging from schematic study models through the presentation models intended primarily for outside parties”.[58]

The focus on model types is intended to develop a conception of miniature models in miniature parks within the context of architectural models. In fact, the word “model” includes the sense of miniature in itself; each model could be called a miniature at the same time. The term “miniature model” is used in order to bring differentiation with other types. Each model is a small-scale visual reproduction of the real thing. Similarly each miniature model is a small-scale visual reproduction of an existing or ever existed “real” building.

There are a few more types of models that can be found in Miniaturk. Human and object figures that represent different scenes from the War of Independence of Turkey in the Panoramic Victory Museum in Miniaturk are different from the miniature models of Miniaturk in terms of scale, materials and way of construction. (Fig. 6) The scale is around 1/10 and instead of focusing on a single object, it was

[57] Ibid., 7.
[58] Moore, *Modelbuilder’s Notebook: A Guide for Architects, Landscape Architects and Interior Designers*, op. cit., 2.

tried to express a total image of the general view of Turkey during that period.

FIGURE 6. Views from the panoramic Victory Museum in Miniaturk. Protographs from “Miniaturk Panorama Zafer Müzesi”, Kultur A.Ş., 2003.

Another type of model used in Miniaturk is the model of the Trojan Horse, which is reinterpreted as a play equipment and works as a recreational area for children. (Fig. 7) The difference from the miniature models of Miniaturk is its way of construction; it was not built with exact detailing, on the contrary it was re-designed.

FIGURE 7. The reinterpreted model of the Trojan Horse in Miniaturk. Photograph by Sevinç Bilgili.

Other models found in Miniaturk are the models of miniature models, which can be obtained from the souvenir shop of Miniaturk. Moreover, the building itself has the properties of a model. The details used in construction make an attribution to a hand-made production.

2.2.2. Scale of Models

Scale is inseparable from the subject of this study. Therefore it is important to point out some accepted concepts and discuss applications.

Whether in metric system or imperial system, all scale expressions indicate ratios. In inch-foot system, scale is usually expressed as a fraction of an inch equalling one foot. However in metric system there is no need to mention of units since they are the same on each side of the semicolon regardless of the unit chosen in considering distances. Under the metric system, a commonly used rational expression such as 1/500 means that 1 mm equals 500 mm, or converted to the standard meter unit, 2 mm equal 1 m.[59] Whether in the imperial or metric systems, the model scales are close to each other. For example, a ¼" scale model could be expressed as a 1/48 scale model or a 1:48 scale model, meaning that the dimensions of the model are 1/48 the size of those on the project, which is expressed as a 1/50 scale model in metric system. Repeating the case of the first example of the Miniature parks in Britain, the scale of 1/25 or ½ inch to 1 foot (1/24) is utilized throughout the world, although it is not a common practice in the architectural model making.

[59] This information about the scale expressions was taken from Pattinson, *A Guide to Professional Architectural and Industrial Scale Model Building*, op. cit., 10-11.

2.2.2.1. Classification of Scale

Fuller Moore, who wrote a guide for model building for architects, landscape architects and interior designers, classifies the scales of the models in a few categories.[60] When there are large site features that must be represented, such as roads, landforms, wooded areas and adjacent buildings, the selected scale should be 1/500 or smaller. In these *large-scale models*, the small scale of the proposed buildings necessitates showing only its overall form, with no façade details.[61]

The scale ranging between 1/500 and 1/100, permits to show all of the major fenestration and exterior façade features and colours, as well as small areas of the surrounding site. However, it is both difficult and undesirable to show façade details such as mullions, masonry coursing, joints, textures and trim in these *large building models*.[62]

The most commonly used scale for presentation of a private house is 1/100. All exterior design features can be shown sufficiently in that scale, but still it does not necessitate showing the minor details. Rather than having the joints and shadows built up three dimensionally in that scale, these details can be depicted through drawings. All accessories necessary for these *small building exteriors*, such as cars, trees, scale figures and furniture can be built with a minimum of effort. Larger scales such as 1/50 and 1/20 are only used for very small building exteriors. On these models, even the smallest decorative details can be shown. Usually it is seen as a time-consuming work to depict the articulations on the elevations of the display model, but it allows showing detailed building textures and small ornamentation

[60] Moore, *Modelbuilder's Notebook: A Guide for Architects, Landscape Architects and Interior Designers*, op. cit., 6-7.
[61] Ibid., 6-7.
[62] Ibid., 6-7.

characteristic of traditional designs.

In the scale classification of Moore, there is another type: *detailed interior models*, which should be 3/8" scale (1/32) or larger.[63] They show specific design features, including furniture, finishes and accessories. The last type is an interior layout model. It is used for large areas where furniture is to be shown as abstract shapes for layout purposes only. Their typical scale range is 1/8' to ¼' or 1/96 to 1/48.[64]

Each scale requires different detailing. Simplification of the model can often be employed without destroying the intended scale. In a 1/500-scale model of a multiunit housing development, windows or some other architectural elements can be excluded; one of the main goals is examining mass relations. But a 1/50 scale model of a single house necessitates those elements. Such simplifications cannot be permissible in a display model.

The scale of the miniature models of Bekonscot in England -the oldest miniature park of the world- was ½", which is equal to the 1/24 in rational expression. Following miniature parks used the rational expression of 1/25, which was approximately equal to the scale of miniature models of Bekonscot, even it is not a scale commonly used in architectural representations. It allows depicting detailed building textures and small ornamentation characteristic of traditional structures. Even this scale is used only for depicting small exteriors according to the classification of Moore, it is the most appropriate scale for depicting the totality of details of elevations and experiencing the miniature model as a whole at the same time.

[63] Ibid., 7.
[64] Ibid., 7.

2.2.2.2. Illusionary Scale

Sometimes it is not enough to construct in the required scale to create the desired image of the model. In order to obtain the proper scale effects there are some physical components to be used on the models. They are back-up items, some accessories and landscape elements.

FIGURE 8. Turbe of Sultan Murat in Miniaturk. Life-size lamps sometimes destroy the scale. Photograph by Esin Osmanoğlu.

Back-up items like light bulbs, fluorescent tubes, transformers, fans, switches and wiring should be out of sight, hidden somewhere behind structure or in a base or even in a box separated from the model. Life- size objects such as lamps destroy the scale. (Fig. 8) Landscape elements and other background images also give damage to the established environment in terms of scale.

Such accessories like automobiles and human figures can also give scale to a model. An automobile helps the viewer relate a known life-size image to the building

against which the automobile is parked. Human figures also accomplish the same thing if they are placed properly. (Fig. 9) Moreover they give life to the model and help to enliven the environment.

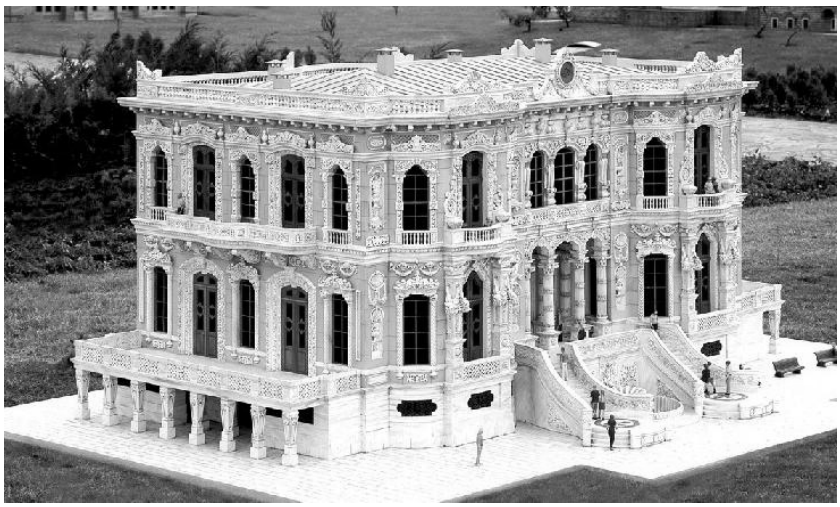

FIGURE 9. The miniature model of Küçüksu Kasrı in Miniaturk. Photograph by İzzet Keribar. From "Zamanda Yolculuk" ,Kültür A.Ş. January 2004. Human figures give scale to the model.

Model making is not usually limited to the construction of a single building. The immediate landscape, rural or urban, is also included into the model. For example when the scale of a new construction in the urban context is called into question, it is important to see the proposed building in its surrounding environment.[65] In such works, models of existing architectural environment with few details and in neutral colours surround the model of the proposed building. These models demonstrate the schematic massing of buildings and illustrate the scale of the proposed building in relation to its surrounding. However, according to Busch, such models can be misleading, because with such an obvious focus on the particular structure, they downplay the visual controversies such a building may introduce into the existing environment.[66]

[65] Busch, *The Art of the Architectural Model*, op. cit., 93.
[66] Ibid., 93.

FIGURE 10. The miniature model of Malabadi Bridge in front, and the miniature models of Mağlova Aqueduct and Bosporus Bridge at the back. In Miniaturk, all of them are constructed on the same water source. Photograph by Haluk Zelef.

In Miniaturk, existing architectural and natural environment of the buildings is totally ignored. Miniature models are not exhibited in their own context. It is important to see the buildings in their original surrounding environments in order to perceive their original scales. However they are in the middle of a new context created by totality of the exhibited miniature models and landscape of the park. The new references for perception of the scale are the immediate landscape elements and the other miniature models. These landscape elements have no relation with those of their original surroundings; they include trees and scrubs that are smaller in scale and are easy to give form of a miniature tree through trimming. In other words, landscaping of Miniaturk was considered independently from miniature models. It looks as the landscaping of an ordinary park rather than creating the different sites

of the miniature models originals. In Minimundus- a miniature park in Austria- the real environments of the miniature models were taken into consideration and they were also reproduced. They say that they are "interested in presenting the models in an environment which 'transports' visitors –in spirit at least- to the natural surroundings of the original building: parts of Minimundus have been turned into desert landscapes or tropical rain forests".[67] Similarly in Miniaturk, there are also some instances where the surrounding landscape is tried to be incorporated into the representation of a singular building but usually they are limited with the use of water element. In order to use the same water source, bridges and some other miniature models such as Yalıboyu Houses at Amasya were exhibited close to each other. Similarly, it was impossible to built Sümela Monastery without the mount on which it was constructed or Soğukçeşme Street without the city walls. Actually, presenting each miniature model in its own context is a very expensive and sometimes unnecessary application. However there were some possibilities such as exhibiting Hagia Sophia and the Blue Mosque as in their original locations. Dolmabahçe Palace and Dolmabahçe Clock Tower were also taken as independent items from each other. It was also possible to consider the Topkapı Palace as a whole. During the settlement process placing miniature models of the neighbouring buildings next to each other was thought, but because of covering very large areas, this idea was also given up.[68] Therefore in Miniaturk each miniature model was considered as a single reproduction taken out of its own context. For that reason it is not possible to perceive the original scale of the represented building or environment. The perceived scale is a new one, which is created by comparison of miniature models. As an example, Anıtkabir is located on a hill that makes it seen from almost each part of Ankara. This location supports its meaning also. Thus, its

[67] http://www.minimundus.at/englisch/content/unternehmen.htm
[68] From interview with Sultan Polat, the public relations officer of Miniaturk, Istanbul, May 28, 2004.

size in the people's mind is extremely large. However, because of its location in Miniaturk –on a plane ground, near Selimiye Mosque- it can be said that its grandeur is lost. (Fig. 11-12) Some other miniature models also loose their meanings created by their original site in the same way.

FIGURE 11. Anıtkabir in Miniaturk. Photograph by Esin Osmanoğlu.

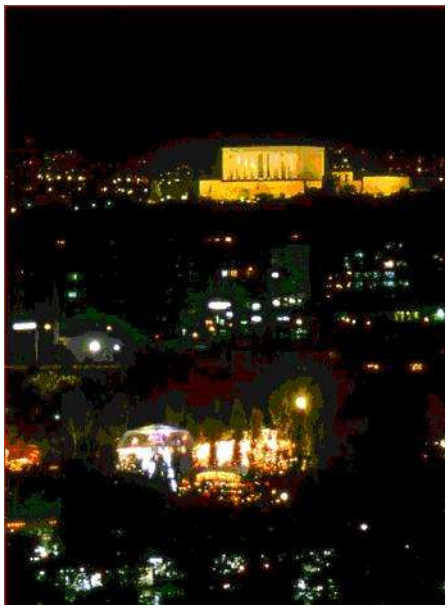

FIGURE 12. Anıtkabir in Ankara. Photograph by Haluk Özözlü.
(http://www.sihirlitur.com/muzeler/anitkabir/)

The new landscape also destroys the scale in most of cases. However if it is executed in a congruous scale with the model of the building and with proper materials, it becomes more convincing. An out-of-scale item might look to be in scale and therefore can destroy the scale of the miniature model. (Fig. 13)

FIGURE 13. Landscaping destroys the scale of the miniature model. Photograph by Esin Osmanoğlu.

2.2.3. Materials of Models

The craft of building architectural models has become more complex and sophisticated practice in the last forty years. Miniature models often extraordinarily look like their originals; they are the exact representations of the real thing. Busch argues that the new models are buildings with their own complex engineering and construction problems. For him, the new models, although they are smaller copies

of real buildings, can hardly be considered simply as imitations of buildings.[69]

According to Busch, this revolution in craft is directly related with the changes that architecture itself has undergone.[70] He argues that it was relatively easy to reproduce the modular units, exposed steel skeletal structures, clean masonry planes and ribbon windows of the modern period.[71] However, with post-modernism in architecture, historical detailing, more colourful materials and texture combinations appealed architects as a reaction to such simplicity. Decoration was no longer taboo. A building could be defined through multiple layers, colours and materials. Transcribing this multiplicity has likewise transfigured the craft of model making. This situation also influenced the model making approach in miniature parks. Especially, in Miniaturk, buildings from different periods of time are represented. There are both contemporary and historical works. Therefore, in order to accomplish representation of the materials, styles and decorations used in the real building successfully, the latest techniques in model making were employed.

Model making can be considered as a way of design; it is deeply integrated into the creative process. During the design process, model making is not a translation of ideas from two dimensions to the third dimension; rather it is the way of thinking directly in three dimensions.

However, traditional model making as a craft based activity will probably become obsolete in the near future. Computerized systems, which make it possible to go from the sketch to the model through a computer-controlled milling machine will become the standard. A computerized model making process is already being used

[69] Busch, *The Art of the Architectural Model*, op. cit., 55.
[70] Ibid., 55.
[71] Ibid., 55.

in some larger design offices.[72] (Fig. 14)

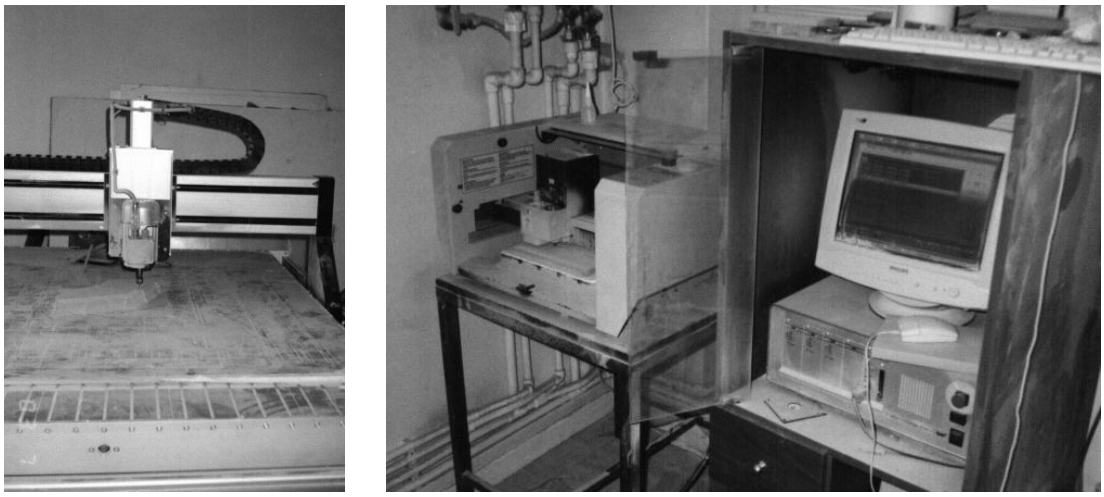

FIGURE 14. Computer-controlled milling machine from Armi Model Design Studio in Istanbul. Photograph by Esin Osmanoğlu.

Miniature models are not study models, so they are not used as tools for design. This type of model making is direct transformation of the two dimensional drawings and photographs into the three dimensional world. There is no need for any kind of abstraction because they are built to the smallest detail. The main method used in the production of the miniature models of Miniaturk was also a production through machine technology.

Paper, wood, and plaster that were the materials of the model-maker at the beginning of the 20th century and they are still used by some studios. However they also prefer to use such materials like foam-core and illustration boards as well. These materials are frail, but at the same time they are easy to work by hand and are particularly suited to design and study models. While some studios prepare presentation models almost exclusively in traditional wood, paper, and illustration board, they are also equipped with table saws, band saws, sanders, joiners, and

[72] R. Lucci, and P. Orlandini, *Product Design Models*, (USA: Van Nostrand Reinhold, 1990).

drill presses. Despite the availability of more durable plastics, these model-makers have found that stiff papers and wood have an inherent warmth and texture lacking in synthetic materials. Paper models convey an innate flexibility; they are by nature less imposing than plastic models, and such flexibility, even in presentation models, can be appealing to clients.[73] Paper construction also tends to be quicker than building with Plexiglas that requires precise sanding, joining and painting. It can be said that Plexiglas is a less forgiving material and demands more technical coordination. On the other hand, paper models can be revised more easily, and a mat knife can do in an hour what might take a day with plastics.

However, when the subject is a miniature model for miniature parks, materials used should have strength to open-air weather conditions. Materials preferred for that purpose are Plexiglas, forex, some metals such as aluminium, and different polyurethane and polyester composites that all demand machine technology. In recent times, the main material used for miniature model production is the Cibatool, a new and improved epoxy resin developed for the rapid prototyping systems. It has strength to high levels of humidity. Mistakes on that material are irretrievable, but when it is compared with hand-made products, mistakes of computer are very low. At the same time, the speed of constructing with computer and machine technology is very high in comparison to hand-made products. It is easier to make some repeating parts of the miniature models by using these technologies. Most of the miniature models are composed of many parts that are produced separately and should perfectly fit to each other during the joining process, and such perfect matches are only possible through the use of machine production methods.

After combining all pieces of the miniature models, the next process is painting this

[73] Busch, *The Art of the Architectural Model*, op. cit., 56.

grey material. Brick, stone, concrete, wood, metal or other materials were imitated through careful paintings. The texture of material is given by CNC machines and the colour by hand-made painting. This is also the way of producing the miniature models of Miniaturk. However in Minimundus –a miniature park in Austria- instead of constructing the entire model from a synthetic material and than painting it, the original materials were used. For example when producing the miniature model of a building built from brick, initially 1/25-scale bricks were produced and then the model was constructed out of them. This is another method of making the miniature models.

2.2.4. Photographs of Models

The photograph of the model has evolved into a separate art form during the last years. In the post-war years the building construction was limited because of the shortage of materials. Model photography first grew during this demand. Busch says that the editors of architecture and design magazines, realizing that their readers were anxious to see the architecture emerging from war satisfied them by publishing the models of these buildings- often photographed in such lifelike ways, in which it was difficult to determine these were only models.[74] Following this, architects and designers realized that the photograph of the model could be a valuable resource itself, a way to position the building on its site and to examine whether it fits into the existing environment.[75]

Contemporary model photography continues to serve for that purpose. To replace the models themselves, which are easily broken and impractical to transport, a photograph of the model may be the most practical way to show the design of a

[74] Ibid., 105.
[75] Ibid., 105.

proposed building to a large number of developers, contractors, design partners and other interested groups. According to Busch, model photography, particularly that - which idealizes or glamorises the proposed building, is a graphic device especially valuable to developers who are trying to create an appealing leasing package before the building has been constructed.[76]

However, it is intriguing that the sense of space is achieved when the three-dimensional model is translated into the two-dimensional model photograph. While the model has definite boundaries, the frame of the photograph, especially the close-up photograph of a detail, can suggest a larger sense of space that lies beyond the frame. It can be said that the scale of the photographed object depends on the intentions of the photographer. This means that it is possible to represent the miniature models as real-scale actual buildings. (Fig. 15-16)

In Miniaturk, miniature models were translated to the two-dimensional format, so that they imply the originals of the exhibited buildings and landscapes. These photographs are mostly taken for introduction catalogues and brochures. For most of the buildings displayed in the form of models in that park still exist, what is promoted into the market is not the miniature models themselves, but the idea of Miniaturk.

Here also, miniature models were photographed in such lifelike ways that it is difficult to differentiate them from their originals. Even it is not explicitly stated somewhere, the reason of this can be the effort for trying to express their originality. When Hagia Sophia and Selimiye Mosque are seen in the same frame, it is possible to compare their size. The impact of these buildings in their context in the city might

[76] Ibid., 105.

be lost by their location in Miniaturk. In that case, close-up photographs of some detailing particularly, suggesting a larger sense of space that lies beyond the frame are preferred.

FIGURE 15. Süleymaniye Mosque. Photograph by Arman Camgözoğlu. From the catalogue of “The Treasures of Istanbul” exhibition,Kültür A.Ş. March 2004.

FIGURE 16. The miniature model of Süleymaniye Mosque in Miniaturk. Photograph by İzzet Keribar. From “Zamanda Yolculuk” ,Kültür A.Ş. January 2004.

If architectural photography is a means of witnessing architecture second-hand, the photograph of the miniature model is a sort of third-hand representation of the building. In most of the cases, it is an unconscious collaboration between model-maker, architect and photographer, and what we see in the photograph is an image constructed deliberately through stages to create a specific impression.

2.2.5. Effect of Time Factor on Models

Architecture, more than any other art, is subject to the passage of time. As in the other arts, styles of expressions change, and so with them do our perceptions. How we perceive a beaux-arts building today is quite different from how it was perceived in 1880. But more to the point is that buildings suffer over time; they age and decay, crumbling visibly and dramatically before our eyes. Moreover, the landscape surrounding a building changes constantly, and adjacent buildings can represent an array of varying architectural periods and styles. All of these inevitably affect the way we perceive a single building. Time is an inescapable condition of architecture.[77]

Architectural models, however precise and finely crafted, are vulnerable to this condition. While their value as study, presentation, and planning tools may be immense, it is also limited.[78]

Uğur Tanyeli, argues that trying to attribute some false oldness to what is contemporary is an attempt to legitimisation of it; actually this attempt is named as 'flattening of the history'.[79] According to him, early modern people are not convinced

[77] Busch, *The Art of the Architectural Model*, op. cit., 27.
[78] Ibid., 27.
[79] Uğur Tanyeli, "Tarihi Yassılaştırma Saplantısı ya da Zihnimizin Miniaturk'leri", *Arredamento Mimarlık,* May 2004, 7. Uğur Tanyeli uses the term "flattening of the history" introduced by

by their own modernity and have difficulty in believing to their power of thought. For this reason they need some confirmations from the past. However the past has already gone, it does not have a contemporary validity. Therefore people will have to "flatten the history" in order to reach to these confirmations. Tanyeli thinks that this is the same with creating "Miniaturk"s both in the physical and mental world. These are the platforms of representations of different periods of history brought together in a new contemporary context. They are removed from their own time and space contexts. He questions what the gain will be through this parade of architectural representations, which are disconnected from the "real history of Turkey". This requires a comprehensive discussion which can be the subject of a further study. However, removing architecture from its context is in the nature of models.[80] In the model world, buildings are stilled, pristine. They bear no vestiges of time and weather. Architectural models represent the scale and massing, materials, lighting and decorative finishes of the proposed buildings. Nevertheless, these models inevitably idealize their subjects. Architecture is represented in a perfect world. However the case is a little different in Miniaturk. There are many points that affect the miniature models as their originals. Most of the miniature models were painted in a way to represent the adverse effects of time on the buildings. Actually they were painted to represent the conditions of the original buildings in the year 2002, when almost the whole of the miniature models were produced. From now on, the miniature model and its original building will be affected differently from the open- air conditions and time because of their difference in scale.

prehistoricist Mehmet Özdoğan. It implies thinking of the events in the past as happened at the same time and place by ignoring their own place and time connections.

[80] Busch, *The Art of the Architectural Model*, op. cit., 27.

CHAPTER 3

A SURVEY ON MINIATURE PARKS

3.1. International Association of Miniature Parks (IAMP)

International Association of Miniature Parks is an organization that was established to represent its members before other international organizations. It is promoting the cultural aspects of miniature parks as a platform for enhancing educational programs worldwide. This association works as an umbrella institution for its members; it is watching over, protect and further the rights and interests of members engaged in the business of miniature parks and to co-operate with those other associations in the world having similar aims and objectives.

One of the goals of the organization is to assist and enable its members to act together in all matters appertaining to their trade interests; defining quality criteria and a quality label for miniature parks. Furthering the interchange of ideas and experiences between the amusement and leisure parks, and establishing and maintaining a dialog with governments and institutions are the other objectives of the IAMP. Besides, IAMP promotes the concept of miniature parks worldwide within the travel and tourism industries.[81]

There are 17 parks that are members of the IAMP and each of them pays an annual fee to be a member. Each member park has the opportunity to take part in

[81] www.i-a-m-p.org/about.asp (23.09.2004)

discussions and debates about miniature parks; and attend IAMP events and meetings.

Members are:

- “Klein- Erzgebirge” Oederan, Germany
- Bekonscot Model Village, UK
- France Miniature, France
- Italia en Miniatura, Italy
- Madurodam, Netherlands
- Mini Chateaux, France
- Mini Israel, Israel
- Miniature World, Canada
- Miniaturk, Turkey
- Miniatuur Walcheren, Holland
- Miniatuurpark Appelscha, Holland
- Mini- Europe, Belgium
- Minimundus, Austria
- Pueblochico, Tenerife, Spain
- Ruegen Park, Germany
- Sardegna in Miniatura, Italy
- Swiss Miniatur, Switzerland

Although each miniature park has its own theme, they have some common objectives:

- Educating (historical, social)
- Promoting travel and tourism

- Promoting commerce
- Representing a culture, a nation or a country
- Projecting the political ideologies
- Developing a consciousness for preserving history
- Creating a space for enjoyment

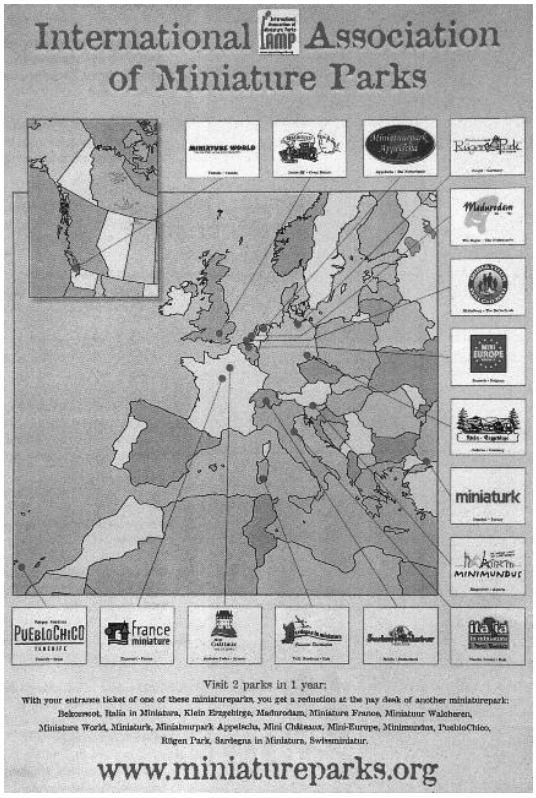

FIGURE 17. A poster of IAMP. *Gezinti*, Autumn 2003.

Rudi Rasschaert is the current director of the Mini-Europe Park in Brussels, and at the same time the president of the IAMP. In the second annual meeting of IAMP, held on September 2003 in Minimundus, Austria, he said that "We want parks with a vision," and the director of Minimundus Diethard Hummer added, "We need to ensure that the new comers have the quality"[82] The miniature park Miniaturk located in Istanbul has a vision; both Republican and Ottoman buildings and landscapes are

[82] Daniel Michaels, "Mini -Worlds Are Big Business"*, Wall Street Journal*, Oct 1st, 2003.

represented as *the showcase of Turkey*[83]. Miniaturk has also reached to a very high quality of model making that was approved by the director of the Madurodam, who is also the consultant of the miniature park of Turkey.

3.2. Characteristics of Miniature Parks

In miniature parks, the World's history and culture are represented in exact 1/25 scale through architecture and landscape. This scale comes from the imperial system of 1 inch to 2 feet. In the first known miniature park Bekonscot in England this scale was used, therefore the others used the same scale.

The miniature models sometimes offer a kind of reality that does not exist in the world anymore. For instance, you can see buildings that do not exist today. As an example in Japan, in Tobu World Square you can visit the Frank Lloyd Wright's sprawling Asian masterpiece, the Imperial Hotel, or the cupolas of Tokyo Station, both blasted to bits during World War II.[84] Also in Turkey, in Miniaturk, you can see the miniature models of two of the World's seven wonders of antiquity; Temple of Artemision, which was constructed in Izmir- Selçuk, in 560 BC and the Mausoleum of Halikarnassus constructed in Bodrum in the 4th century BC. At the same time you can obtain an overhead view of the miniature models that is not possible for the real buildings. The structures that exist today, that you have known for years and never thought about them, have very remarkable effects on people. This experience may offer a unique occasion for the ordinary people to think on architecture.

On the other hand, miniature models sometimes offer a kind unreality that cannot

[83] It is the name of the book published and distributed by the owner of Miniaturk in the opening day of the miniature park: "*The Showcase of Turkey: Miniaturk*"
[84] Ron Gluckman, *"A World of Wonders"*, http://www.gluckman.com/JapPark.html.

be seen in everyday life. Buildings that are far away from each other can be seen together in miniature parks. This is sometimes very exciting and is even more appealing to be seen in such a concept, which differentiates the miniature parks from the ordinary parks. However, some of the buildings loose their importance, meaning and all of their grandeur when their miniature models come together with a one of the more remarkable and larger building, in terms of scale.

3.3. Examples of Miniature Parks from the World

The number of miniature parks on the world is around forty. The examples studied in this chapter are chosen from the members of the IAMP; Bekonscot in England, Madurodam in Holland, Minimundus in Austria and Mini- Europe in Belgium. Bekonscot is the first miniature park; that is why it is the investigated park in this study firstly. The others are the parks that are examined in detail by the team involved in the planning process of Miniaturk in Turkey. They became the most important guides for the Miniaturk project. Consequently, these parks are to be studied comparatively in this thesis to understand Miniaturk.

3.3.1. Bekonscot

The first miniature park, Bekonscot in England, was founded in 1929 and is frozen in time before World War II.

Since the late nineteenth century in Britain there has been a tradition of visiting and conserving the countryside. This can be seen in the appreciation of certain kinds of landscape (including villagescapes) and of the country houses set in attractive rural

settings.[85] Bekonscot was built in such an environment. This kind of interest in the rural environment still continues. In the 1980's, with the tendencies to globalisation, different countries have come to specialize in different sectors of the holiday market for overseas visitors. Spain specialized in cheaper packaged holidays, Thailand in 'exotic' holidays, Switzerland in skiing and mountaineering holidays, and so on. Britain has come to specialize in holidays that emphasize history. This location within the global division of tourism has further reinforced the particular strength of the heritage phenomenon in Britain.[86] This may explain the continuing popularity of the Bekonscot Model Village.

A London accountant, Roland Callingham, in the mid-1920's bought a field in Beaconsfield, Buckinghamshire (a few miles Northwest of London), dug a pond in it and built a few model houses as a hobby and as an enjoyment for family and friends. His friend James Shilcock living in Ascot, added a model railway to the model houses. They decided to combine the names Beaconsfield and Ascot and call the village "Bekonscot". It covers approximately 6,000 m2 in Beaconsfield. In 1934, Princess Elizabeth- now Queen Elizabeth II, celebrated her 8th birthday there. As a result the park grew very popular. Dutch philanthropists inspired from Bekonscot opened the second oldest park of the world, Madurodam. Soon miniature parks were popping up in Switzerland, Italy and beyond. In Asia, Japan's Tobu Railway invested 133 million $US in World Square, which opened in 1993. Indonesia, Thailand and China all followed suit.[87]

In Bekonscot there are six little villages in the middle of an admirable landscape. The attractions are not just miniature farmhouses, but also castles and churches,

[85] John Urry, *"Gazing on History"* op. cit., 210.
[86] İbid., 212.
[87] www.afr.com (10.11.2003)

woods and lakes, a zoo and one of the most famous and complex model railways in the country. (Fig. 18) This miniature park is an ideal place for “education combined with pleasure”; students, who are visiting the park, learn through real experiences, and after their visit their imaginations are very stimulated.[88]

FIGURE 16. A view from Bekonscot Model Village. From the brochure of Bekonscot, (2002).

When the village first opened to the public in 1929, no admission charge was made. There were just collection-boxes for charity if people wanted to give money. In 1978, the Church Army, which has always had strong relations with the Bekonscot, set up a company to organize the charity works. Therefore although it is not a commercial company, the economic income of the miniature park cannot be neglected.

[88] In the brochure of Bekonscot, it is promised for this “education combined with pleasure”.

By the 1980's it was decided to rebuild the village in a more traditional way and Bekonscot today is the same as rural Britain was in the 1930's. Having no electricity and no motorways, according to the managers of the park, it makes a perfect world. However, according to John Urry, these are a set of heritage fantasies, and what is needed is a critical culture based on the understanding of history.[89] It is obvious that displaying the heritage plays an important role in British tourism, however representation of the rural past of Britain, generates some kind of nostalgia. On that point, Urry refers to Hewison's remarks on the heritage industry; "Nostalgic memory is quite different from total recall; it is a socially organized construction. The question is not whether we should or should not preserve the past, but what kind of past we have chosen to preserve."[90]

During the winter months, Bekonscot is closed for village restoration and construction work. That restoration and construction work is done in the village's workshops throughout the year and mostly during the winter. There is a tour named "Behind the Scenes", which was created in order to explore the things behind the closed doors. It is for visitors who want to know about the workshops and control rooms of the railway.

In fact, these restoration and construction workshops should be found in each miniature park necessarily. It is always possible for the miniature models to be destroyed by the visitors or bad weather conditions. Transportation of these large models is not easy; therefore damages should be restored on the original locations of the miniature models on the park or in the workshops located inside the park.

[89] John Urry, *"Gazing on History"* op. cit., 212.
[90] John Urry, *"Gazing on History"* op. cit., 212. He refers to the R. Hewison, *The Heritage Industry*, (London: Methuen, 1987).

There should be working experienced model-builders who can repair the damaged models in the shortest time and the best way.

In Miniaturk, there are no any workshops for restoration works. The miniature models were produced outside of the park by different model construction studios. Each studio is responsible from its miniature model for three years. When there is a need for some restoration work, the production team comes to Miniaturk and repairs the miniature model. However, after three years, when the agreement between the employer and model builders comes to an end, who will support the miniature models is a mystery.[91] It was published a catalogue for information about the sponsorship by the employer. Through sponsorship it is hoped to obtain a continuous support for the models.

Actually it was thought for the need of a workshop inside the miniature park during the planning process of Miniaturk. However because of some economical reasons, it was ignored in order to reduce the costs. Now, there is a small atelier under the artificial mount through which there is a tunnel of the railway system in Miniaturk. It is not a space for restoration works but only for storing the tools needed for repairing.

Experiencing the process of construction and restoration at the workshops of miniature parks can be a very meaningful step in order to be included in this process. If miniature parks were concerned as platforms for bringing together the ordinary people with architecture, being included into the construction process would be the further stage of this relation.

[91] From interview with Sultan Polat, the public relations officer of Miniaturk, Istanbul, May 28, 2004.

The definition of miniature parks by IAMP was mentioned in the first chapter: “Some miniature parks are scale models of whole towns and cities; other parks are gardens with some made-up buildings in them”.[92] Bekonscot fits to the first description because it is obtained from six villages; miniature models are not one to one representations of existing buildings that have historical and architectural value. Actually the represented thing is the rural life. However Miniaturk is a collection of many miniature models from different locations and ages, without any intend to compose the image of a single city or village. Therefore the second definition of IAMP is more suitable to Miniaturk: it is a garden or a park with some made-up buildings in it.

3.3.2. Madurodam

Madurodam was opened officially on 2 July 1952 in Holland. It was intended to be both a war memorial and a charitable organization. Mrs. B. Boon-Van der Starp and Mr. And Mrs. J. M. L. Maduro were the initiators of this park. The Society for the Support of the Dutch Student Sanatorium (N.S.S.) was founded in 1947 and offered students suffering from tuberculosis the opportunity to recover, while at the same time continuing with their studies. The costs of construction and patient care were high; therefore the initiators were looking for a way of acquiring financial support. Mrs. B. Boon-Van der Starp was one of the initiators of the Sanatorium and she met with Mr. and Mrs. J. M. L. Maduro who were looking for an idea for a memorial for their dead son George Maduro. So they decided to make something together and build the Madurodam. The architect S. J. Bouma who was the manager of the Zuiderzee Museum in Enkhuizen at this time, was commissioned for the design of the park. He visited the first miniature village Bekonscot in England, took it as an

[92] www.miniatureparks.org (24..05.2003)

example, and started to the design of the park with the idea of “the small town with a smile”. (Fig. 20)

FIGURE 19. Two brochures of Madurodam.

Although Bekonscot is a model of the rural Britain in the 1930’s, Madurodam is constantly changing. Each year a few new models are added to the city. (Fig. 21) Since the opening of the Madurodam, the park has had its own review committee. The major goal of this committee is to decide on the new models, which will be produced. 80 percent of the new models are financed by the park’s own funds. The rest is partly sponsored by some institutions and companies that have an interest in a specific model. The guiding criteria for the committee are as following:

- The project should be “typically Dutch”,
- There should be a special place for it in the miniature park,

- It should be explored whether there are any similar models in the park or not,
- It should be discussed whether it is attractive to visitors or not,
- Does the project contain dynamic elements?[93]

FIGURE 20. “The small town with a smile”; the vision of a typical Dutch town still continues. *Gezinti*, Summer 2003.

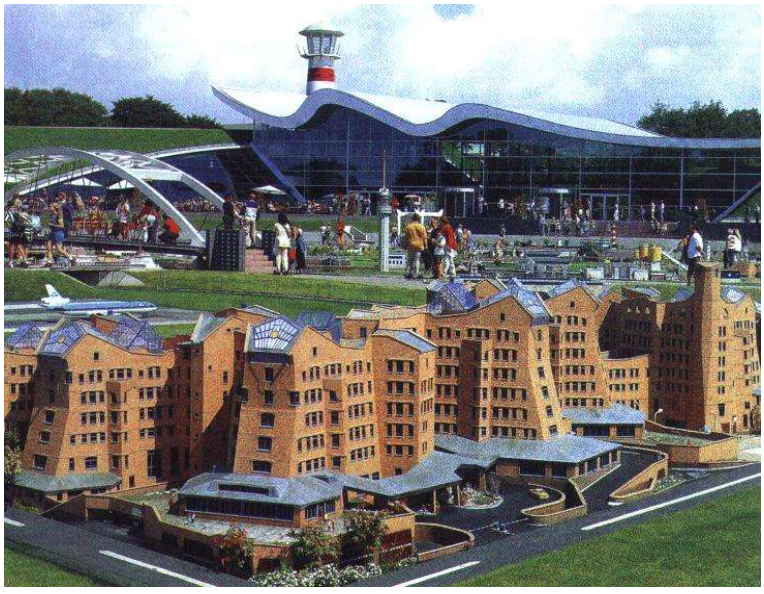

FIGURE 21. New additions to the park; the modern Holland. *Gezinti*, Summer 2003.

[93] www.madurodam.com.nl (20.10.2004)

The park has its own workshops and the scale models are built in five departments. The models of the buildings are mostly made in the scale model construction workshop. The others departments are trains, street scenes, engineering and parks & gardens. All the models are built on a 1/25 scale and are true copies of the originals.

First, the staffs of the construction department make a search for the original blueprints and drawings of the later renovations of the building from the organization that uses the building or from municipal archives. However blueprints are not enough for one to one reproduction of the details. In order to have the image of the end product in their minds, the model makers always visit the original sites and take photographs. Then they calculate the dimensions of the model and decide what material would be best to be used for an appropriate reproduction. The shape, the construction and the finish are the main factors in the choice of the material.

The most frequently used material is cibatool that can be handled by machine and is not very sensitive to temperature. After this stage, all of the models are sent to the paint shop, where they are painted carefully for an accurate depiction of the original buildings. The other materials used are brass and polyester, which are very durable materials used for moving objects; and today wood is used just to carry out some small repairs.

In 1952, when the park was opened, the main concept was “the small town with a smile” and this Dutch town vision still continues. At the same time it constantly develops as any real Dutch city. Every year new scale models have been added, but the general layout has not changed since 1952. However, continuous addition of new scale models inevitably creates a lack of space. Therefore, the surface of the

town was enlarged with a process that took several years, and on 1 April 1996, a new Madurodam was opened.[94] A new entrance, a large second port, a city of the future and models of the various Dutch bridges were the new additions. The park is more than just a collection of these miniature buildings. They come together very harmoniously. With the scenes of daily life, it is a living model city. When something important is happening in the real city, it is possible to see this event in a temporary frozen scene. (Fig. 22) According to management of the miniature park, that is why it is still the most attractive miniature park of the world.[95]

FIGURE 22. Madurodam is a living miniature city through scenes of daily life. From the brochure of Madurodam, 2002.

In Miniaturk, the concept is not related with representing the traditional architecture combined with scenes from the daily life all in 1/25 scale. The exhibited models are not considered as a part of a town as in Madurodam, or as a part of a village like in Bekonscot. Instead they are handled as individual objects of an exhibition. In Miniaturk human figures are used, but mostly for scaling and the number is very low when compared with Madurodam. According to the architect of Miniaturk, Murat Uluğ, the miniature park will become more dynamic in time.[96] In order to make the

[94] http://www.miniatureparks.org/parkinfo.asp?lang=uk&ParkID=9
[95] www.madurodam.com.nl
[96] From interview with the architect of Miniaturk, Murat Uluğ, Eskişehir, October 2003.

miniature park visited for the second or third time, there should be some innovations included to park. These may turn the park to a more lively space.

The initiator of Miniaturk was Cengiz Özdemir, who lived in Holland for 15 years, was very impressed by Madurodam. Therefore Madurodam played a very important role in the design process of Miniaturk. A consultation support from Madurodam was required. This coordinated work between the two miniature parks, helped to a systematic work and Miniaturk could be finished in the planned time.

3.3.3. Minimundus

They started building Minimundus on 1/25 scale in 1958 on a site located in Klagenfurt, Austria. Today there are 171 models of buildings from the five continents. (Fig. 24) Minimundus is a limited company, so it has strict economic principles, but actually the net works for disadvantaged children both in Austria and abroad. Beside this, the staff of Minimundus, consider their park as an Austrian “institution” in the business of “edutainment”; equal emphasis on education and entertainment. There can be found much valuable information about architectural styles, cultures and other countries on the site. Instead of just books and catalogues, here you can learn by walking through the interiors of the models with the help of 3D “walks”, audio guides and traditional background music for a particular country.

The models look very realistic, because materials used in the original buildings such as marble, sandstone, basalt, tuff, etc. were used and they paid much attention to the smallest detail. Another aspect that makes the park more realistic and special is that the models are introduced as in their original locations. Natural surroundings of

the building are also very important in order to “transport” the visitors to the real site. Some regions of the park are turned into deserts or tropical rain forests. Therefore much attention is given to the special landscaping and floral displays that cover the large part of the park.[97]

FIGURE 23. The logo of Minimundus. http://www.minimundus.at

FIGURE 24. Miniature buildings of Minimundus from all around the world.

Some changes are inevitable in Minimundus, in order to keep the attraction alive. New models are always being added, and old ones are replaced by new. A search for new ideas is always continuing.

Miniaturk looks like to Minimundus from the way of exhibiting the miniature models. In Minimundus there is no effort to represent any town or village with its social life.

[97] http://www.minimundus.at/englisch/content/unternehmen.htm

On the contrary, miniature models are exhibited individually. Buildings that have architectural, historical and cultural meaning from all around the world are exhibited in 1/25 scale. The landscapes of the actual buildings of the miniature models are also tried to be represented in the same scale. Similarly in Miniaturk, the environments of the original buildings are not considered so much, but still the general concept is similar instead of the geographies of the actual buildings.

3.3.4. Mini- Europe

As the capital of Europe, Brussels was the most suitable city to locate a miniature park that will include the models of the important buildings of the countries of the European Union. In 1987, art historians selected over one hundred buildings from various parts of the EU to be built down to the smallest detail to a scale of 1/25. The criteria of selection of the buildings was based on socio- cultural and architectural value, the ability of the building to represent the European spirit and technical properties that make it possible to be reproduced in this scale.

FIGURE 25. General view of the Mini-Europe. From the brochure of Mini- Europe.

Under the auspices of the European Community, Mini Europe was officially inaugurated in presence of H.R.H. Prince Philippe of Belgium on June 13th, 1989. Base investment was 500 million BEF. In this first year, the park included around sixty models.

Today there are 350 models from the 70 cities of Europe spread on a 2,5 hectare area. The number of visitors through 15 years after opening of the park was 4.000.000 people. 60.000 plants and flowers of 150 different species from all around Europe decorate the gardens of the park. (Fig. 25)

55 professional workshops from 8 countries of the European Union were contacted to participate in the process of production of the models. A new technique was tried for that production work. This technique guarantees better weather resistance. Also more sensitive detailing is possible with it. First, the various parts were cut of different materials such as wood and cardboard. Then they were mounted on a “master” plate. A flexible silicone mould was made from this plate. The mould, designed to accurately reproduce every detail, was then filled with an epoxy resin or polyester. After drying for days, the cast was released from the mould to give the final result. This process can achieve whole of the wanted details. But it is a very long process. For example in the brochure of the park it is said that it had taken 24.000 hours of work to complete the Cathedral of Santiago de Compostela. Even 55 workshops were involved in this long process; the last stages were completed in the workshops of Mini- Europe in order to guarantee the consistency of the painting style. (Fig. 26) With the help of the photographs, the original colours of the buildings were preserved, but the recent effects of modern-day pollution were ignored. Although most of the models are made from epoxy resin or polyester,

some of them are made from natural stone: the Leaning Tower of Pisa is made from real marble and the Château de Chenonceau from real stones.

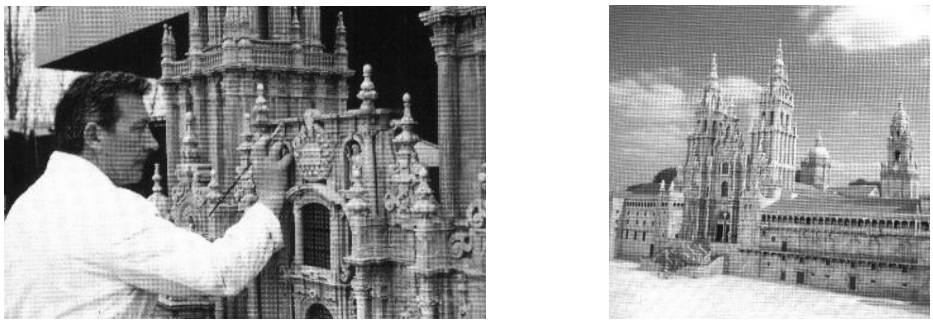

FIGURE 26. The Cathedral of Santiago de Compostela was painted in the workshops of Mini- Europe as the rest of the models. At right the completed model of that holy place of Christians is seen.

Beside model buildings there are also moving models in order to bring action and colour to park. The “Thalys whizzing” across France at full speed, the “sails of the Kinderdijk windmills” turning endlessly, a yacht entering the lock to pass from one lake to another in Finland and the boats of the firemen rushing to put out a fire in the port of Barcelona are some of the models in movement. Activating them, most of times is possible by pushing a button. This increases the feeling of “Gulliver” on the visitors.

The pathway was designed to allow visitors to get as close as possible to the models. Along the edge of the main pathways, small paths provide access to different levels, giving various perspectives of the building and making the visit more enjoyable and diversified. As you walk along the walkways in each country, the guide offered to every visitor when entering, tells the history and details of the sites and their models. It is updated each year and published in seven languages to give information to all visitors.

It is said that the models of the buildings and monuments in Mini- Europe symbolizes a number of major elements on which the European history is founded.[98] For example “democracy” is symbolized by the Parthenon (the first model of democracy), Big Ben (democracy founded on two chambers) and the Berlaymont (the cradle of European democracy).[99]

In Beconscot, the rural life of Britain, and in Madurodam, the Dutch town was represented. In Minimundus, there are architectural works from all around the world without any unequal treatment for some parts of the globe. However in Mini-Europe, by representing only the architectural works of the members of European Union, there is an effort to differentiate a European identity. In Miniaturk, the works represented are not only from the Turkish Republic. Different architectural works from different Ottoman periods and geographies are exhibited. Therefore it may be possible to say that Miniaturk tries to establish a kind of identity through the Ottoman past.

[98] The brochure of the Mini- Europe is like a written guide of European Union. It is laid out in the same order as the models. After short information about each building or monument, the future of the EU is discussed in that brochure. The topics like the budget of the union or the purposes of enlargement are argued in the rest of the pamphlet. According to this information, it can be said that Mini- Europe works as an institute for the benefit of the European Union.

[99] İbid.

CHAPTER 4

MINIATURK

4.1. The Birth of the Idea of Miniaturk

Miniaturk, which was established on a 60,000 square meter area and completed within 22 months, has costed $10 million. Out of the total area, 15,000 m2 for models, 40,000 m2 for green and open area, 3,500 m2 for closed area, and 2,000 m2 for pools is allotted, in Miniaturk. (Fig. 27)

FIGURE 27. Applied site plan of Miniaturk. *Yapı* 262, September 2003.

1. Car park
2. Entrance
3. Ticket booths
4. Retail units
5. Offices
6. Entrance platform
7. Restaurant open area
8. Children's playground
9. Model display area
10. Café
11. Observation terrace

The construction of Miniaturk in Istanbul started on June 30th, 2001, but the official opening was on April 23rd, 2003, that is a special Children's Day in Turkey. This selection is meaningful in terms of the addressee of the park itself. Being opened on the Children's Day implies that the initiators of the miniature park were aware of that strong relation between children and miniature models.

As it is mentioned in the second chapter, miniature models are more easily observed and understood than actual buildings. This gives us a sense of authority. Especially children, who are developing their notions of the environment and their place in it through such smaller things like dollhouses; miniature models of Miniaturk create a large playground for them. The number of children among the totality of the visitors cannot be neglected.

This miniature park project was presented to the Istanbul Metropolitan Municipality on January 31st, 2000, as one of the "new millennium projects" of the Istanbul Culture and Art Products Trade Co. (Kültür A.Ş.) of Istanbul Metropolitan Municipality. Cengiz Özdemir, general manager of the company, prepared the Miniaturk Project and presented it to the management of the municipality. According to him, extraordinary cities or countries that possess a historical identity or have a rich historical heritage like Turkey do not attract the attention of only those who live there; rather people from all around the country and the world are attracted by these. He explains that exploring every nook and cranny of such colourful, melodic, multi- dimensional and cultural cities or countries would take an incredibly long time.[100] In this age, it is nearly impossible to undertake such a long tour of holiday, due to our modern life style. But, even if people do not have the opportunity to make

[100]"A Delightful Journey Through The History of Civilizations"*, The Showcase of Turkey Miniaturk*, Kültür A. Ş., Istanbul, 2003, 7.

such a journey, they do have the right to know, to become acquainted with such a rich geography.

Modern city planners, directors and curators have found a possible solution to this problem by creating miniature cities, of which there are quite a few examples today, in Europe in particular. There are dozens of miniature cities all over the world as mentioned in the previous chapter.

For Cengiz Özdemir it was the time that Istanbul should start to put into action plans to make a “Miniature Turkey”; a miniature park that has an emphasis on Istanbul. In recompense for the difficulty, the trouble and the expense of such a project such a miniature city will provide Istanbul with a new cultural and touristic complex. The models that will be placed in the projected miniature city for Istanbul should capture, as other examples throughout the world do, a general concept. This will be a “Miniature Turkey” with selected works from all around Turkey.[101]

It was Cengiz Özdemir’s idea to build a miniature park in Istanbul. Between 1979-1993, he lived in Holland and studied at the Leiden State University, Faculty of Literature, Department of Middle East Cultures and Languages, and obtained both undergraduate and graduate degrees. During these 15 years he was very impressed by Madurodam, so when he had guests from Turkey or another country, first thing that he did was to take them to see this miniature park, which completely reflects the history and life style of the whole of Holland. It was a chance to gain a general idea about the culture of that country. Therefore, he wrote an article about

[101] Ibid., 7.

the Madurodam, in order to help Turkish people think about a miniature park for Turkey.[102]

FIGURE 28. A general view from Miniaturk. Photograph by Esin Osmanoğlu.

Madurodam left a deep impact on Cengiz Özdemir's life. Therefore, during the planning process of the Miniaturk, a consultation support from Madurodam was required. So, the Madurodam played a very important role in the establishment process of Miniaturk. The consultant team of Madurodam often came to Turkey and gave advises from the planning stages of the project to the day of the opening. Peter Verdaasdonk, the general director of Madurodam, said that he was impressed by the skills of the team of Miniaturk and also by the quality of the end product.[103] When Miniaturk was opened, the team of Madurodam confessed that they had

[102] ."Dünya'nın En Küçük Kenti", *Nokta*, July 22th 1986.
[103] See the report with Peter Verdaasdonk by Musa Ceylan. "Miniaturk Bizi Heyecanlandırıyor", Gezinti, Summer 2003, 28-29.

never believed that Miniaturk could be accomplished with this high quality in the planned amount of time.[104]

4.2. The Selection of the Miniature Models

In Miniaturk, sensitivity has been shown to include all civilizations that have thrived in and around Anatolia, and left us a rich heritage. Miniaturk has the mission of reflecting the multi-cultural structure of the lands on which it has been erected. The selection committee under the consultancy of two leading Turkish historians Prof. Dr. İlber Ortaylı and Assoc. Prof. Dr. Haluk Dursun carried out the work of selecting the historical structures and landscapes whose miniature models would be constructed. The first step of selection of the settings was to prepare long lists of buildings and landscapes that could possibly be represented. After the preparation of these long lists, they worked with art historians, academicians and curators in order not to forget the works of all of Anatolia and the lands that Ottoman Empire ruled. Later the real work of the selection committee started which included selecting from the long lists of buildings.[105] After a careful selection process among hundreds of works, the selection was finalized for the first phase of the project. Each work reflects the technology, arts and culture of its time. The selection of the works of the first phase was done according to these criteria:

- Capacity of representing the period that it belongs.
- Authenticity, or originality of the work
- Feasibility of the production of the model

[104] From report with Sultan Polat, the public relations officer of Miniaturk, Istanbul, May 28, 2004.
[105] See the report with As. Prof. Haluk Dursun by Canan Dila. “Tarihin Derununa Aşina Mısınız?”, Gezinti, Summer 2003, 32-35.

The construction process of the models started according to the availability of the technical drawings, possibility to reach them, and other needs for constructing a miniature model of a building.

FIGURE 29. A general view from Miniaturk. Photograph by Esin Osmanoğlu.

At the Miniaturk, there is also a miniature railway network, a motorway with moving vehicles, an airport with landing airplanes, thousands of human figures and ships sailing across the miniature Bosphorus.

4.3. Location

4.3.1. Why Istanbul?

Istanbul is the largest and the most crowded city in Turkey. Besides this, when Turkey is mentioned, the first thing to come to outsiders mind is Istanbul. It became

the transition area between East and West, Asia and Europe, and modern and traditional during all of its history. In the Byzantine and Ottoman periods, Istanbul was an important centre of commerce, administration and the military. Today even it is not the political capital of Turkey, it is still the accepted centre of art, culture and commerce. Because of these properties and its historical meaning, Istanbul is one of the most visited cities in Turkey by local and international tourists. For these reasons it was meaningful to locate Turkey's first miniature park in Istanbul.

According to an article published in the magazine of Miniaturk, Istanbul is in search of new and large regional projects, in order to be a global city. On the other hand, it is in the search of its identity that makes it Istanbul, and what makes it different from other cities. The variety of products is decreasing in the global markets, therefore the representation of what is local and ethnic actually becomes an encouragement to consumption throughout the whole world.[106] Miniaturk can be considered as a means to assert this unique identity.

4.3.2. Why Golden Horn?

The Golden Horn, with its historical and cultural significance, has a special meaning for Istanbul. When the peninsula is viewed from the East, the silhouette formed by Ayasofya, Blue Mosque and Topkapı Palace, can be seen as creating the entrance of the Golden Horn. From the Galata, the panoramic view is completed by Süleymaniye, Fatih, Mahmut Paşa (one of the works of Mimar Sinan), Defterdar Mosque and Eyüp Sultan in the Golden Horn. The hills of Eyüp Sultan and the tombs around the mosque on the seaside, seem to be the elements of a small town, instead of being a part of a metropolitan city. The streets are shaped by the

[106] Emin Çavuşoğlu and M. C. Yalçıntan, "Geç kalmış atılıma yeni başlangıç: Haliç", *Gezinti,* Summer 2003, 8-13.

buildings and mostly by the tombs. They seem to be as in a beautiful painting when it is walked towards the top of the hill, giving a very mystical sense. From the top of the hill Istanbul and the Golden Horn can be seen. Therefore it was the most suitable place to locate such a miniature park, which also reflects the grandeur of Turkish history and culture. Designing Miniaturk outside the city was not considered rational in terms of convenience. In this way, project became a step for a larger one designed to save the Golden Horn, and to restore its reputation. Over recent years numerous cultural institutions have been established here, such as the Rahmi Koç Museum, housed in the old anchor factory, and the Feshane or former fez factory, which now hosts the fairs and cultural events. Soon to be added to their number are Sütlüce Cultural Center and Sadabad Park.

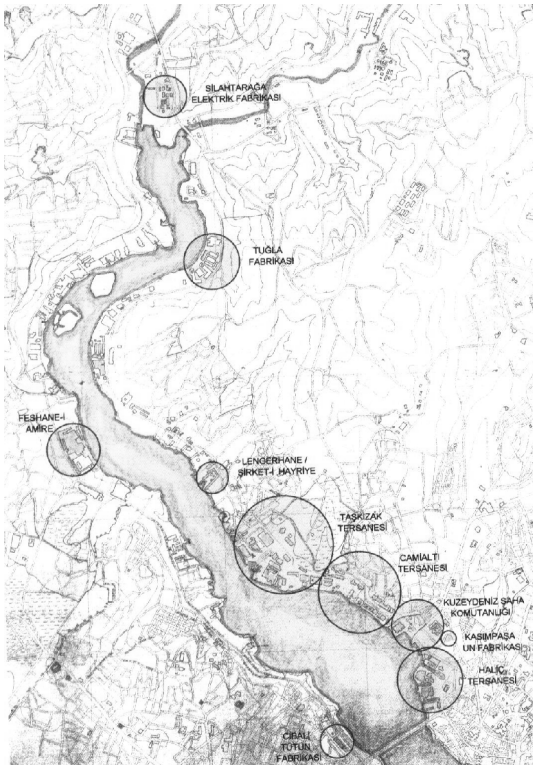

FIGURE 30. In 19th Century, Golden Horn became an industrial district. Köksal, G., "Türkiye ve İstanbul'un İlk Termik Santrali: Silahtarağa", *Arredamento Mimarlık*, 2004/07-08, 104.

Istanbul, as it is today, was a natural harbour and centre for stocking trade products. Until the 18th century, Golden Horn was surrounded by waterside houses. But after the 18th century, together with Galata and Eminönü, it became the heart of Istanbul, in terms of trade because of its location. The first step for industrialization in Golden Horn was done in the period of Sultan I. Ahmet in 1615, the construction of a shipyard. But the greatest progress in industrialization was in the 19th century. In a very short time, the Golden Horn turned into an industrial district very similar to the ones on the sides of the Thames in London, and the Seine in Paris, which were transformed into such big industrial, trade centres during the 17th and 18th centuries.[107] (Fig. 30)

FIGURE 31. The Golden Horn from the hills of Eyüp. Antoine Ignaze Melling, 1819. *Gezinti*, Autumn 2003.

Communication and transportation possibilities were limited; therefore it was difficult to build these industrial buildings outside the city in these centuries. The most beautiful parts of the cities were sacrificed for the sake of industrialization. During the time of Sultan II. Mahmut, the Karaağaç kasrı was destroyed and on its site, a new complex for the army was built. Then the Ottoman government started to use the Golden Horn to produce the needs of the Ottoman Army. Most of the banks and

[107] İlber Ortaylı, *İstanbul'dan Sayfalar*, (İstanbul: İletişim Yayınları, İstanbul Serisi, 1995).

large trade companies found new bazaars, and removed to the Beyoğlu- Galata region. On the area of the demolished waterside houses, new factories were erected, such as *iplikhane* and *baruthane.* After this the traditional urban view and the cosmopolite population of the Golden Horn, began to decline. The paper factory caused the largest damage. It was the biggest source of pollution. According to İlber Ortaylı, this situation of Golden Horn was a product of one of the last steps in late industrialization. It was no more a district of imperial necropolis, palace*,* dervish lodge, cafe, excursion and recreation spot; but it was a centre of factories, working and middle class district, a composition made by tombs, and it may even be called a suburb.[108] Pollution problem has been aggravating continuously to an extent, which suggested the Metropolitan Municipality proposed to fill in the Golden Horn few years ago. Today, with the renovation project of the Golden Horn, it seems that the swamplands are being cleared up and the smell is disappearing. The buildings of the paper factory in Kağıthane and the foundry of the shipyard today are used as a conference and cultural centre.[109]

FIGURE 32. The site of Miniaturk before the construction. From *The Showcase of Turkey: Miniaturk.*

[108] Ibid., 125.
[109] Emin Çavuşoğlu and M. C. Yalçıntan, "Geç kalmış atılıma yeni başlangıç: Haliç", *Gezinti,* summer 2003, 8-13.

As it is stated, the other examples similar to the Golden Horn, the Thames and the Seine, also later became the centres for renovation projects beginning at the end of World War II and new functions were assigned. But, as it was late for industrialization reforms, it was also too late for the decentralization and renovation projects for the Golden Horn. They first started to be discussed during the mid-1980s. Removing the small industries and ateliers was very hard and difficult. The spaces were transformed into large green parks that are not used by the public. Therefore the latest renovations and additions were made according to the new function- a cultural centre; and the problem was taken as how to attract the tourists. The aim of attracting tourists to the Golden horn facilitates the creation of new attractions like the tour of the royal caiques (boats). Miniaturk was considered as a port for these vehicles initially.

4.4. Architectural Project of Miniaturk

4.4.1. Expectations

Usually for such great projects, architectural competitions are organized. However in this case, the architectural project of Miniaturk was assigned to ÇM Architecture formed by Murat Uluğ and Y.Burak Yüksel. The employer was also the founder of Miniaturk, Istanbul Culture and Art Products Trade Co. (Kültür A.Ş.).

At the beginning, the employer defined the project as an open-air museum in which 1/25 scale models of important buildings and landscapes would be displayed; the theme or the concept of the display was not clear at that time.[110] Therefore, three different sketches were done with the idea of “a park as an exhibition area”. The

[110] From interview with the architect of Miniaturk, Murat Uluğ, Eskişehir, October 2003.

architect Murat Uluğ confessed that at the beginning of the project he did not take it very seriously and looked at it as a childish work. [111] After visiting the examples abroad of miniature parks, he felt the previous sketches were no longer relevant. He said that the idea of "Miniature Park" was formed in his mind after visiting Madurodam in Holland, Minimundus in Austria and Mini- Europe in Belgium.[112] During the project process the most influential miniature park was Madurodam, but none of them was taken as a direct model. The consultancy of Madurodam assisted the team of Miniaturk in avoiding mistakes made previously by others.

The architect Murat Uluğ said that while working on the project he developed a realization that this project will help order and colour daily life of the people. Through this project he realized the strong relationship between architecture and daily life. It also increased his understanding of how people view architecture. For example, people are not interested in architecture, but by looking at the miniature models, they begin to relate to architecture as children throughout models. In other words, the miniature models have childlike qualities without which the architect could not go into relation with ordinary people.

Berger and Luckmann, in "The Social Construction of Reality", try to analyse the discipline of the sociology of knowledge in a very systematic way. They explain the transitions between the reality of everyday life and other realities such as the reality of dreams or theoretical thought through a theatre stage. According to them this transition is marked by the rising and falling of the curtain. When the curtain rises, the spectator is "transported to another world" which has its own meanings.[113] This "other world" has an order that has not much to do with the reality of everyday life.

[111] İbid.
[112] İbid.
[113] P. L. Berger and T. Luckmann, *The Social Construction of Reality*, (New York: Doubleday & Company, 1966), 24-25.

After the falling of the curtain, spectator again “returns to reality”. Therefore it can be stated that the stage of the theatre is the spatial construction of the daily life, but the play is the world of realities of dreams and theoretical thoughts. The dreamers, physicist, artists and architects also live in the reality of everyday life, so their main problem is to interpret the coexistence of these both realities: the reality of everyday and the reality of the “other world”. The architect of Miniaturk, Murat Uluğ thinks that, through this project, he has had a chance to interpret these both realities; he could establish relations between the everyday life and his architecture.

4.4.2. The Criteria for Design and the Process of Design in Miniaturk

When the problem was handled, two criteria were considered. The first was the need to separate the view from the outside. The second was to consider the importance of its location at the Golden Horn. The first criteria – its proximity to outside- has two main reasons. The first is a very practical reason; it was necessary to prevent screening the park before purchasing tickets. The second reason is that people who enter the park can be separated from the outside world and can focus on the history and architecture being represented. Although the structure of the design program is very closed to outside, its presence at the Golden Horn causes the design to be very enjoyable.[114]

When they started to program, an important point was the protection of the Golden Horn shores. According to Murat Uluğ, there is a great attack on the coasts of Istanbul.[115] Even Istanbul is a city located on the grounds surrounded by water, most of times it is impossible to reach to the shores. The relation between people and water is destroyed by many settlings no matter private or public. Therefore it

[114] Murat Uluğ, “Miniaturk”, *Yapı*, vol. 262, September 2003, 71- 74.
[115] From interview with the architect of Miniaturk, Murat Uluğ, Eskişehir, October 2003.

was very important to protect the continuity of the shorelines for the architect. At the beginning, employer proposed to sprawl to the Golden Horn and even to use the islands on it as an additional exhibition area. However this intends was directly opposed to the idea of preserving the continuity of the shores of the Golden Horn. For that reason this thought was given up. As a result the coastal paths were opened to the public and arranged also as continuation of the park.[116]

Another point for design criterion was the need to define the space into which new relationships can be developed for the park. The architect did not interfere with the development of the inside relationships, especially the relations between the exhibited models. Emre Arolat, who designed the second miniature park of Turkey - Minicity in Antalya- was also not concerned with the interior structural relationships between the exhibited models.[117] Although most of the miniature models are representing the buildings that have architectural and historical value, the architects usually are not concerned with the relationship between the space designed and these objects. Emre Arolat explains this by saying that architects do not like making models of the real buildings that still exist, because according to him, this is a kind of imitation.[118] An architect designed the Miniaturk, but the team of people involved in the project from beginning to end do not include an architect. This demonstrates the alienation between the architect and the models.

According to places where their originals are located, models are exhibited in three different sections in Miniaturk. Works that belong to Anatolian and Istanbul geography are in two different sections, and Ottoman works beyond the borders of

[116] *The Showcase of Turkey: Miniaturk*, (İstanbul: Kültür A.Ş, 2003).
[117] July 1, 2004, Interview with Emre Arolat by Murat Birsel, kanal 8
[118] İbid.

Modern Turkey are in a special place. (Fig. 33) These sections were separated from each other and can be visited in a route that enables visitors to see all works.

FIGURE 33. Depictions of different routes for visitors in Miniaturk. Photograph by Haluk Zelef.

The architect, Murat Uluğ, designed the general layout. However the exact locations of the models in the park was decided later, by the team involved in the construction process. There are no special meanings behind the location of the models on the site. Just the general view of the park was taken into consideration. This means that rather than their original location or the period of construction, the physical properties such as the size or the colour of the models, or some thematic affinities like the buildings next to water or different city walls was considered.[119]

[119] From interview with Sultan Polat, the public relations officer of Miniaturk, Istanbul, May 28, 2004.

FIGURE 34. The construction for cafeteria parallel to the shores of the Golden Horn. Photograph by Esin Osmanoğlu.

Another important factor in the design was to develop an architectural language and environment which did not use the tectonic of the exhibited models, and which did not recall them any way. (Fig. 34) Actually at the beginning the employer's demands were different. The architect Murat Uluğ did not find this very strange.[120] They wanted the architecture of the service buildings such as the entrance and the cafeteria with arches, domes and vaults that recall the buildings that would be represented inside the park. According to Murat Uluğ, when you are designing a space for exhibiting historical works, people want from you to use the same analogies with the exhibited objects.[121] He said: "It is not just here, but almost everywhere that the requirements are the same. They want you to use stone, wood or constructing arches and domes. What we define as national architecture is almost reduced to these analogies." He also thinks that the miniature models are

[120] From interview with the architect of Miniaturk, Murat Uluğ, Eskişehir, October 2003.
[121] Ibid.

reflecting their architectural identities in a very strong way. It should be avoided to produce an image, which would compete with them. Using the tectonics of the miniature models may cause to scale conflicts. In other words, when you are looking at a model mosque, seeing the second dome will lead to confusion as to which is real and which is the model. (Fig. 35) This may cause to misleading perceptions. Therefore it would be better not to repeat the same tectonics for the service buildings; instead the contemporary architecture can be preferred."[122] After explaining this to the employer they no longer insisted on their earlier requirements.

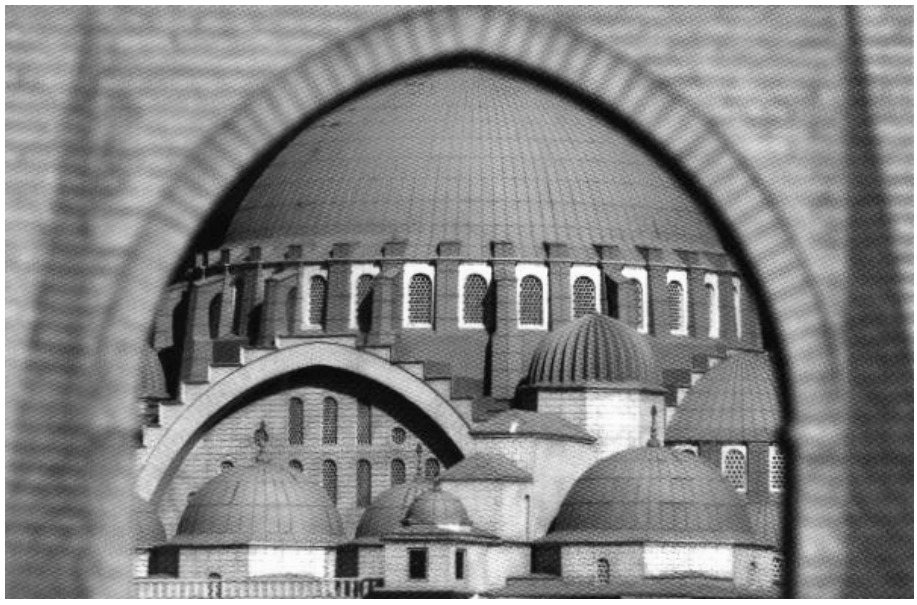

FIGURE 35. A view from Miniaturk: Süleymaniye Mosque from the Maglova Aqueduct. Photograph taken by İzzet Keribar, from the archive of Miniaturk.

4.4.2.1. First Drafts for Miniaturk

Initially Miniaturk project was taken as an enclosed space in itself. This does not mean that it was a project independent from its surrounding context. The created architectural space, especially the entrance mass and the great structure designed

[122] Ibid.

on the shores, was intended to apply new function to the whole Golden Horn. Created architectural space was constituted of inclined glass surfaces and light eaves, which do not give the image of an ordinary building. This decision was made in order to avoid of competing images between miniature models and the building itself.

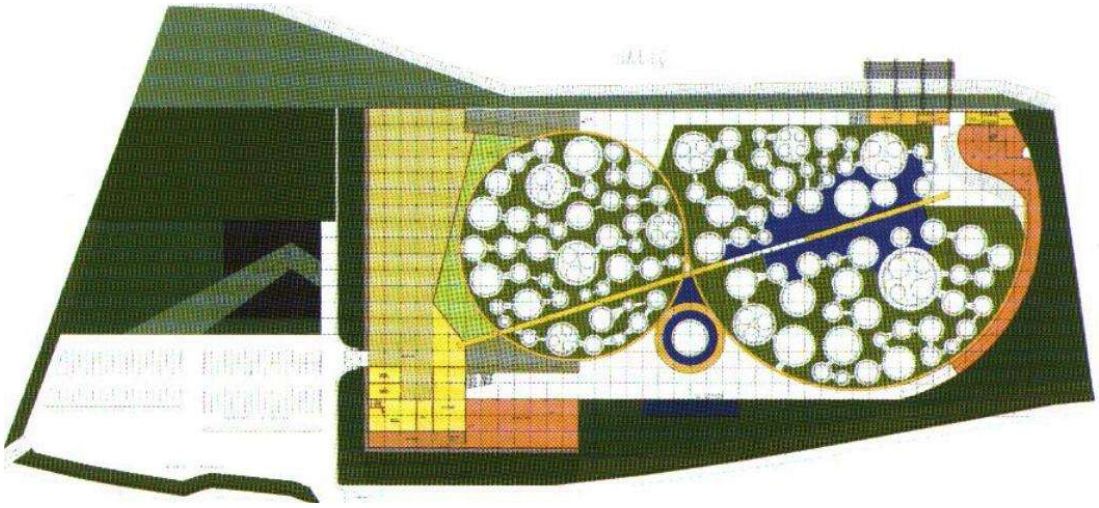

FIGURE 36. Earlier design for Miniaturk. *Arredamento Mimarlık*, September 2001.

Two different routes were designed for the tour trips: first one for browsing the park by walking and the second for taking a quicker look to all park. (Fig. 36) Cafeteria was a stop for resting in the meeting point of the two routes. It is aimed a total image of the miniature park settled on the sea level by entrance, which was heightened 3.5 m above the car park. Entrance ramp, which starts from the car park, constituted the beginning of the walking route at the same time. Colored eaves gave a clue for the first image about inside. Axis created through the bridges forms a shortcut among the souvenir shops and restaurants.

Railway - the other route - started from the train station located under the entrance construction. This train cruise was designed to make trip more amusing especially

for children. This tour was continuing somewhere over the sea, which makes it more exciting for the passengers. The huge structure thought on the Golden Horn was designed for carrying this air route. This cantilever structure was handled as an image that would transform the general look of the Golden Horn and which would support the future developments in this district.[123] (Fig. 37-38)

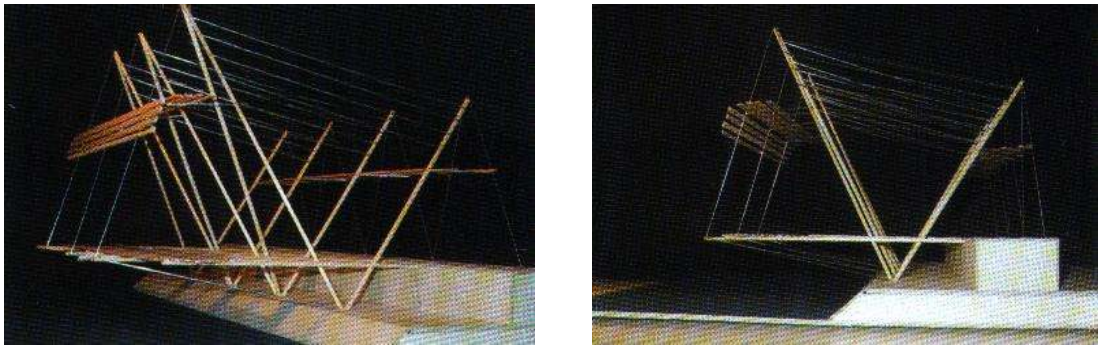

FIGURE 37. Structural design model of the structure on the Golden Horn, earlier design, later deleted. *Arredamento Mimarlık*, September 2001.

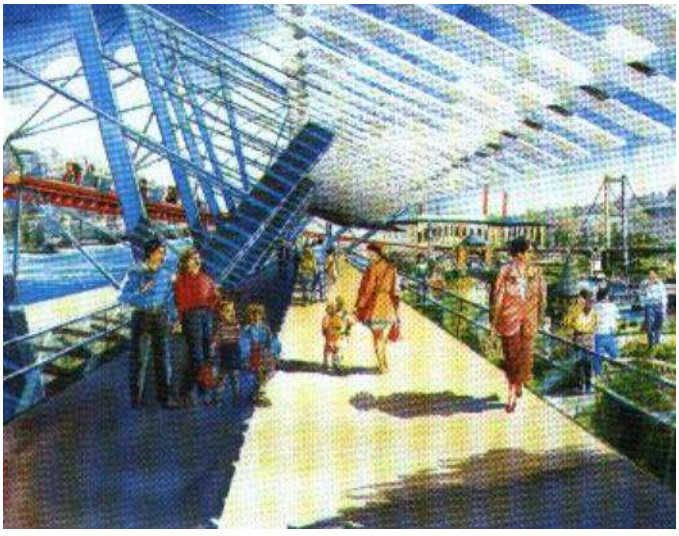

FIGURE 38. View from the cantilever structure on the Golden Horn, earlier design, later deleted. *Arredamento Mimarlık,* September 2001.

[123] Murat Uluğ, "Miniaturk: Mini Türkiye Projesi", *Arredamento Mimarlık*, September 2001. pp. 38-39.

However, with the economical crisis in 2001 in Turkey, the destiny of the project was changed. The available resources were cut in half. The planned size of the park was cut in half also. The earth was like wet clay that necessitates strengthening to support the miniature models, which is a very expensive application. By decreasing the size of the park, the cost of improving the infrastructure was also decreased. Another interference with the project was the need to eliminate the cantilever structure and the railway on it because of the reductions in the budget. Despite these changes, the initial concept of the miniature park was kept in the final result. The park covers an area of 60.000 m2 now, and still is the largest miniature park of the world.

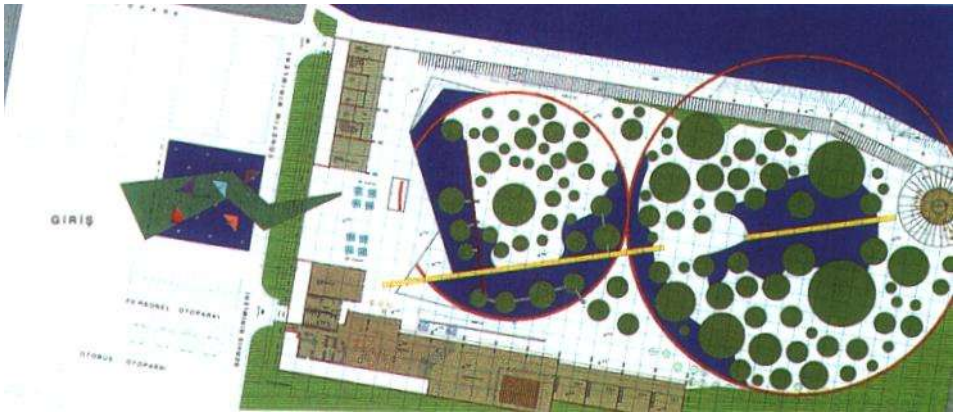

FIGURE 39. One of the previous designs for Miniaturk. The railway can be seen on the Golden Horn. *Yapı* 262, September 2003, pp.71-75.

4.4.3. The Project

In the final state of the project of Miniaturk that was applied, the exhibition area was designed parallel to the shores of the Golden Horn. Entering from the Sütlüce highway there is a car parking area through which the park is reached by walking up a ramp that leads to a platform where tickets can be purchased. After entering the park above the platform there is a total view of the whole models. According to the

architect Murat Uluğ, this entrance structure functions as a division between the real world and the storybook world.[124] Moreover it can be said that there is a relationship between the buildings done by the architect and the model world. For example the cladding system looks as if it was a model, how the elements come together is legible in a proper scale for ordinary people to see and understand. (Fig. 40)

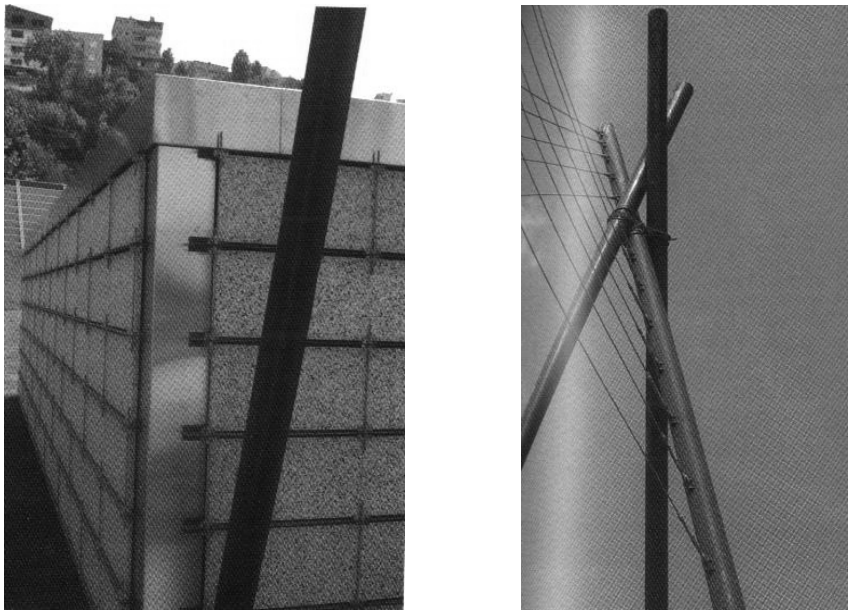

FIGURE 40. Structural details from Miniaturk. There is a hand-made quality in each detail, which relates the buildings to the miniature models. *Yapı* 262, September 2003.

Being located near the Golden Horn and Sütlüce highway, this project has strong relationships with the city. The structure across the entrance is the place for meeting with the Golden Horn. This building is a space for nourishment and according to the architect eating is the most important thing to thank God for. Therefore it is a kind of sanctuary for him.[125]

The entrance building was constituted of coloured eaves and lightened steel construction apart from these; surfaces that are buried in greenery shape the

[124] From interview with the architect of Miniaturk, Murat Uluğ, Eskişehir, October 2003.
[125] İbid.

entirety of the architectural environment. This theme continues both outside and inside and entering from the outside you pass through a green surface into the area, which is contained in a green bowl. (Fig. 41) A few different types of granite facing on the surfaces are being carried out by means of a construction that develops from the exterior. Thus the continuity of the greenery by an arterial flow along the granite surfaces is maintained.[126]

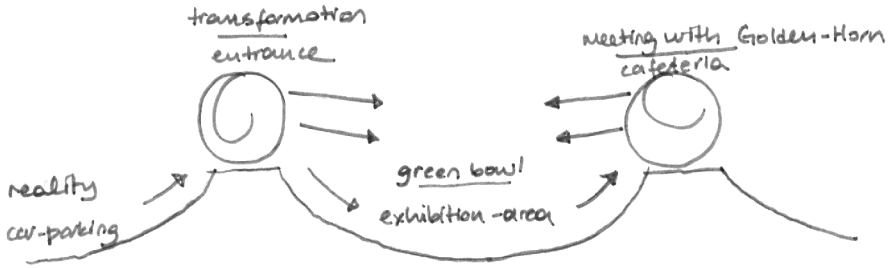

FIGURE 41. The exhibition area is located between two heightened constructions. Drawing by Esin Osmanoğlu.

Miniaturk was introduced as a project that later expanded by additions of new miniature models. Although the initiators say that the park is open to expansion, the exhibition area is defined on all four sides and have a limited expansion possibility. At the beginning the owners want the park to be open to continuous development in order to provide enough space for new models. In practice this seems possible, because the whole surrounding area belongs to the municipality. But visiting an open-air museum and listening to the introduction of each model, necessitates extreme concentration for each model. After a period of time this is very tiring and cause the attention span to end. If the number of models increases and the path between them gets more complicated, the possibility of proper perception of each miniature model will fade away further. Therefore there will no longer be a

[126] Uluğ, “Miniatürk”, op. cit., 71-75.

difference between the Selimiye and Süleymaniye Mosques for the visitors. Close proximity of the entrance and cafeteria buildings prevents future development, because this development would cause further loss of ability to concentrate and enjoy the park. According to the architect the current size is ideal for the maximum enjoyment of the park.[127]

FIGURE 42. A general view of Miniaturk. Photograph by Cemal Emden. *XXI,* vol.14.

The idea of constructing the miniature model of Miniaturk and locating it as the first object of the exhibition was given up later because of its huge size. It would be helpful for those who have never seen any of the actual buildings in order to realize the scale of the miniature buildings. Passing from the real-size entrance and then meeting with its 1/25 scale miniature model would give a clue about the scale. However seeing the 1/25 scale models of the miniature models would cause to different scale (1/625) confusions also.

[127] İbid.

FIGURE 43. A view of the Golden Horn from the cafeteria. Photograph by Haluk Zelef.

4.4.4. Construction Process

4.4.4.1. The Construction Process of Miniaturk

Before the construction of Miniaturk started, a complete filtration system was used under the area of the park in order to balance the water table. On top of this, due to the ground conditions of the site, a vibrating stake was chosen for the foundations; 416 stakes were placed at a depth of 25-30 meters.[128]

Using substructural ducts, water, gas, lighting, electric, electronic and communication systems were all wired in under ground. To deal with surface water,

[128] *The Showcase of Turkey: Miniaturk*, op. cit.

and any flooding problems that might arise, the entire park was fitted out with an appropriate drainage system.

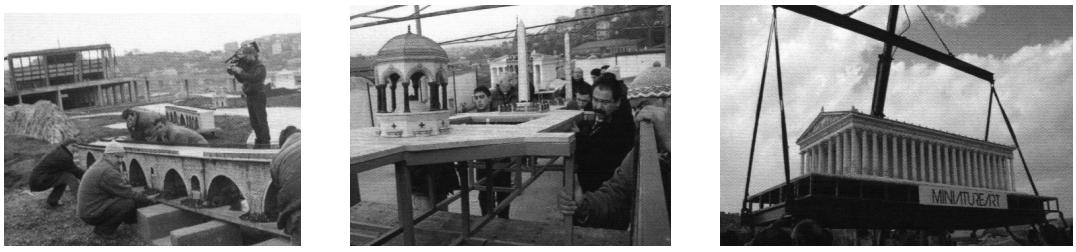

FIGURE 44. Views from the construction processes of Miniaturk. *The Showcase of Turkey: Miniaturk*, Kültür A.Ş., İstanbul, 2003.

The lighting problem was solved in two sections. The first section was general lighting, which also included the car park and the fencing, while lighting in the park was arranged according to the needs and sizes of each miniature model. The general lighting was applied according to the architectural project; soft and subtle lighting through the steel construction.

There is a security system working 24 hours in a day. To combat those who may not be of the best intentions, the park has been fitted with C.C.T.V. that is providing maximum security for both the models and the visitors of the park.

A sound system has been wired up to rely any public announcement that need to be made, and also so the visitors can enjoy the specially composed music by Fahir Atakoğlu that accompanies visitors on their tour of the park. The speakers hidden among the landscaping follow the 2 km path, providing background music for the visitors. (Fig. 45) There are many negative factors that needed to be considered when designing the sound system; open-air, length of the path, being located on the shores of the Golden Horn and on the other side being surrounded by a busy road. In order to be able to keep the volume low, the speakers were placed at frequent

intervals. To prevent an echo caused by a difference in the phase along the path, a single line transformer system was used.[129]

FIGURE 45. Hidden speakers among the artificial stones in Miniaturk. Photograph by Haluk Zelef.

Beside this sound system, there is also an audio information system. (Fig. 46) They are located next to each miniature model and provide the visitor with information about the miniature model's original. The system is placed on a pole that measures one meter in height, and can be heard without headphones. There are six language choices for the visitors; Turkish, English, French, German, Arabic and Russian. The country from which the visitor has come is routinely encoded on the entrance ticket. (Fig. 47) The electronic information system automatically selects the appropriate language.

In addition to the sound systems, different sound effects were used; the call to prayer (azan), the sound of bells, highway noises, train and steamship horns. All of

[129] *The Showcase of Turkey: Miniaturk*, op. cit., 48-49.

them were used in order to bring dynamism to Miniaturk, and to give an impression of a living city.[130]

FIGURE 46. Each miniature model has a separate audio information system in Miniaturk. Photograph by Binnur Tulga.

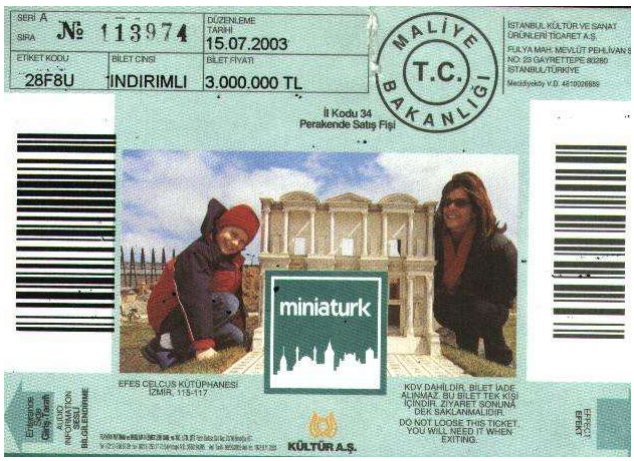

FIGURE 47. The electronic information system automatically selects the language above the ticket.

However when compared with Bekonscot and Madurodam, it is early to say that Miniaturk has the image of a “living city”. Before all else, the miniature park was not

[130] Ibid.

designed to represent the traditional architecture combined with scenes from the daily life that represents the culture and the lifestyle all in 1/25 scale. The exhibited models were not considered as a part of a town as in Madurodam, or as a part of a village like in Bekonscot. Instead they were taken as individual objects of an exhibition.

4.4.4.2. The Construction Process of the Miniature Models

Miniature models were produced by a few approaches. Nevertheless the most prevalent was to construct the models according to their appearance in the year 2002, because it was very hard to reach to the original drawings of the works. Some of them do not exist anymore, and the others were kept in governmental archives. Therefore almost the whole drawings were reproduced by the model production workshops; they also obtained the latest photographs of the buildings in order to make the smallest details as originals. For example, Leandros Tower (Kız Kulesi) was constructed according to its latest restoration. The miniature model has exactly the same contemporary appearance with the original one. However, Ince Minareli Madrasa in Konya, which was destroyed by a thunderbolt in 1901, was reproduced as its previous form. Historical sources were used for restitution of its minaret.[131] Works that are no longer with us today, like the Ephesus Meryem Church or two of the ancient seven wonders of the world, the Halikarnas Mausoleum and the Artemis Temple were also reconstructed in 1/25 scale according to the available historical sources.

Kültür A.Ş. put out calls to firms through media that had attended the groundbreaking ceremony on June 30th, 2001. After this, close to 30 applications

[131] *The Showcase of Turkey: Miniaturk*, op. cit., 34.

were received from different model production firms in a short period of time. All of the applicants obtained the Conditions of Model Production from Kültür A.Ş. and conveyed their bids to the employer. The price estimates were including the obtaining whole of the visual material and blueprints as well as the construction costs. Also the material that would be used and the production technologies were clarified in the bids. After a serious evaluation, a contract was signed with the companies for the first stage of model construction and production began.

FIGURE 48. Kız Kulesi (Leandros Tower). The miniature model in front and the original at the back. Engin, F.G., "Haliç'te Miniaturk Parkı'nda Anadolu Kültüründen İzler", *Arkitekt*, vol. 2003/1. pp.40-49.

The companies that had already been professionals at model making have soon become expert in making models that could withstand the open-air conditions. Some of them became the experts of construction of miniature models of bridges, some of them the experts of mosques and some others of civil architecture. A total of 13 main firms, 10 local and 3 foreign produced the models of Miniaturk. Yıldız Technical University and September 9th University provided the sea vessels and models. Moreover, special models, like the trains and planes were made by firms professional on these subjects.

After obtaining the blueprints and photographs of the building taken from each corner, the next step was to transfer them into the digital environment. Following this, the CNC machines produced the miniature model parts. These machines were very useful especially in the production of the relief and other repeating parts.

FIGURE 49. The final corrections for a smooth surface before painting. Workshop of MiniatureArt, Istanbul. Polat, S., “Estetikle Emeği Buluşturan Maket Atölyeleri”, *Gezinti*, Autumn 2003, pp. 62-67.

FIGURE 50. The construction process of the miniature model of Mehmet Ali Paşa Mosque at Cairo, the studio of Armi Mimarlık, Istanbul, and the finalized miniature model of it in Miniaturk. Photographs by Esin Osmanoğlu.

The material used for the model production usually was the cibatool as in the most of the miniature parks on the world in recent times. The corporation of cibatool and CNC machines produces high quality parts with exceptional accuracy levels.[132] The professional model builders usually preferred this material that is gray in color and is available as thick plates. These large plates were handled as wood and sliced into smaller parts with the desired dimensions. After production with CNC machines, small parts were brought together and the miniatures were formed.

Other preferred materials were Plexiglas, forex, some metals such as aluminum, and different polyurethane and polyester composites. After adhering all parts to each other and sanding the connections, the models were painted. Because of the reason that all parts of most of the miniature models were produced by the same material, differentiating the wood from the stone was through painting. Therefore, painting and decoration, which requires artistic skills, were important steps in the production of the models. Models were painted as their originals; even small changes of color on the walls caused by the rainwater or some other weather conditions were reproduced on the miniature models. People who painted the models usually were undergraduate or graduate of Fine Art departments; this shows that painting of the models also was handled professionally.

After the production of the first miniature models, the firms that would continue to produce models were chosen. None of them had made models for miniature parks already. This was their first experience in model production durable to different weather conditions.

[132] http://www.ipnews.com/archives/special_machinery/aug98/3Dcibatool.htm

CHAPTER 5

CONCLUSION

Apparently it is easy to say that miniature models are scale models because they have a scale of 1/25. At first sight this scale does not look like architectural, because it is not a widespread scale used in model production in Turkey and other countries that use the metric system. However it comes from the English imperial foot-inch system and is a very common scale used in the production of miniature models for miniature parks. Since the first example of miniature parks was an English application; the following parks adopted the same scale, because they took it as an example from many points of view. Even though it is not a usual scale, these models should be evaluated in the context of “scale models” explained in the second chapter.

If these are scale models, then it can be asked whether they are architectural or not. As it is explained in the second chapter, scale models can be classified into two main groups: sketch models and presentation models. It is obvious that the scale models of miniature parks are not constructed for design purposes. They are neither the study models of a design process nor the presentation models of a finished design to be presented to the clients. They are minute replicas of very well known buildings and landscapes. Famous buildings are miniaturized in 1/25 scale. These presentation products have an architectural value, which may be related with the value of the original or sometimes a completely different meaning from the original. It is introduced new construction methods for each miniature model. Most of the times these methods have no relation with the construction methods of the

original work. Interiors of these miniature models are not represented because they are produced for their outside forms and images. Therefore they have internal structures, which will make them robust and enduring the bad weather conditions. Only these new construction properties of the miniature models are enough to make them conceived in this study as works in the realm of architecture.

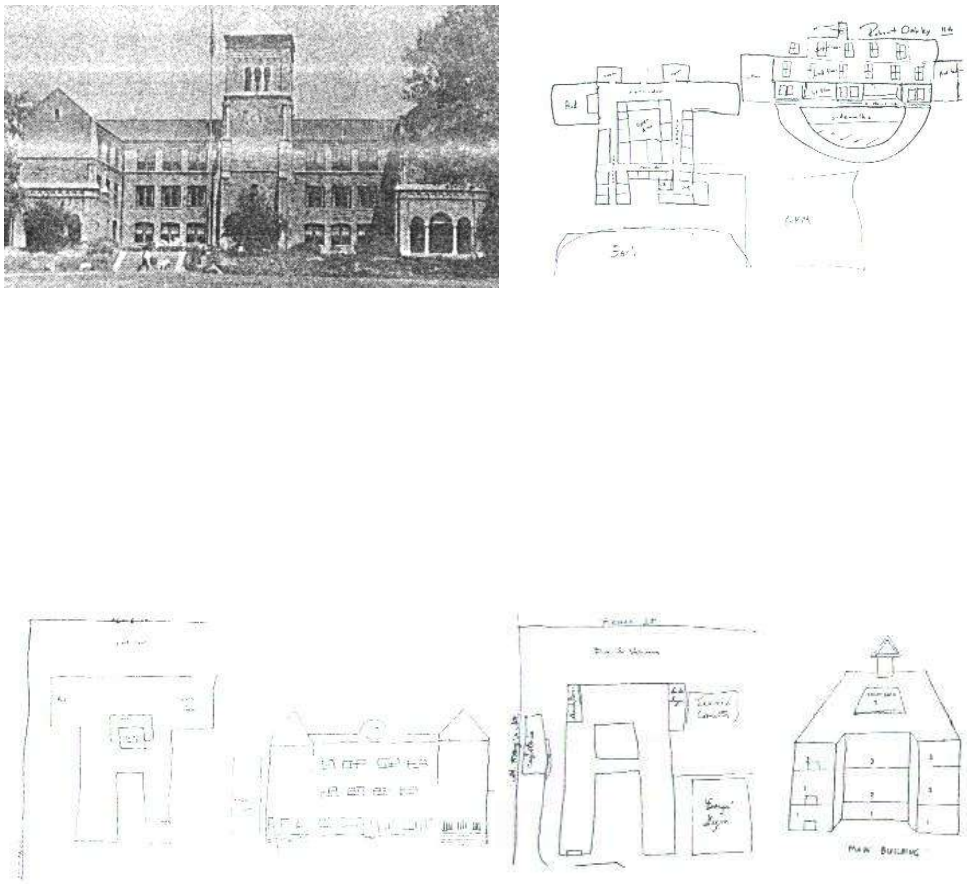

FIGURE 51. The “main” campus building and student’s drawings of it. (Drawings by Tun Sing Chen & Henry Sanoff)

After these remarks on the models in miniature parks, relevance of these building representations within the context of architecture is a good point to concentrate on. What is the contribution of these models to architecture is the question to be answered. Although the built environment is a part of the daily life, surroundings

usually are not recognized, because they are the most ordinary things for the people. People live in the constructed environments, but they do not think about them. In order to understand the perception of the environment we live in, it will be good to have a look at the book of Sanoff who is searching for the visual research methods in design.[133] To supplement information about the flow patterns of people using a high school campus, a series of real time studies was conducted to understand how students, teachers, and staff use the environment and how they feel about their place in it. Different student classes were requested to draw maps of their campus as well as drawings of their image of the “main” building. Although there was no commonly agreed main building on this high school campus, most of the students selected the most original and significant building as the main building. But when comparing the building features depicted on the drawings with the actual building, it was evident that perception of the building was very different for each student. It is obvious that buildings that we live in are not very well known for us.

Not all of them, but most of the buildings represented in Miniaturk are the ones that we live in. For example having a dinner in the Leandros Tower or Galata Tower, or listening to a pop-music concert in Rumelian Fortress are very ordinary happenings for a man living in Istanbul. However, it is possible for those buildings not to be observed by their every-day users. In Miniaturk, the whole represented buildings can be seen from different points of view that is not possible for real life. Experiencing the building as a whole is more possible. This helps people to understand their environment, and through this to locate themselves into it. Moreover it is a good platform for students of architecture to examine the buildings that they already know theoretically. For example Miniaturk can be very helpful for a

[133] Hanry Sanoff, *Visual Research Methods in Design*, (New York: Van Nostrand Reinhold, 1991). 82-87.

student of architecture in Istanbul who may not have a chance to go and visit all of the Anatolian buildings that have architectural and historical value. Through these miniature models he can be aware of many different details of the structures.

As we move through space, each body, head and eye movement sets the visual environment in motion. We can look up, down and sideways and collect information even at the periphery of our field of vision; we can adjust by focusing on points in the far distance and points near at hand. The eyes receive spatial information, which is, both in frequency and velocity, far in excess of that received by any other of the sense organs. The centre of visual attention in the eye, the foveal area, gathers information about shape and pattern by making many rapid eye fixations – a process which literally 'paints-in' a reconstruction of given stimuli. The surrounding peripheral retina gathers less detailed information and is sensitive to sudden changes in the environment, often signalling to the central focusing system to change the direction of focus.[134]

As a result when we look at a scene, the eye cannot focus on more than one very small point at any one time. This tiny point of acuity sits at the centre of the much wider field of vision. Visual data from outside the focused centre becomes progressively less determinate as it ranges out to the blurred outer reaches of our peripheral vision. Therefore a scene is never viewed 'at a glance' – rather, it is reconstructed via a scanning sequence in which the eye flits continuously from point to point to complete an almost instantaneous visual reconnaissance of the situation.[135] This visual scanning process is an issue-oriented operation, and so people with quite different motives will view the same scene in quite different ways. For example a man living in a historical district and a man, who is a tourist there, will

[134] Porter, *The Architect's Eye: Visualization and Depiction of Space in Architecture*, op. cit., 28-29.
[135] Ibid.

perceive this district in very different ways. For example, Anıtkabir that includes the mausoleum of Atatürk, has a symbolic meaning for people of the Turkish Republic; however, for a tourist from abroad, it may not be more than a different architectural work.[136] Likewise, for a man who has never seen the original works of the exhibited miniature models in Miniaturk, would not perceive the symbolic meanings of the models. They would be perceived just as "beautiful" and probably as important architectural works. However for people aware of these buildings and environments, perception would be different. For instance if one of the people stops when he saw the red light in a beacon and the other one continues to his walk, it can be said that the first one knows the meaning of red light in traffic rules and the other does not. For man who does not know the traffic rules, this light would be just a red one.

FIGURE 52. Children visiting Miniaturk before the circumcision feast. Photo by İzzet Keribar. From "Zamanda Yolculuk" ,Kültür A.Ş. January 2004.

[136] Examples are taken from the notes of the course "Çevre ve Kentsel Tasarım" provided by Inst. Osman Tutal, Department of Architecture, AU, Spring 2002-2003.

In Miniaturk, there are attached additional meanings by people. For example throwing coins to the pool in which Leandros Tower (Kız Kulesi) was located and wishing something is a very ordinary happening in Miniaturk. A woman with a veil can be seen praying and crying in front of Mescid-i Aksa, because the miniature model of it has the same meaning with its original for her. Sometimes Miniaturk becomes a place for the trip organized traditionally before the circumsicion feast. (Fig. 52)

In Miniaturk, there is a variety among the visitors; this variety is both related with the age of the visitors and also with the social conditions of them. Therefore Miniaturk can be evaluated as a kind of centre of consumption of architecture. Moreover, the miniature models of buildings from different geographies and different periods of time are compared by ordinary people. Actually this tendency is very normal, because the size of the models gives possibility for comparison. Miniaturk is such a site that the architects can get into relation with people on the street. In other words it is a gathering and meeting point for everybody.

FIGURE 53. A model from the collection of A&V and RIBA.

(http://www.vam.ac.uk/vastatic/microsites/1240_buildings_in_miniature/)

Presentation models are mostly produced by professionals. They are not open to design anymore as study models. Because they are produced to be presented mostly to the customers, they are usually seen as marketing tools of the architecture. If these presentation models are the small-scale replicas of the existing buildings, they do not include any relation with the study models anymore. Therefore in the eye of the architect, they may be seen as they have lost their importance and the support quality to the design process. Moreover these miniature models are not exhibited in architectural context like “Museum of Architecture”; rather they are presented in a space that has re-creative and playful qualities. Architecture seems as a secondary concept in the general idea of Miniaturk. Architects are worried about their profession because of location of these architectural representation tools in such a platform. Therefore it becomes hard to admit the architectural qualities of Miniaturk for the architects. For example RIBA and V&M Museum in London held an architectural exhibition that was displayed at the V&A in autumn 2002.[137] There were exhibited many architectural models ranging ancient China and medieval India to early nineteenth-century Italy and contemporary London. V&A plans to open a permanent architectural gallery displaying these materials.[138] (Fig. 53) It will include about 180 exhibits composed of original drawings, models, photographs and building fragments. This will be a kind of architectural museum; therefore the architecture will be the main concern of the exhibition. The space of exhibiting the miniature models of Miniaturk is very different from the space of V&A Architectural Gallery from many aspects. For instance, this gallery will work as an institution that serves the community. It will preserve its exhibits and present them to the public; educating and creating consciousness probably will be the main objectives of it. However, in Miniaturk, the architecture seems as a secondary concept; it stands somewhere between museum, public park

[137] http://www.vam.ac.uk/vastatic/microsites/1240_buildings_in_miniature/ (05.12.2004)
[138] http://www.vam.ac.uk/collections/architecture/arch_gall/art/index.html (05.12.204)

and an entertainment centre. If it is accepted as a museum, what kind of museum it is will be another point of concern: a toy museum, an architectural museum or an archeological museum.

An exhibition opened in Miniaturk on April 23rd, 2004, one year after the official opening of Miniaturk, gives clues about how the administration of the park perceives this establishment. Ceramic models of famous cartoon heroes such as the Penguins of Selçuk Erdem or Avanak Avni of Oğuz Aral were exhibited in Miniaturk.[139] The opening ceremony was including different activities for entertainment of the children because of the special Children's Day in Turkey. The space created by these two exhibitions at the same platform is very different from the one of an architectural gallery. Therefore it may not seem as an institution displaying and exhibiting architectural tools, especially for architects.

After the official opening of Miniaturk, there were a few more attempts for new miniature parks in Turkey. The second park was opened in Antalya on May 29th, 2004. The Mayor of Batman did another attempt for the city center. They planned a mini "Miniaturk" for their city in order to make it the most "beautiful" city of the southeast region of the Anatolia.[140] These attempts demonstrate the popularity of Miniaturk. The number of visitors in one year is more than 1,000,000, which was an unexpected case.

For this reason, whether they are found architectural or not by the professionals, miniature models have contributions in establishing good relations with the man on the street. This popularity and the communicative advantage cannot be ignored and be used by the architects or professional organizations such as Chambers of

[139] http://www.yeniasya.com.tr/2004/04/23/kultur/h3.htm (13.12.2004)
[140] http://www.arkitera.com/haberler/2003/07/21/batman.htm (13.12.2004)

Architects to arouse interest in the cultural heritage as well as the contemporary architecture.

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Appendix A: The Miniature Models in Miniaturk

1.Miniaturk general layout model

2.Turbe of Mevlana

3.Selimiye Mosque

4.Anıtkabir

5.Building of TBMM

6.Building of Ziraat Bank

7.Hacı Bayram Mosque and Turbe

8.Yivli Minareli Mosque

9.Diyarbakır Ulu Musque

10.Adana Stone Bridge

11.Yalıboyu Houses of Amasya

12.Malabadi Bridge

13.Safranbolu Houses

14.Turbe of Ertuğrul Gazi in Söğüt

15.Külliye of Hacı Bektaş-I Veli

16.Green Turbe

17.Bursa Ulu Mosque

18.Ishak Paşa Palace

19.Izmir Clock Tower

20.Isa Bey Mosque

21.Turbe of Aşık Paşa

22.Virgin Mary Church

23.Temple of Artemis

24.Halikarnas Mausoleum

25.Halil-ür Rahman Mosque and Balıklı Göl

26.Fairy chimneys of Cappadokia

27.Sümela Monastery

28.Ruins of the Mount Nemrut

29.Stone Houses of Mardin

30.Ahlat Grave Stones and Ulu Tomb

31.Pamukkale

32.Aspendos

33.Efes Celsus Library

34.Hatuniye Madrasa

35.Zeus Altar

36.Çifte Minareli Madrasa

37.Muradiye Mosque

38.Gök Madrasa

39.Konya Alaeddin Mosque

40.Divriği Ulu Mosque

41.Ince Minareli Madrasa

42.Karatay Madrasa

43.Niğde Alaeddin Mosque

44.Döner Kümbet

45.Sultan Khan

46.Çanakkale Martyr's Monument

47.Süleymaniye Mosque

48.Topkapı Palace

49.Aya Irini

50.Soğukçeşme Street

51.Olymic Stadium

52.Dolmabahçe Clock Tower

53.Ahmed III. Fountain

54.Istanbul Municipality Building

55.Galata Tower

56.Dolmabahçe Palace

57.Eyüp Sultan Mosque

58.Mağlova Aqueduct

59.Çırağan Palace

60.Kapalıçarşı

61.Sadullah Paşa Waterside Mansion

62.Rumelian Fortress

63.Anatolian Fortress

64.Bosporus Bridge

65.Atatürk Airport

66.Yerebatan Cistern

67.Haghia Sophia

68.Haseki Hürrem Public Bath

69.Hıdiv Kasrı

70.Maiden's Tower

71.Kuleli Military High School

72.Beylerbeyi Palace

73.German Fountain

74.Great Post Office

75.Burmalı Sütun

76.Mısır Dikilitaşı

77.Örme Sütun

78.Blue Musque

79.St. Antoine's Church

80.Example for a modern plaza

81.Four Seasons Hotel

82.Capitol Shopping Centre

83.Haydarpaşa Railway Station

84.Küçüksu Kasrı

85.Taksim Republican Monument

86.Zeyrek Mosque

87.Akmerkez

88.Ahrida Synagogue

89.Kariye Museum

Model buildings selected from Ottoman Geography (out of Turkey)

90.Bekiriye Mosque/ Yemen

91.Sultan Süleyman Forts-Damascus Gate/ Jerusalem

92.Mescid-I Aksa/ Jerusalem

93.Kubbet-üs Sahra/ Jerusalem

94.Mehmet Ali Paşa Mosque/ Cairo

95.Ecyad Castle/ Mecca

96.Hijaz Railway, Damascus Station

97.Mescid-I Nebi/ Medina

98.Süleymaniye Külliyesi/ Damascus

99. Hijaz Railway, Medina Station

100.Vardar Bridge/ Macedonia

101.Turbe of Sultan Murat/ Kosova

102.Mostar Bridge/ Mostar

103.Gül Baba Turbe/ Budapest

104.Turbe of Gazi Ali Paşa/ Romania

105.The House of Ataturk/ Greece