AN INQUIRY INTO THE ARCHITECTURAL PROGRAM OF THE CONTEMPORARY AIRPORTS

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ASLI KAYA

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submitted by **ASLI KAYA** in partial fulfillment of the requirements for the degree of **Master of Architecture in Architecture Department, Middle East Technical University** by,

Prof. Dr. Canan Özgen _____
Director, Graduate School of **Natural and Applied Sciences**

Prof. Dr. Güven Arif Sargın _____
Head of Department, **Architecture**

Assoc. Prof. Dr. Berin Gür _____
Supervisor, **Architecture Dept., METU**

Examining Committee Members

Prof. Dr. Güven Arif Sargın _____
Architecture Department, METU

Assoc. Prof. Dr. Berin Gür _____
Architecture Department, METU

Prof. Dr. F. Cânâ Bilsel _____
Architecture Department, METU

Assoc. Prof. Dr. Esin Boyacıoğlu _____
Architecture Department, Gazi University

Inst. Dr. Adnan Aksu _____
Architecture Department, Gazi University

Date: 10/09/2012

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name: Aslı Kaya

Signature:

ABSTRACT

AN INQUIRY INTO THE ARCHITECTURAL PROGRAM OF THE CONTEMPORARY AIRPORTS

Kaya, Aslı

M.Arch., Department of Architecture

Supervisor: Assoc. Prof. Dr. Berin F. Gür

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Architectural program of airports has evolved from being a mere transportation space into a "city" containing various activities along with transportation at its core. This thesis aims to discuss and criticize it, by arguing that the city and the airport are to be integrated by giving a special importance to the user (both the passenger and the inhabitant of the city). The discussion is focused on three dialectically related constituents of the program: Process, User and Product (building). Rather than the architectural design process generating the built form, *process* refers to the influential actors in shaping the space of airport. *User* refers to both the active and passive actors of the organization of space. *Product* denotes the space itself, transformed according to the wishes and demands of both the user and the mode of production. These constituents are accepted as significant factors in the development of the airport architectural program in a way to answer the requirements of the integration with the city.

In contemporary airports, users do not have enough rights over the

space to be able to show their existence against the domination of capital's spaces. Therefore, this thesis proposes an alternative airport architectural program integrating the airport within the city by placing the user at the center.

Keywords: airport, aerotropolis, architectural program, integration, social space, Henri Lefebvre, fix spaces, space of resistance

ÖZ

GÜNÜMÜZ HAVALİMANLARININ MİMARİ PROGRAMI ÜZERİNE BİR ARAŞTIRMA

Kaya, Aslı

Yüksek Lisans, Mimarlık Bölümü

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Havaalanı mimari programı, zaman içinde salt bir ulaşım mekânı olmanın ötesinde, çekirdeğinde ulaşım yapısı olup etrafında çeşitli aktiviteleri barındıran bir "şehre" dönüşmüştür. Bu tez, kullanıcıya (yani yolculara ve şehrin sakinlerine) özel bir önem vererek, havaalanı ve şehrin bütünleşebileceği savunmasıyla, günümüz havaalanları mimari programını tartışmayı ve eleştirmeyi hedefler. Tartışma, programın diyalektik ilişki içinde olan üç bileşeni üzerine odaklanır: Süreç, Kullanıcı ve Ürün (Yapı). Süreç, bina formunu üreten mimari tasarım sürecinden ziyade, havaalanı mekânının şekillenmesinde etkili olan aktörleri ve tasarım sürecine olan katkılarını ifade eder. Kullanıcı, mekânın organizasyonunun hem pasif hem de aktif aktörlerini ifade eder. Ürün ise, kullanıcı ve hâkim üretim biçiminin dilek ve talepleri doğrultusunda dönüştürülmüş olan mekânın kendisini temsil eder. Bu bileşenler tezin savı çerçevesinde, şehir ile bütünleşmenin gereksinimlerine yanıt verecek bir havaalanı mimari programının geliştirilmesindeki önemli etkenler olarak kabul edilir.

Günümüzün havaalanlarında, kullanıcıların, sermayenin mekânları kurgulayan egemenliğine karşı varlıklarını gösterebilmek için mekânların tasarım ve kullanım süreci üzerinde yeterli hakları yoktur. Bu nedenle, bu çalışma, merkezine kullanıcıyı koyan, havaalanını şehir ile entegre eden alternatif bir havaalanı mimari programı önerir.

Anahtar Kelimeler: havalimanı, aerotropolis, mimari program, bütünleşme, sosyal mekân, Henri Lefebvre, sabit mekânlar, direniş mekânları

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LIST OF ACRONYMS

UNWTO	(en) The United Nation World Trade Organisation
IATA	(en) International Air Transport Association
TSA	(en) Transportation Security Administration
UECNA	(fr) Union Européenne Contre Les Nuisances des Avions
ICAO	(en) International Civil Aviation Organization
FAA	(en) Federal Aviation Administration
ACI	(en) Airport Council International
UNHCR	(en) The United Nation Refugee Agency

CHAPTER I

INTRODUCTION

Concerning the acceleration of speed and mobility, today, transportation of people (the act of traveling) has constructed its own spatial network and rules, and these rules have become significant in terms of its reflections to the production of spaces of transportation and to spatial practices as well as experiences peculiar to transportation.

Being one of these spaces, the airport is a relatively new building typology, implemented and used for civil aviation only after the 1920s. Nevertheless, its short history includes a tremendous evolution (shift) from hangars to city-like structures emerging as important components of modern life. Nowadays, more and more people continuously on the move spend much of their time in airports while traveling. As Zygmunt Bauman mentions, they become "'seasoned travelers' who feel fully and truly 'at home' and behave accordingly".[1]

Comparing one's travel experience of airport in the past with that of the present, it can be noted that this experience has shifted *from being only a passenger to being also a tourist or a consumer or even a dweller*. This change can additionally be observed in the spaces and functionality of airports, which are not anymore only transportation hubs, but also areas transformed into living spaces with the expansion of their architectural program through the insertion of facilities such as accommodation (hotels), offices, shopping and entertainment areas, and etc.

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[1] Adrian Franklin, "The Tourist Syndrome: An Interview with Zygmunt Bauman," *Tourist Studies* 3, no. 2 (August 2003): 205–217.

Therefore, with the changes in the architectural program of airports, there appear changes in the production of the passenger's space and his/her experience of this space.

1.1 Aim of the Study

This thesis aims to discuss and criticize the architectural program of the contemporary airport by underlining its evolution from being just a transportation space into a "city," containing various activities along with transportation at its core. The thesis argues that the city and the airport are to be integrated by giving a special importance to the user (both the passenger and the inhabitant of the city). The user has to have a significant position in the process of integration, in the sense that the user's rights over the space, which is limited by the domination of global capital, are to be enhanced. Then, the thesis will propose an alternative airport architectural program integrating the city with the airport through a significant positioning of the user.

Airports are becoming "airport cities"[2] in the sense that they resemble cities by housing various facilities (such as offices, shops, hotels, cinemas, museums etc.) rather than just being a transitional or transportation space. The increase in commercial investments on air transportation has brought about the growth of airports' capacities to serve millions of passengers per year. This means that the architectural program of airports has been elaborated on and enlarged, which in turn causes an increase in the building volume. Furthermore, the idea of the city developing around an airport has also become a current issue among economic circles, and has begun to be applied in new airport projects. The thesis develops a

[2] "Exploring the airport of 2030," *Airport Business*, July 2010, http://www.airport-business.com/2010/07/exploring-the-airport-of-2030 (accessed May 3, 2012).

critical stance towards this idea that locates the airport at the core of new living areas due to the negative impacts (air pollution, noise, and etc.) of airports on the quality of life.

Considering all these factors, an investigation into contemporary airports in terms of their architectural program has become necessary in order to highlight the significance of architecture in responding to current circumstances emerging with the technological developments and economic concerns. In other words, besides the economic and technological issues, the airport program is to be reconsidered and reinvented in an architectural sense, by taking into account its integration with the city and by increasing the user's rights over the space of airport.

1.2 Approach of the Thesis

According to Henri Lefebvre, space is not a purely scientific object. It always has been political and strategic. He explains this idea with the following words:

> Space is not a scientific object removed from ideology or politics; it has always been political and strategic.... Space is political and ideological. It is a product literally filled with ideologies.
>
> There is an ideology of space. Why? Because space, which seems homogeneous, which seems to be completely objective in its pure form, such as we ascertain it, is a social product. The production of space can be likened to the production of any given particular type of merchandise....
>
> … The science of space, therefore, must be assessed at several levels. It can be viewed as a science of formal space, that is to say, close to mathematics: a science which employs such concepts as construction density, network analysis, critical path analysis and program evaluation

> and review techniques. The science, however, can not be situated only at this level; it cannot remain formal. Critical analysis defines how and according to what strategy a given space has been produced. Finally, there is the study and science of the contents of a given space, or in other words, the people using this space, people who perhaps are opposed to the physical form or purpose of the space.[3]

According to Lefebvre, the primary task is to understand the effective role that property relations play in the sustainability of the capitalist mechanism and to confirm that they are directly related to the radical transformation of space.[4] Rather than understanding space with merely mathematical data, he points out the need for a scientific study taking into account the social relations.[5] This will be the point of view of the thesis in discussing the airport architecture program of present day. It will investigate how agents affecting the formation of architectural program also change the spatial organization.

The approach of this thesis is framed on the basis of Lefebvre's, *The Production of Space*, which sees 'space' as a social product,[6] and this framework provides a versatile approach to understand the processes of urbanization, their conditions and consequences at any scale of social reality: from the practices of everyday life, through the urban scale, to the global flows of people, capital, information and ideas.[7] In *The Production of Space*, he argues that space is a social product which affects spatial practices and perceptions and that it can only be

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3 Henri Lefebvre, "Reflections on the politics of space," in *Radical Geography: Alternative Viewpoints on Contemporary Social Issues*, ed. Richard Peet, Maaroufa Press Geography Series (Chicago: Maaroufa Press, 1977), 341.

4 Güven Arif Sargın, "Yakın Dönem Kentleşme Süreçlerine İlişkin Eleştirel Notlar," *Mülkiye* 22, no. 261 (2008): 45–54.

5 Lefebvre, "Reflections on the politics of space."

6 Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Oxford: Blackwell Publishers, 2009), 26.

7 Ibid.

grasped dialectically. Therefore, he classifies the processes of production of space in three categories:

- The "conceived space" – the intellectual interpretation of space, a conceptualized or abstract space:

> Representation of space: conceptualized space, the space of scientists, planners, urbanists, technocratic subdividers and social engineers, as of a certain type of artist with a scientific bent – all of whom identify what is lived and what is perceived with what is conceived.[8]

- The "lived space" – a social space of everyday life:

> Representational spaces: space as directly *lived* through its associated images and symbols, and hence the space of 'inhabitants' and 'users', but also of some artists and perhaps of those, such as a few writers and philosophers, who *describe* and aspire to do no more than describe. This is the dominated — and hence passively experienced — space which the imagination seeks to change and appropriate. It overlays physical space, making symbolic use of its objects. Thus representational spaces may be said, though again with certain exceptions, to tend towards more or less coherent systems of nonverbal symbols and signs.[9]

- The "perceived space" – a concrete place produced by the society containing its spatial practices:

> The spatial practice of a society secretes that society's space; it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely as it masters and appropriates it. From the analytic standpoint, the spatial practice of a society is revealed through the deciphering of its space.[10]

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[8] Ibid., 38.

[9] Ibid., 39.

[10] Ibid., 38.

Space, as a social product, is shaped as a result of these three dialectical relations. Basically, he states that conceived space is the "abstract space" which governments and investors invest in for a profit. Lived space is the social space which represents the everyday experiences of space. Perceived space is a real space and a mixed combination of these abstract and social spaces. Lefebvre's three interrelated concepts define the "space".

1.2.1 Conceptual Framework for Understanding Airport Architectural Program

According to Robert G. Hershberger's definition, an architectural program is the stage during which "the relevant values of the client, user, architect, and society are identified; facts about the project are discovered; values are stated clearly; and goals are articulated."[11] On the other hand, William M. Peña and Steven A. Parshall define it as "problem seeking" or, in other words, "the search for sufficient information to clarify, to understand, and to state the problem."[12]

This thesis defines the continuing transformation of airports as a problem, which will be further clarified with the examination of the relationships between the main actors of this problem, namely the user, client, society and the architect. As Lefebvre indicates, the necessity to research space should not only be conducted by mathematical values but also by means of social relations. Hence, this thesis will discuss the formation of the airport's architectural program and those factors that are effective in its formation by considering the social relationships between the actors and the effects of these relations upon the product

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[11] Robert G. Hershberger, *Architectural Programming and Predesign Manager* (New York: McGraw-Hill, 1999), 5.

[12] William M. Peña and Steven A. Parshall, *Problem Seeking: An Architectural Programming Primer*, 4th ed. (New York: John Wiley & Sons, 2001), 5.

(i.e. airport). To do this, the thesis defines three constituents of architectural program, namely process, user, and product. The term 'architectural program' hereby refers to the programmatic requirements which are to be reconsidered and reinvented as a result of the dialectical relationships between these three constituents.

1.2.2 Three Constituents of Airport Architectural Program: Process, User, Product

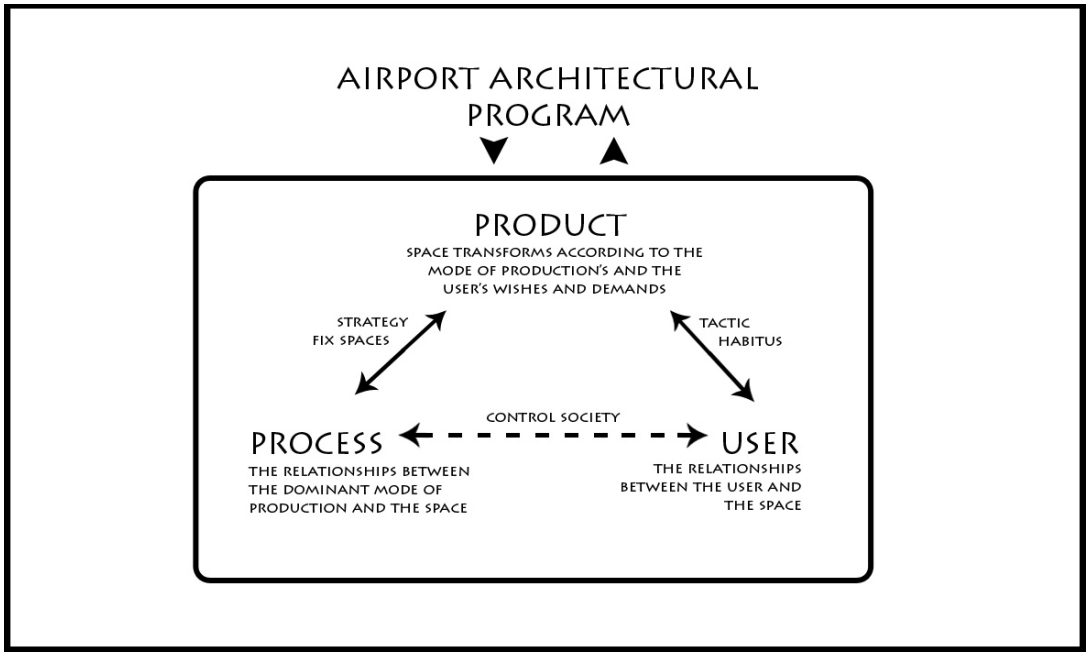

Figure 1.1: Diagram to understand Airport Architectural Program

Consequently, this thesis will analyze and discuss the architectural program of the airports by focusing on its three dialectically related constituents: Process,

User and Product (building). This thesis argues that these constituents are significant in the design of airport architectural program in a way to respond to the requirements of the integration with the "city". Considering the viewpoint of the thesis, the three constituents resemble the three concepts that Lefebvre uses to define the space.

Process

In this thesis, "process" refers to the influential actors in shaping the space of airport rather than to the architectural design process generating the built form. It denotes the relationships between the dominant mode of production and space. It is in this sense that process resembles Lefebvre's conceived space, or in other words, conceptualized space, as an abstract and intellectual interpretation of space. Essentially, space is an effective medium of capitalism. Güven Arif Sargın indicates that spatial transformations in urban scale are, in fact, maneuvers that render capitalism sustainable.[13] This shows that the control of the "process" has been mainly taken over by the dominant mode of production. This assumption will be discussed in the second chapter, which will analyze the mental process that has produced the present-day airport structures. Airports (as a space) are progressively drawing the attention of governments and private investors. As stated above, Lefebvre states that '(social) space is a (social) product. Space needs to be understood in the context of the mode of production of a particular epoch. Despite Lefebvre's acknowledgment of the role of ideas, he does also recognize the importance of forces and relations of production.[14]

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[13] Sargın, "Yakın Dönem Kentleşme Süreçlerine İlişkin Eleştirel Notlar," 50.
'Kentsel dönüşüm adına, soyut bir düzleme taşınan değer edinimini, tasarlanan mülkiyet ilişkileri aracılığıyla meşru kılan bütün operasyonların, eninde sonunda, yukarıda betimlediğimiz kapitalizmin sürekliliğini sağlayan manevralar olduğunun bilinmesi gerekir.'

[14] Stuart Elden, *Understanding Henri Lefebvre: theory and the possible*, Continuum studies in philosophy (London; New York: Continuum, 2004), 184.

User

"User" as one of the three constituents refers to the actors who have both active and passive roles in the organization of space. These roles are passive when the user is in the conceived space and active when the user acts as the creator in redesigning this space. The concept of the user resembles Lefebvre's lived space as social space of everyday life. It denotes the relationships between the user and the space. Here, in this thesis, users are the passengers of the airports, whose identities change according to the character of the space they occupy, and who have the power to change the space according to their needs.

Product

Here, "product" denotes the space itself, transformed according to the wishes and demands of both the user and the mode of production. While the mode of production utilizes the space as a tool to survive, users have the power to shape the space according to their primary needs. On the one hand, the former is more concerned with the spatial growth in an urban scale, while the latter can only cause human-scaled spatial changes. The relations between the space, the user, and the dominant mode of production will be revealed by deciphering the various contemporary airport projects and proposals. Moreover, the continuous growth of the architectural program of airports necessitates dwelling on some architectural and economic discussions, such as Rem Koolhaas' "bigness theory" and John Kasarda's "aerotropolis" concept.

In order to support a continuous economic growth, a new concept, namely, "Aerotropolis" has appeared on the agenda.[15] Focusing on the urbanization of the airport through the global management strategy, John D. Kasarda, along with co-

[15] John D. Kasarda and Greg Lindsay, *Aerotropolis: the way we'll live next*, 1st ed. (New York: Farrar, Straus and Giroux, 2011).

author Greg Lindsay, developed the "aerotropolis" concept, of which even a prototype was developed in cooperation with a visual media company.[16] Kasarda believes that urban design can help make both terminals (airports) and their surrounding development interpretable, and that airports can become economically efficient spaces by evolving into the cities of the 21st century.[17]

Although this concept is appreciated by economic circles as a current subject, the integration of the city with the airport appears to be a controversial issue particularly in the contemporary applications that try to bring a solution to this integration. This is due to the fact that these applications mainly ignore the negative effects of airports on the citizens. Therefore, the airport architectural program has to be reconsidered and redesigned by taking into account these negative effects.

Lately, there has been some interest in Kasarda's approach to airports by several academic circles. For example, the aerotropolis concept became the subject of research project in the master's program of Architectural Association School in London between 2007 and 2008.[18] This thesis will examine some of the students' works through the aerotropolis concept to identify and discuss alternative 21st century airport programs.

The expansion and elaboration of architectural programs following the economic growth in order to fit the demands of the 21st century city cause a never-ending growth of a building volume. The issue of growth and big scale design has already been the object of many discussions and studies. In one of these works, *S,M,L,XL*, by Rem Koolhaas and Bruce Mau, "bigness" is discussed as an

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[16] Evolve Media, "Aerotropolis," Company website, *Evolve Media*, 2010, http://www.evolvemedia.co.il/Pro/Aerotropolis.html (accessed April 24, 2012).

[17] John D. Kasarda and Stephen J. Appold, "Are Airports Non-Places?," *Airport Consulting*, 2011.

[18] Architectural Association Graduate School, "Aerotropolis, Renewable Types," *Projective Cities*, 2010, http://projectivecities.aaschool.ac.uk/?page_id=171 (accessed April 24, 2012).

unrecognized problem of 20th century architecture and, with their manifesto, they try to reveal the existence of the bigness problem and, at the same time to create awareness to deal with big buildings as architects.[19] They explain the relation between bigness and city as follows:

> Bigness no longer needs the city; it competes with the city; it represents the city; it preempts the city; or better still, it is the city.[20]

They state that a single volume with quantity and complexity of the facilities it offers is itself urban although it is incapable of establishing relationships with the classical city.[21] They also compare the contemporary city and the contemporary airport in terms of "sameness and identity". Their discussions on "bigness" will be an essential reference for rethinking about 21st century airport architectural programs.

1.3 Structure of the Thesis

The thesis consists of six chapters. The introduction indicates the approach of the thesis and the conceptual framework for discussing the airport architectural program.

The second chapter, under the title of "process" will analyze airports as one of the significant spaces of the global capital, and reveal its reflections on the architectural program of airports. David Harvey's "spatial fix theory", Foucault's "disciplinary societies", Deleuze's "societies of control" and Ignasi de Sola-Morales i Rubio's "colonization, violence, resistance" concepts will be utilized to clarify the

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[19] Rem Koolhaas and Bruce Mau, *S,M,L,XL*, 2nd ed. (New York: Monacelli Press Inc, 1998), 495.

[20] Ibid., 515.

[21] Ibid., 514.

relations between the dominant mode of production and the airport as its main space.

How the airport is perceived, and experienced by the users and their responses to the space will be discussed in the third chapter. Michel De Certeau's concept of "strategy and tactic" and Bourdieu's "habitus" notions will be referred to underline the significance of the user as a programmatic constituent.

Table 1.1: Structure of the Thesis

CHAPTER II	**Readings**
DESIGN PROCESS	
the relationships between the dominant mode of production and space.	David Harvey – "Fix Spaces" Gilles Deleuze – "Societies of Control" Michel Foucault - "Disiplinary Socities"
CHAPTER III	**Readings**
USER	
the relationships between the user and the space. This chapter interested in the users of the space and their roles in the organization of space.	Michel De Certeau - "Strategy and Tactic" Pierre Bourdieu - "Habitus"
CHAPTER IV	**Readings**
PRODUCT	
the space itself, transformed according to the wishes and demands of user and dominant mode of production. This is an architectural analysis of the relation between the space, the user and the dominant power .	John Kasarda - "Aerotropolis" Rem Koolhaas - "Bigness"

In the fourth chapter, the transformation of architectural programs according to the desires and demands of both the mode of the production and the user will be analyzed and discussed through selected examples related to airports. Along with the "Aerotropolis" concept and sample projects developed on the basis of this concept, this chapter will analyze the problem of growth in contemporary airports, in reference to the concept of "bigness" by Rem Koolhaas. The way

architectural and economic circles handle volumetric and programmatic growth will be discussed in this chapter.

The fifth chapter will be about developing an alternative airport architectural program according to the conclusions of the analysis in the second, third and fourth chapters.

CHAPTER II

THE PROCESS

Since the early days of the civilization, people have been traveling for religious, economical, recreational or leisure purposes. Prior to the Industrial Revolution, transportation from one place to another used to take much more time due to the difficult conditions and old techniques used to travel. Nowadays, the act of traveling has become part of daily routines of life and has already constructed its own network. Today there is a considerable decrease in travel time between various destinations in the world: from several months during the past to some hours in our time. Economic, social and political integration between the countries have increased through transportation and telecommunication networks which surround us at land, water and air. Citing Harvey's book, *The Condition of Postmodernity*, "space shrinks to a 'global village', built by transportation and telecommunication networks, and a 'spaceship earth', formed by economic and ecological interdependencies."[22] The transportation and communication networks continue to multiply and spread inversely proportional to the world's shrinking.

The transition spaces like airports have been constructed as a part of the transportation network, as a space between two points: the points of departure and destination. The main purpose of air transportation during its early days was the carriage of both people and cargo; this was the only function of the airports. However, today airports are assigned new meanings and functions; rather than being merely transition spaces between two points. For example, they start to

[22] David Harvey, *The condition of postmodernity: an enquiry into the origins of cultural change* (Malden, Mass.: Blackwell, 2004), 240.

house entertainment facilities and in turn become themselves destination targets. The transformation of the transportation spaces into an important pillar that supports globalization and helps flowing of global capital can be seen as a crucial reason for assigning new meanings and functions to these spaces.[23]

Along with other means of heavy transportation (train, shipping), air transport has contributed to the relocation of the production from its traditional zone boundaries to a broader level by decreasing the duration of international transportation. This is how Bell and Feitelson express the importance of transportation in the expansion of the production:

> While most movements associated with production were previously along the assembly line – or among proximate production facilities – they increasingly take an interregional or even international dimension. Due to the flexibility they allow, highways and airways are likely to be the main systems on which inputs and outputs are transported in the new economy.[24]

Besides being an indispensable part of the network chain required for expanding production to the world, air transportation at the same time has become the choice of the passengers in the 21st century, and has been growing even more year-by-year. According to the data of International Civil Aviation Organization (ICAO), the world's major airports have grown as required by the millions of international passengers and tons of cargo per year. (Table 2.1) This in turn, brings also the growth of the construction industry and new employment opportunities.

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[23] Jean-Paul Rodrigue, "Transport and Globalization," in *Encyclopedia of globalization*, ed. Roland Robertson and Jan Aart Scholte, vol. 3, 4 vols. (London; New York: Routledge, 2006), http://people.hofstra.edu/jean-paul_rodrigue/downloads/transportation%20and%20globalization.pdf.

[24] Michael E. Bell and Eran Feitelson, "U.S. Economic Restructuring and Demand for Transportation Services," *Transportation Quarterly* 45, no. 4 (October 1991): 530.

Table 2.1: Passenger Traffic Data according to Airports Council International Statistics

Passenger Traffic 2010 FINAL		
Last update: August 1 2011		
Rank	City (Airport)	Total Passengers
1	Atlanta Hartsfield Airport, UNITED STATE	89 331 622
2	Beijing Capital Airport, CHINA	73 948 113
3	Chicago O'Hare Intl. Airport, UNITED STATE	66 774 738
4	London Heathrow Airport, G. BRITAIN	65 884 143
5	Tokyo International Airport, JAPAN	64 211 074
6	Los Angeles Airport, UNITED STATE	59 070 127
7	Paris Charles De Gaulle Airport, FRANCE	58 167 062
8	Dallas Fort Worth Airport, UNITED STATE	56 906 610
9	Frankfurt Main Intl. Airport, GERMANY	53 009 221
10	Denver Intl. Airport, UNITED STATE	52 209 377
11	Hong Kong Intl. Airport, HONG KONG	50 348 960
12	Madrid Barajas Airport, SPAIN	49 844 596
13	Dubai Airport, UNITED ARAB EMIRATES	47 180 628
14	New York John F Kennedy Airport, UNITED STATE	46 514 154
15	Amsterdam Schiphol Airport, NETHERLAND	45 211 749
16	Jakarta Soekarno Hatta Intl. Airport, INDONESIA	44 355 998
17	Bangkok Suvarnabhumi Airport, THAILAND	42 784 967
18	Singapore Changi Airport, SINGAPORE	42 038 777
19	Guangzhou Baiyun Airport, CHINA	40 975 673
20	Shanghai Pu Dong Airport, CHINA	40 578 621

2.1 The "Fix Spaces" of Capitalism

In *The Survival of Capitalism: Reproduction of the Relations of Production*, Lefebvre states that capitalism survives through the production of space.[25] Although globalization suggests blurring of boundaries, and then the flow of capital, of people, goods and commodities, it needs fixed spaces. That is what Harvey calls as "spatial fix". Airport is one of the fixed spaces of globalization and in turn capitalism.

[25] Henri Lefebvre, *The survival of capitalism: reproduction of the relations of production*, trans. Frank Bryant (New York: St. Martin's Press, 1976).

Harvey discusses the powerful relationship between economical indexes and space in his essay, "Globalization and the "Spatial Fix". He explains the significance of space in thoroughly understanding the political economy of capitalism. While expressing the "contemporary form of globalization as the capitalist production and reconstruction of space",[26] he constructs "the theory of the spatial fix" to interpret the globalization in spatial terms. The spatial fix means that "something is secured in space: it cannot be moved or modified".[27] This theory has been proposed to explain capitalism's endless and insatiable need of geographic expansion in order to survive its inner crisis. It argues that capitalism is addicted to geographical expansion, technological change and endless expansion through economic growth. Harvey summarizes the relation between capitalism and space in these words:

> ...capitalism has to fix space (in immoveable structures of transport and communication nets, as well as in built environments of factories, roads, houses, water supplies, and other physical infrastructures) in order to overcome space (achieve a liberty of movement through low transport and communication costs). This leads to one of the central contradictions of capital: that it has to build a fixed space (or "landscape") necessary for its own functioning at a certain point in its history only to have to destroy that space (and devalue much of the capital invested therein) at a later point in order to make way for a new "spatial fix" (openings for fresh accumulation in new spaces and territories) at a later point in its history. [28]

The spatial arrangements made to keep the capital in motion, to make way to the fixing and slowing down of a portion of the total capital in a specific space. On the other hand, these spaces have to preserve their safety and profitability for a

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[26] David Harvey, "Globalization and the 'Spatial Fix'," *Geographische Revue* 3 - Marxism in Geography, no. 2 (2001): 23.

[27] Ibid., 24.

[28] Ibid., 25.

long time in order to avoid losing the value of fixed capital; otherwise the invested capital will be lost after a while. The circulation speed of the capital increases through the transportation and communication networks which continue to multiply and spread, causing the acceleration of capital accumulation. The capital accumulation affects the amount of investments and spatial expansion. This is a kind of chain reaction where the space becomes a necessity for the dominant mode of production. Therefore, the space now has to be rearranged and renewed, constantly. Harvey uses airport as an example to clarify his idea:

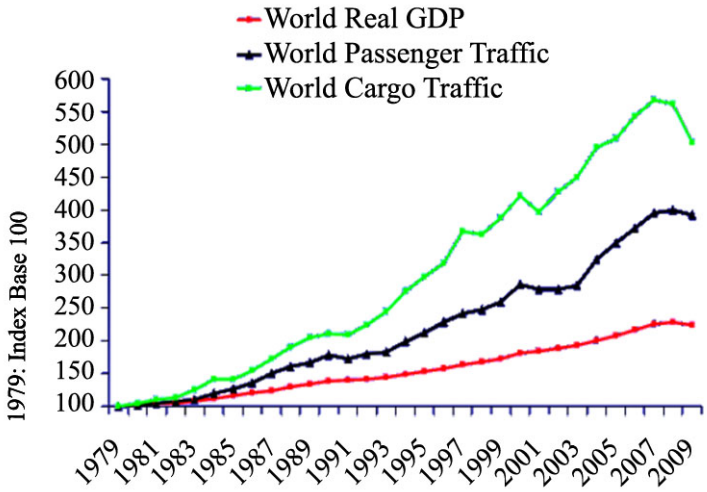
> ...in order for the capital invested in the aircraft to be paid off, the airports must encourage as much traffic as possible which means that the places they serve must be attractive sites for the convergence of commodities, people, ideas, information, cultural activities, and the like.[29]

Today, air transportation doesn't attract the attention of economic circles only in terms of people and cargo transportation. Airports as stop (fix) points of air transportation are seen as the potential spaces for the flow of capital; they are transformed into spaces accommodating usages related with tourism, trade, accommodation and entertainment, which make airports one of the main (fix) spaces of the global markets. Therefore, depending on these circumstances, airports' architectural program has been expanded not only in terms of the spaces of aviation activities, but also in terms of commercial and cultural facilities such as hotels, bars, museums, etc. The relation between Gross domestic product (GDP) and air transportation, shown in Table 2.2, helps us understand the importance of the aviation industry for the regional economic development.

[29] Ibid., 27–28.

Table 2.2: Air Transport vs. Economic Growth - Data of International Civil Aviation Organization

Air transport vs Economic growth



Source: ICAO, IHS/ Global Insight

Therefore, it seems inevitable that airports are likely to be transformed into entertainment areas and become an attraction point. The total capacity processed by the airports was 4.8 billion passengers per year in 2012 and it is expected to reach 10 billion passengers in 20 years.[30] Based on this potential growth in airport capacity, the airport is shifted "*from being a city airport to airport city*"[31,32], which requires reconsidering of its program and spaces by taking into account strategies and concepts associated with the city. According to a research in the University of North Carolina Kenan Institute, "employment growth near airports has been growing considerably faster than the metropolitan suburban area that the airport is

30 "Exploring the airport of 2030."

31 Kasarda and Lindsay, *Aerotropolis: the way we'll live next* [emphasis added].

32 Mathis Güller and Michael Güller, *From Airport to Airport City* (Barcelona: Editorial Gustavo Gili SA, 2003).

located in."[33] In other words, "since airport areas are attracting businesses, workers and residents at a heightened pace, airport area commercial development reflects employee and resident needs in terms of incidental services, including basic housing, recreation, food services and retail."[34] Thus, the idea of constructing the city around airports is presented as a new formula that fulfills the requirements of spatial changes in order for the survival of capital.

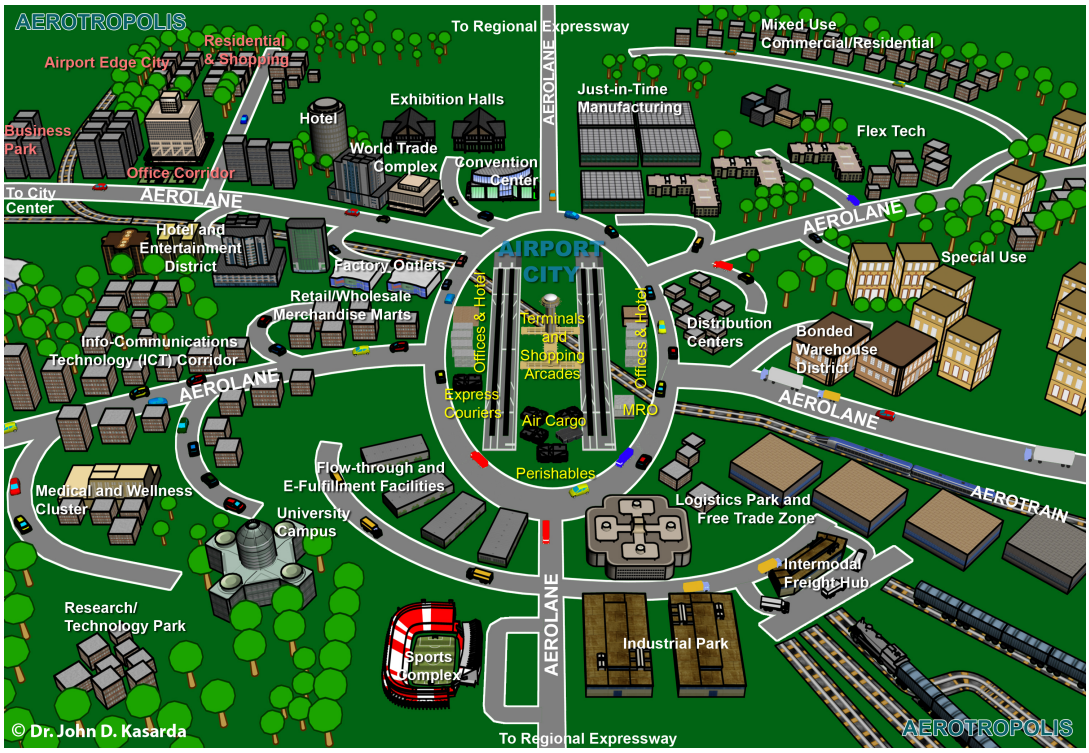


Figure 2.1: The schematic sketch of Aerotropolis, developed by Kasarda.

Today, there are some "Aerotropolis" examples, which are under construction. One of them is "the Circle" project at Zurich Airport, designed as an

[33] John D. Kasarda, ed., *Global Airport Cities* (London: Insight Media, 2010), 23, http://www.globalairportcities.com/book/global-airport-cities-the-book.

[34] Ibid., 23–24.

airport city by Riken Yamamato & Field Shop. While being Switzerland's gateway to the world, Zurich Airport is also an important point of international transit, having, thus, a significant increase on the number of passengers passing through it. In 2008, a total of 22.1 million passengers departed from, arrived at or transferred via Zurich Airport.[35] In this project, architects try to design the city concept with the seven major program modules, which are the health care, education & knowledge, shopping, business facilities, accommodation, entertainment area and other services. All spaces are loaded with programs to attract high attention from both international and domestic tourists. It is expected that these touristic facilities will help to increase the number of passengers up to 24 million. If we add the regional visitors and local customers to this number, then this airport would be the attraction point for Switzerland. These amounts of customers, together with the great number of the working people this complex will need, are important to keep the capital in continuous flow. This project is the embodiment of the "fix" space that Harvey mentions.

During the process, the architectural program of airport is shaped by the expectations of the investors, who aim to attract as many users as possible. People move from a point to another for many various reasons, such as family visits, education, business or tourism. On the other hand, the latter has become the most important one during the last decades, insomuch that even education, business or health travel have been classified as types of tourism. Therefore, tourism has become an important tool to increase the number of users. It is one of the most powerful sectors in the global economy and has potential to bring people together at one location.

The World Tourism Organization defines tourism as "the activities of

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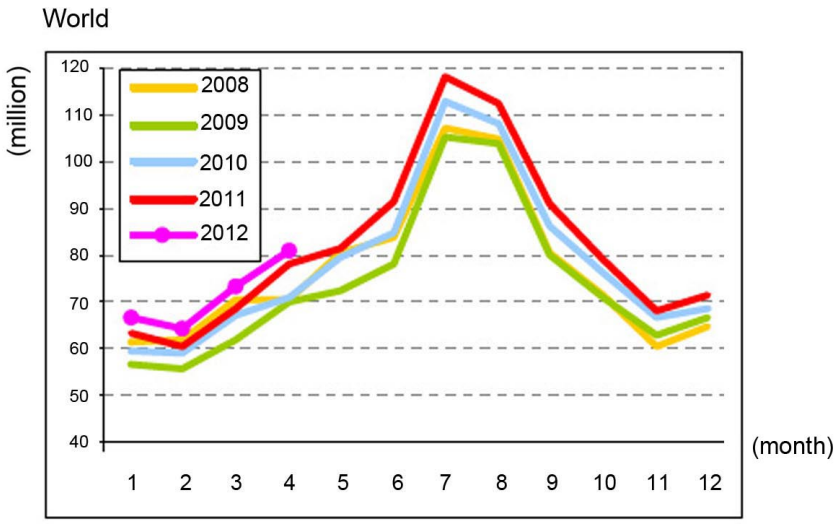
[35] Flughafen Zürich AG, "The Circle," Company website, *The Circle at Zurich Airport*, 2011, http://www.thecircle.ch (accessed February 8, 2012).

people traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".[36] According to UNWTO World Tourism Data, international tourist arrivals grew by 4.4% in 2011 to a total 980 million. Table 2.3 elaborates the data of the first four months of 2012 showing the number of international tourists reaching the record levels comparing to previous years. At the end of 2012, the total number of tourists is expected to reach the one billion mark.[37] The formation of the new types of tourism, molded according to the users' preferences and budget is inevitable in this extremely fast-growing industry.

Table 2.3: Monthly evolution of international tourist arrivals

International Tourist Arrivals, monthly evolution

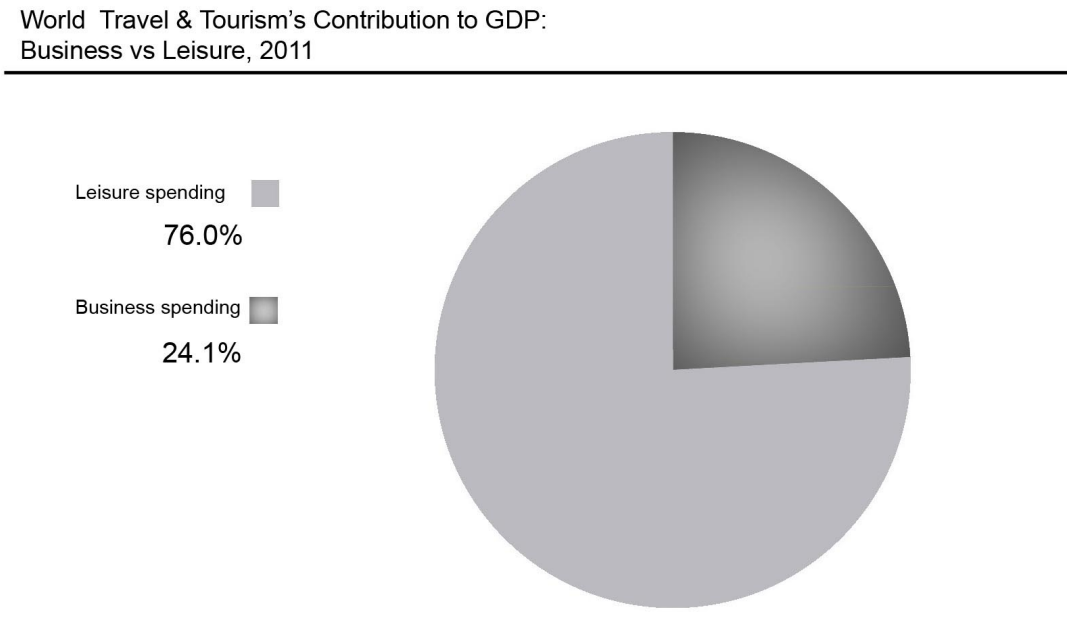


[36] WTO Statistics and Market Research Department, *Collection of Tourism Expenditure Statistics*, UNWTO Technical Manual 2 (World Tourism Organization, 1995), 1, pub.unwto.org/WebRoot/Store/Shops/Infoshop/Products/1034/1034-1.pdf (accessed February 8, 2012).

[37] UNWTO World Tourism Barometer, "International tourism to reach one billion in 2012," Press release (Madrid, January 16, 2012), http://media.unwto.org/en/press-release/2012-01-16/international-tourism-reach-one-billion-2012 (accessed March 8, 2012).

The economic-based city at the intersection of international and regional transportation networks will be financially much stronger than ever. Since the last quarter of the 20th century, the frequency of business related travel has grown at a tremendous pace due to the increase of the international trade volume. A recent study commissioned by World Tourism and Travel Council showed that business travel, as a driver of economic growth, was responsible for one third of the growth in global trade over the past decade.[38] Business travel spending generated 24.1% of Travel & Tourism Gross Domestic Product in 2011. (Table 2.4) Therefore, facilities serving to the business world are indeed spatial solutions created to provide the continuity of the capital circulation. In The Circle example, the mix-use of various programs and their accommodation in a single volume so as to support the idea of the city makes the airport a fixed space of flowing capital.

Table 2.4: World Travel & tourism's Contribution to GDP: Business vs Leisure



[38] *Travel & Tourism 2011*, Annual Review (London: World Travel & Tourism Council, 2011), www.wttc.org/site_media/uploads/downloads/traveltourism2011.pdf (accessed February 8, 2012).

There are also some other examples currently under construction, in which the city is located around the airport. For example, the Durgapur Aerotropolis Project is located near Durgapur in West Bengal, India.[39] The master plan consists of a new airport, a logistic zone, Information Technology industry Hub, an Institutional zone and facilities like educational and medical institutions, houses, shopping and leisure center and a green energy park.

Figure 2.2: Durgapur Aerotroplis Project

The project spreading over approximately 2,182 acres is under construction and the new airport is expected to be completed by the end of the 2012.[40] According to the Economic Times news, the next 8-9 years, the airport city will

[39] "Bengal Aerotropolis Projects Limited," Company website, 2009, http://www.bengalaero.com/ (accessed April 25, 2012).

[40] Ibid.

have a residential population of 68,000 persons, 90,000 visitors from catchment areas like Asansole and Raniganj, and will create 90,000 jobs.[41] This project is spread over an area several hundred times wider than the Circle at Zurich Airport. The city is designed rather than a single volume. Yet, what is the important in both of two projects is to keep the capital in continuous flow. For this reason, economic-based zones take place in the program of the city such as a logistic zone, Information Technology industry hub, and an institutional zone.

2.2 The Control Society of Capitalism

The events of September 11th, 2001 mark a radical turning point in airport security. As a result of these suicide attacks, nearly 3000 people died – including 19 hijackers and 256 civilians on the four planes, which were used as weapons.[42] The hijackers passed through the checkpoints and hijacked four planes by means of small knives, box cutters and pepper spray. According to the Federal Aviation Administration regulations of the time,[43] these items were allowed to be carried on board of commercial flights. Thus, from September 11, the effectiveness of security in airports has been questioned[44] and airport security throughout the world has been significantly tightened along with increasing international intelligence

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41 Anindya Upadhyay, "Airport city in Durgapur to create 90,000 jobs," News & Media, *The Economic Times*, January 14, 2011, http://articles.economictimes.indiatimes.com/2011-01-14/news/28431954_1_airport-city-project-mro-facility-bengal-aerotropolis-projects (accessed March 8, 2012).

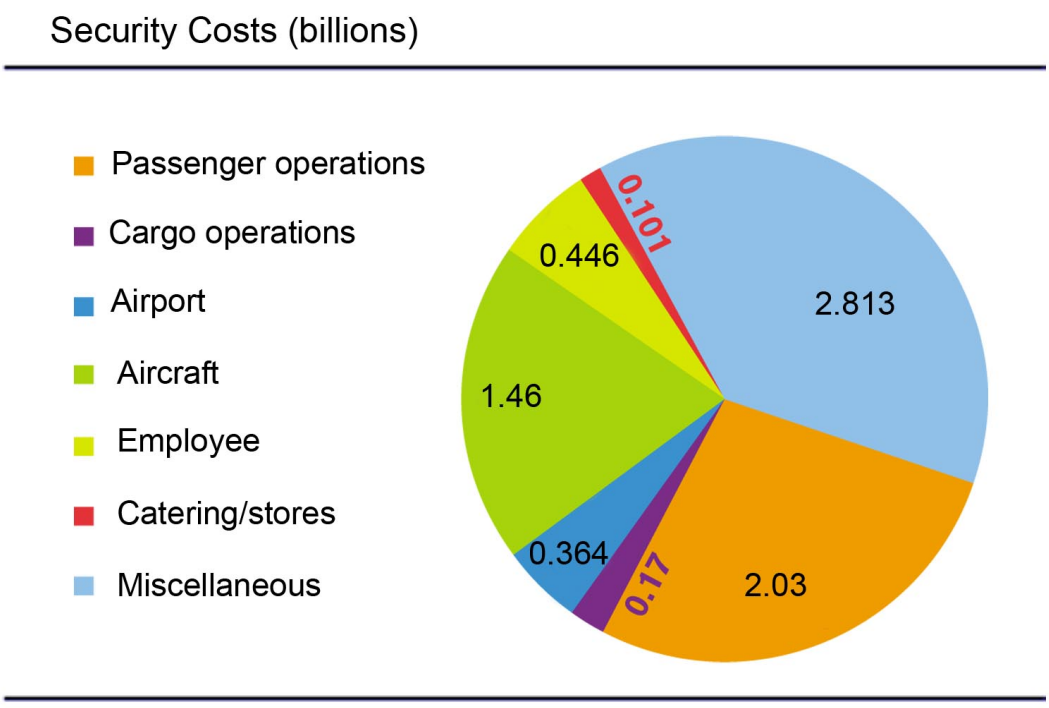
42 *The 9/11 Comission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* (The National Commission on Terrorist Attacks Upon The United States, July 22, 2004), http://www.gpoaccess.gov/911/pdf/fullreport.pdf (accessed May 26, 2012).

43 Ibid., 2.

44 Paul Zielbauer and John Sullivan, "After the attacks: airport security; F.A.A. announces stricter rules; knives no longer allowed," News & Media, *The NewYork Times*, September 13, 2001, http://www.nytimes.com/2001/09/13/us/after-attacks-airport-security-faa-announces-stricter-rules-knives-no-longer.html (accessed May 21, 2012).

cooperation. Before the attacks, private security companies had been responsible for the security of the U.S. Airports. The post-9/11 "Aviation and Transportation Security act" brought the airport security under government's jurisdiction;[45] at the same time forcing more stringent rules in the aviation security. Today, courtesy of latest technology, passengers and their baggage are searched thoroughly, machine —readable passports become mandatory, thus allowing an easier control of the passengers' visa issues and airports are kept under control 24 hours by special security teams, equipment and cameras. The cost of all these huge security measures is estimated to be 7.4 billion dollars annually. [46] (Table 2.5)

Table 2.5: Security Costs - Data of International Air Transport Association



[45] *Aviation and Transportation Security Act*, 2001, http://www.gpo.gov/fdsys/pkg/PLAW-107publ71/pdf/PLAW-107publ71.pdf (accessed January 9, 2012).

[46] "The Impact of September 11, 2001 on Aviation" (IATA, 2010), http://www.iata.org/pressroom/documents/impact-9-11-aviation.pdf (accessed January 9, 2012).

The total budget spent on safety measures is divided among its many layers. The most usually visible measure users face during their travel experience are the airport security checkpoints. Moreover, there are many more safety layers hidden in the background, invisible to the passengers' eyes. For instance, the U.S aviation security system include stages like intelligence gathering and analysis, transportation security inspectors, federal air marshals, federal flight deck officers, etc.[47] Until their boarding on plane, the passengers pass through many layers, visible or not, of a system created to prevent terrorist attacks. (Figure 2.3)

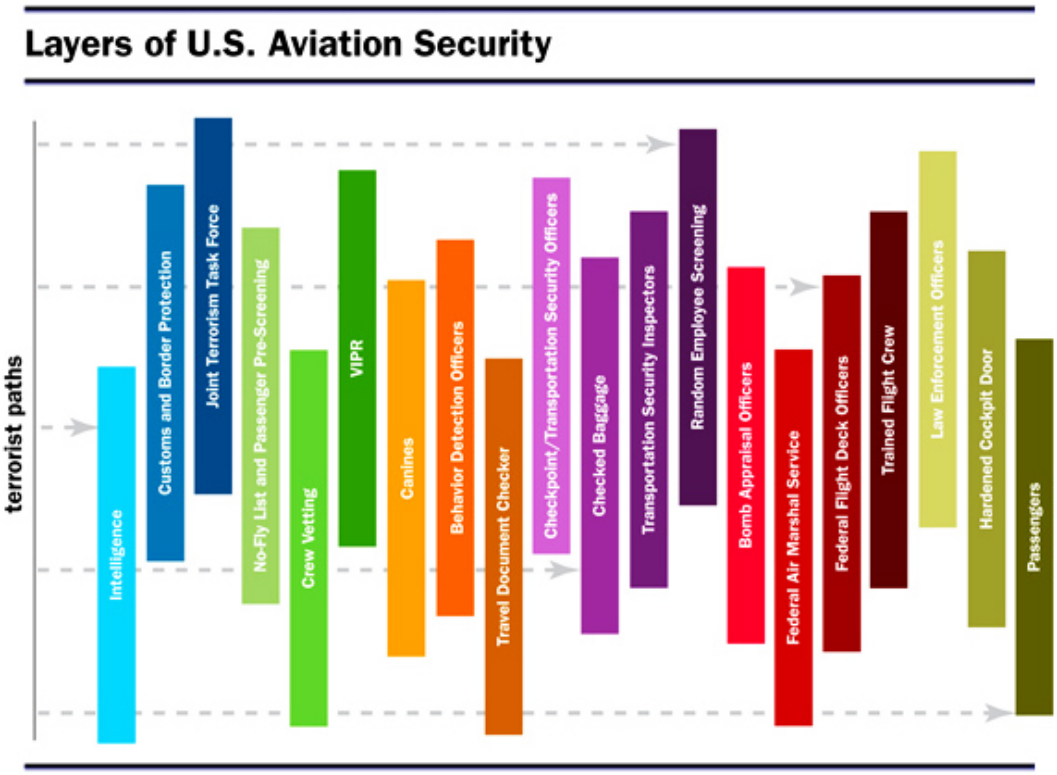


Figure 2.3: Layers of U.S. Aviation Security

[47] TSA, "Layers of Security," *About TSA*, 2012, http://www.tsa.gov/about-tsa/layers-security (accessed January 9, 2012).

The present discussion about safety measures is focused on developing security gates that will ensure the flow of the passengers without creating long queues where they are stopped to be checked for any dangerous object.[48] One of the proposed measures is that there would be gates where passengers will be separated and classified according to the probability of them being potential terrorists.[49] On one hand the flow of airport passengers is being sped up, on the other hand the government classifies them according to the amount of information it possesses. This way it aims to increase the database of peoples' information, otherwise any individual not figuring in it would be considered and treated as a terrorist.

Figure 2.4: IATA 'Checkpoint of the Future'

[48] "The Impact of September 11, 2001 on Aviation."

[49] IATA, "Checkpoint of the Future," *Areas of Activity - Security*, 2012, http://www.iata.org/whatwedo/safety_security/security/Pages/checkpoint-future.aspx (accessed September 9, 2012).

The control mechanism is not limited only with this kind of security measures. As indicated by Gilles Deleuze, the society of this century is in general already a "society of control", shaped by different mediums of control, where the individuals are under the control of the system.[50] He uses the example of the highway to explain the new means of control:

> … A control is not a discipline. In making highways, for example, you don't enclose people but instead multiply the means of control. I am not saying that this is the highway's exclusive purpose, but that people can drive infinitely and freely without being at all confined yet while still being perfectly controlled. This is our future.[51]

Thus, while the users are left free to adjust and use the provided space according to their needs, there are still limits. Although spaces seem to be designed according to the will and wishes of the user they are in fact controlled – the users are kept totally continuously under surveillance. As Ignasi de Solá-Morales i Rubió indicates, "controls are no longer exercised by opaque walls; rather, information and bodies are controlled through the manipulation of desire."[52]

Furthermore, he describes the capitalist as a colonizer that assumes "the role of dominus: lord, master",[53] the aim of his dominion being not only owning the lands, but also exploiting its productive capacity while cultivating the land. Thus, in this new colonization, the power is exercised "through economic and financial domination, which replaces military colonial dominion". The architecture becomes an instrument which contributes to the programming of behavior by designing the

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50 Gilles Deleuze, "Postscript on Societies of Control," *October* 59 (1992): 3–7.

51 Gilles Deleuze, "Having an idea in cinema (on the cinema of Straub-Huillet)," in *Deleuze and Guattari: New Mappings in Politics, Philosophy, and Culture*, ed. Eleanor Kaufman and Kevin Jon Heller (Minneapolis: University of Minnesota Press, 1998), 18.

52 Ignasi de Solà-Morales Rubió, "Colonization, Violence, Resistance," in *Anyway*, ed. Cynthia C. Davidson (Barcelona: Anyone Corporation in association with Rizzoli International Publications, 1994), 122.

53 Ibid., 119.

required spaces for an economy expanding by using the individuals' impulses and desires.[54]

Figure 2.5: Leisure spaces in Singapore Changi International Airport

Top left: The roof top swimming pool at Terminal 1. Top right: Miniature World Landmarks at the T3 Departure Hall. Middle right: The playing areas for children are located in the transit areas in all terminals. Bottom right: Internet terminals located throughout the airport's terminals. Bottom Left: Butterfly Garden located at T3.

This situation was slightly different in the "discipline societies" of the 19th century, described by Michel Foucault. Herein, the ruling power modeled the institutions through Jeremy Bentham's panopticon, a building designed for observing the individuals to control and supervise them by making them feel they are being watched.[55] These institutions like factory, prison, school were "enclosure"

[54] Ibid., 123.

[55] Michel Foucault, *Discipline and punish: the birth of the prison*, trans. Alan Sheridan, 2nd ed. (New

spaces, which had their own rules. On the other hand, Deleuze argues that today's society is different from Foucault's disciplinary society.[56] Today, the individual is still observed and controlled by the ruling power but this control is provided by the methods of competition, rewarding and the open spaces where individual feel free but totally under controlled.

> Enclosures are molds, distinct castings, but controls are a modulation, like a self deforming cast that will continuously change from one moment to the other, or like a sieve whose mesh will transmute from point to point.[57]

Deleuze's definition is not exactly a spatial reading of control society or disciplinary society, but, it is possible to read it in relation to the formation of spaces. If we continue to analyze the "Circle" airport city from the control spaces' point of view, we will see that it is designed with the seven major program modules such as the health care, education & knowledge, shopping, business facilities, accommodation, etc. These headlines of the modules specify general definitions of a compressed city programming. The content of the modules is flexible, inspired by how the medieval cities of Switzerland were used in an extremely flexible way, a fact emphasized in the design concept outline of the "Circle".[58] For example, at times they may be used as a restaurant and at other times, as a brand shop or a comfortable hotel. Different from discipline society of the 19th century, where institutions mainly have a single function, the airport city concept gives people the possibility to go to the airport not just for transportation, but also for shopping, business, education or healthcare. As Foucault indicates that

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York: Vintage Books, 1995).

56 Deleuze, "Postscript on Societies of Control," 5.

57 Ibid., 4.

58 Riken Yamamoto & FIELDSHOP, "THE CIRCLE at Zürich Airport," Company website, *Riken Yamamoto*, 2011, http://riken-yamamoto.co.jp/index.html?page=ry_proj_detail&id=1&lng=_Eng (accessed February 9, 2012).

the factory and the prison are some of the typical spaces of disciplinary societies,[59] we can define the airport cities as the control societies' typical spaces.

[59] Foucault, *Discipline and punish: the birth of the prison*.

CHAPTER III

THE USER

Human as a social presence is constantly in contact with his/her environment. S/he tries to survive by adapting herself/himself to changes in the existing environment. Space, as a social product, is the embodiment of an idea, and serves as a strengthening factor to it. Recognizing the relationships between the user and the spaces of the airport, and reading these spaces through these relations are among the goals of this section.

The everyday behaviors of people, involuntary or not, play an important role in shaping the space that surrounds them. Even if the space is designed to the finest detail, the users comment and use the space as they perceive it. They seek new solutions according to their needs in space. This is a requirement of human nature. In this way, the user has the power to change the architecture. In this chapter, one of the important constituents of the airport architectural program, "the user" will be studied. In doing so, De Certeau's concepts of strategy and tactics and Bourdieu's "habitus" notion will be utilized in order to clarify user-space (of airport) relationships.

3.1 User and Space interaction

The airport is a transition space which is used for passing to different regions and countries by thousands of people every day. The circulation of passengers, baggage and aircraft is a very important problem to be solved in the

planning of the airport. At the same time, as it is mentioned in the 2nd chapter, for the continuity of the circulation of capital, it is required to reach the maximum use of these structures. Therefore, avoiding any functional disruption and increasing the possibilities of the use of space are seen as the most important criteria.

In other words, the airport should continuously and smoothly work as machinery. Thus, architects design the spaces in order to prevent the chaos, which might be created by the heavy traffic. At the same time these spaces restrict and direct the users' movements. For this reason, the mobility of the users, goods and aircraft are controlled with the organization of spaces, with architectural elements and guiding signs. From the car park to the airplane, all spaces that users pass through are designed according to the particular set of rules. Check-in desks are generally designed in the entrance hall of the airport. Without completing the check-in it is not possible to pass the passport control and people unconditionally have to adopt this rule. Bourdieu's "habitus" notion explains this situation.[60] He explains the notions of "habitus" and "field" by using the metaphors of "game" and "player". Players are the members of society, while the field is where the game is played. The field is a network shaped by the power or forms of capital, a structure or a set of relationships, which may be intellectual, religious, economic, cultural, etc.[61] Every game has its own rules (*doxa*), and these rules limit the players and their behavior. The rules of each game are generally seen as fixed and immutable by players. The players need *to have a benefit* from the game (*illusio*), to enter it. These unconsciously adopted result-focused behavioral patterns lead to the creation of a common set of individuals' "predispositions". Entering the game means finding values worth of playing. As one starts playing by acknowledging

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[60] Pierre Bourdieu and Loïc J. D. Wacquant, *An invitation to reflexive sociology* (Chicago: University of Chicago Press, 1992), 98.

[61] Zander Navarro, "In search of a cultural interpretation of power: the contribution of Pierre Bourdieu," *IDS Bulletin* 37, no. 6 (November 2006): 18.

and adopting the already settled order of the field, these values go unquestioned. Bourdieu calls the whole of these "predispositions as habitus".[62] It is about ensuring compliance with the current situation. Therefore, the field shapes the habitus to survive as it requires the individuals to enable the reproduction of the field. Individuals adopt the rules of the field, by means of habitus.

Airport as an example can be seen as a volume that hosts playing fields, each of which is shaped and manipulated according to its own rules. These are the fields of government, commerce, tourism, entertainment and etc. which are solved in one volume. In this volume of the airport, the passengers are the members of society, in other words, the players. They accept the rules of fields without questioning in order to reach their destination points. They don't say anything while being monitored 24 hours/7 days, screened by metal detectors and then checked physically or questioned at passport control points. Their identities also change according the rules of each field they take part and then it becomes obvious that different relations are observed between the user and the space of each field. The meaning attributed to each space changes according to the experiences of the passenger. When it is just a transit space between different countries/cities, it can turn into an entertainment area for the user or into a political space, when s/he faces the security procedures.

However, there are times when the users develop their own "tactics" against the existing mode of operation. They can ignore the rules when considering primary needs like sleep, food, etc. and improve their own solutions. This can be explained through De Certeau's relationship between "strategy and tactics". De Certeau links "strategy" with institutions and structures of power who are the "producers", while individuals are "consumers" acting in environments defined by strategies, by using "tactics". Strategy is the calculation (or manipulation) of power

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[62] Bourdieu and Wacquant, *An invitation to reflexive sociology*, 18.

relationships that becomes possible as soon as a subject with will and power (a business, an army, a city, a scientific institution) can be isolated.[63] So, the strategies emerge from the power relationships. The ruling power has the strength to keep the spaces under continuous surveillance and control with a pan-optic approach, similar to the concept invoked by Foucault.[64] Thus, the ruling power sees and dominates everything; it calculates, defines and controls external influences, objects or powers according to its needs. On the other hand, tactics are "self-imposed practices" developed outside of the ruling power to create a range of motion in an area. Thus, while strategies are rules trying to impose themselves, tactics benefit from the possible cracks on these rules.

The airport is among the structures controlled by power. It is a space, which is under constant surveillance and control with security and passport control areas, monitored 24 hours. This reveals the control of power over space and the users. However, the users may become actors in shaping the spaces according to their tactics. Because of these small yet effective moves of tactics, strategies are forced to redefine themselves and the areas they dominate. Therefore, the user is not only a person that uses the space, but also an agent that transforms the space. Although the decision mechanisms, as explained in the 2nd chapter, determine the content of airport program, the user may have a role in the production of spaces with tactics that s/he developed.

3.1.1 User as a Passenger: Airport as a Transition Space

Although every day millions of people are moving from one place to

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[63] Michel de Certeau, *The practice of everyday life*, trans. Steven Rendall (Berkeley: University of California Press, 1984), 35.

[64] Foucault, *Discipline and punish: the birth of the prison*.

another for religious, business, recreational or leisure purposes by air, road or sea, nowadays can especially be named the golden era of air transportation. According to data from Airports Council International reports, in 2009 airports were frequented by a total of 4.8 billion passengers, international and domestic flights combined. The 10 billion milestone number is expected to be reached in 2027.[65] The airport is a transition space between two points; the points of departure and destination. The main reason of the use of the airplane more than the other transportation for traveling is willing to reach the destination point within the shortest possible time. Thus, speed is an important concept in designing this place. From the car park to the planes, passengers should find the way as quickly and easily as possible. Luggage also has to be delivered to their destination points on time.

Figure 3.1: Passenger traffic during boarding time

[65] Airport Council International and DKMA, *ACI Global Traffic Forecast 2010 – 2029* (Montreal, 2011), http://issuu.com/aciworld/docs/aci_global_traffic_forecast_2010_-_2029_-_sample?mode=window&pageNumber=1 (accessed May 6, 2012).

Along with the expansion of the size of the structure, human and luggage traffic become a serious problem in airport design. The increase in the amount of passengers releases the needs of rational solutions in the planning of transportation. This requires the organization of various circulation networks (i.e. passengers, cars, planes etc.) suggesting that the airport has to be planned like "airplane (a machine)"[66] itself. Thus, it becomes necessary to set spatial standards and measurements for airport design. The solutions like "airplane (a machine) have become necessary in order to prevent the chaos created by the crowd of passengers and to help the user to move faster. After passing through the entrance, passengers are routed to the waiting hall before the flight by using auxiliary elements such as directional signals and digital screens which are announced the flight information. Information desk, check-in zones where the baggage is tagged and taken to delivery and the tickets are controlled in, the waiting areas with dozens of benches are the places that users feel theirselves as passengers mostly.

3.1.2 User as a Potential Criminal: Airport as a Space of Control

The dominant mode of production uses architecture as a tool to produce the (spatial) infrastructure for the continuation of its own existence, such as shopping malls, hotels, etc. The airport is, among others, a product of the dominant mode of production; it has created its own identity and history despite having a background less than a century old. Although they have begun to be erected only just after 1920's, the airports have already become an important part of human's life. Aside from its principal use and meaning (as a transition space and terminal point) that is determined by its functional side, the airport has also grown as an

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[66] Alastair Gordon, *Naked airport: a cultural history of the world's most revolutionary structure*, 1st ed. (New York: Metropolitan Books, 2004), 104.

important space embodied with political meaning. International airports, as non-adjacent connection points between countries, serve as borderline areas or buffer regions which exercise their own laws and rules. They can be also seen as a mechanism that controls and registers the movement of people, their entrances to and exits from the respective country.

This mechanism was mostly formed in response to the dangerous attempts, such as hijackings, arson, bombing etc., which affect the security measures. In 1970s, aerial hijackings became more common as "the fastest way for extremists to gain global attention and advertise their causes".[67] Between 1969 and 1978, more than four hundred international hijackings had happened, involving over seventy-five thousand passengers.[68] After these attempts, airports began to adopt strict security measures as special forces with machine guns, X-ray screening devices which scan the passengers and their baggage whether they have weapons or other dangerous items.[69] Interior spaces became more tightly controlled and sterile. In 1984, the French theorist and urbanist Paul Virilio stated that the airports as the last gateway to the State came to resemble the fort.[70]

Crossings between countries are not anymore only gates on the lines set out on maps. Since the early 20th century, the airport, as a new type of border crossing, began to emerge close to city centers, far from the geographical borders. As a new entrance gate to a State, the airport, which has the capacity to serve millions of passenger in a year has become an important target for terrorists, attacking planes to gain global attention; hijackers attempting to go to their destination; criminals setting fire to the terminal, etc.[71] As such, reconsideration of the airport security has

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67 Ibid., 231.

68 Ibid.

69 Ibid., 233.

70 Paul Virilio, *The lost dimension*, trans. Daniel Moshenberg (New York: Semiotext(e), 1991), 10.

71 Gordon, *Naked airport: a cultural history of the world's most revolutionary structure*.

become inevitable, and as a result of this technological equipment for scanning all the passengers, their baggage and movements started to spread over the terminal spaces. In his book, where he defines airports as “theaters of necessary regulation of exchange and communication”, Virilio emphasizes the fact that they became breeding and testing grounds for high-pressured experiments in control and aerial surveillance performed for and by a new "air and border patrol."[72] These new regulations in the security system have also affected the airport architecture. Before 1970s terminal lobbies were designed according to the open-style planning but since then they have been divided into two zones: “sterile and non-sterile”,[73] which are connected to each other with narrow corridors from single-entry points.

After 9/11 event, the passenger is treated as a potential criminal whose movements and attitudes are under control. In *A week at the Airport*, written by Alain de Botton after staying at the airport for a week and experiencing the spaces of Heathrow Airport, he asserts that passengers are seen as suspects, guilty until proved innocent.[74] Instead of the airlines or private contractors, federal employees are tasked with the security of aviation in the United States under the name of Transportation Security Administration.[75] Airports are now not only the transition area but have also become the space of authority. The entire airport is monitored 24 hours and 7 days; vehicles and baggage are scanned by explosive detection machines; passengers are screened by metal detectors and then checked physically. In the United States the Transportation Security Administration also use “advanced imaging technology"[76] to screen the passenger for metallic and nonmetallic threats

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72 Virilio, *The lost dimension*, 10.

73 Gordon, *Naked airport: a cultural history of the world’s most revolutionary structure*, 235–236.

74 Alain de Botton, *A week at the airport* (New York: Vintage International, 2010), 52.

75 “Airport Security,” News & Media, *The NewYork Times*, May 14, 2012, http://topics.nytimes.com/top/reference/timestopics/subjects/a/airport_security/index.html (accessed June 21, 2012).

76 TSA, “Advanced Imaging Technology,” *Traveler’s Guide*, 2012, http://www.tsa.gov/travelers-guide/advanced-imaging-technology-ait (accessed May 21, 2012).

including weapons, explosives and other objects concealed under layers of clothing without physical contact which is widely contested by the public opinion as violation of physical privacy.[77]

Figure 3.2: *Security controls in airport with x-ray screening device*

[77] Nedra Pickler, "Group says body scanners an 'unreasonable search'," News & Media, *The Washington Post*, March 10, 2011, http://www.washingtonpost.com/wp-dyn/content/article / 2011/03/10/AR2011031003628.html (accessed May 30, 2012).

3.1.3 User as a Potential Trespasser: Airport as a Gate to the State

In Roger M. Smith's *Citizenship, Borders and Human Needs*, borders are defined as "geographic boundaries demarcating or defining political entities or legal jurisdictions".[78] Although airports do not precisely correspond to this definition due to lack of geographic boundaries, they are spaces of political entities or legal jurisdictions as mentioned in the definition and are classed as the border crossings of the contemporary world through which millions of people and cargo move in and out of the countries. Governments assume the control of these new entrance gates to their countries to overcome the security vulnerability caused by the flow of many passengers or anything able o carry a threat, from livestock to plants and goods across a border. Also according to international law, "states can secure *their* borders and decide on *conditions* of entry and stay, as well as removal".[79] Hence, airports are not only transition areas but also governments' checkpoints to control the movement of citizens, the availability of immigration and the security of the respective countries.

On the other hand, all countries have different rules and procedures in the border control to allow the person to enter their territory. The visa system is one of the filtering systems to determine whether one may or may not enter the territory. The passport control area, positioned in the sterile zone, is the place that the passengers' visas and passports are controlled, the last control point before the passengers' entry to the country or departure to the border. The passport control officer has an interview with the passenger about his/her stay by asking such questions such as reasons of arrival, duration of stay, the place to stay. Even if the

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[78] Chandran Kukathas, "Expatriatism: the theory and practice of open borders," in *Citizenship, Borders, and Human Needs*, ed. Rogers M. Smith, 1st ed., Democracy, Citizenship, and Constitutionalism (Philadelphia: University of Pennsylvania Press, 2011), 235.

[79] UN International Organization for Migration, *International Migration Law*, 2007, http://www.rcmvs.org/documentos/IOM_EMM/v1/V1S06_CM.pdf.

passenger has a visa and the other documents related to the border crossing, the officer has a right to revoke the documents if a threat is perceived. In this area, which is the part of the airport space where the state power is felt most than the rest, the passenger is seen and questioned as a potential trespasser, without making difference of nationalities. As an example, while entering the territories of European countries, the passport control areas are divided into parts, named like European Citizen, Non-European Citizen or Other Nationalities. The reason of this differentiation is the implementation of the Schengen agreement, which recognizes to the citizens of European countries, the right of free movement through these territories. Therefore, they are able to pass the border control in less time than other countries' citizens.[80]

The use of an airport as a transportation hub is increasing day by day, causing long queues at the control points. The plan layout of the passport control area resembles the section of a funnel – the crowd of passengers passes from a huge hall to the last waiting area, before boarding through control boxes placed such that only two persons can go through. Portable Crowd Control barriers are placed throughout the hall so that the crowd can smoothly flow through these bottlenecks.

The waiting intervals at these points turns into suffering because of long queues. During the control, many people are faced with visas cancellation, missing documents or denial of entry into the country due to governmental policies. They are forced to wait in airport spaces sometimes for several days until the documents are in order. In this way, due to different political procedures there have been seen various spatial uses in the airports. For instance, there are people staying as a refugee or protesting their governments because they have been exiled: benches

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[80] "Heathrow passport control waits of more than an hour," News & Media, *BBC News*, April 13, 2012, http://www.bbc.co.uk/news/uk-england-london-17701212 (accessed June 6, 2012).

have been turned into their living areas, and then airport space is turned into protest area.

Although architects design the space according to a scenario, the space could possibly be experienced with unexpected ways by its users. As David Harvey argues, "this does not mean that practices are determined by built form (no matter how hard the planners may try); for they have the awkward habit of escaping their moorings in any fixed schema of representation".[81]

There are some examples of this unexpected experience which causes some changes in the perception of space in the airport. In these examples, despite having different reasons to stay, people have remained trapped in the airport for a long time and made of the terminal their homes. Spending too much time in an airport opens up the way to collect and record memories and experiences different than other passengers.

The Terminal, a film directed by Steven Spielberg in 2004 is inspired by a real story. Merhan Karimi Nasseri, an exile who has been expelled from Iran for taking part in protests against the Shah, lived in the departure lounge of Terminal One in Charles de Gaulle Airport from 1988 to 2006.[82] He was trapped in the airport without any country of origin to be returned to, or country to be permitted to stay in. So, he started waiting to be accepted by any possible country. In the meantime, he continued his life on the benches of the airport's departure lounge as an

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81 Harvey, *The condition of postmodernity*, 204.

82 Suzanne Daley, "Roissy journal; 11 years caged in an airport; now he fears to fly," News & Media, *The NewYork Times*, September 27, 1999, http://www.nytimes.com/1999/09/27/world/roissy-journal-11-years-caged-in-an-airport-now-he-fears-to-fly.html?pagewanted=all&src=pm (accessed May 7, 2012) After being shipped out of the country by the Iranian government, he applied for political asylum and was given the refugee status from the UNHCR in 1986, thus permitting the entrance to any European country, but had his papers stolen and after that arrested in the airport. Citing the news report, "while French authorities have insisted that Mr. Nasseri was on French soil illegally, they have not deported him because they could find no country that would accept him. After he stayed 15 years on a bench, with the help of French human rights lawyer, he finally proved his acceptance as a refugee status in 1986.

emigrant. He showered in the public restroom nearby, ate in the terminal's restaurants, bought books from the bookstore and clothes from airport boutiques. He used the terminal's laundry to clean his clothes. A publication of the time described his situation as "the terminal provides him with all his needs. The airport switchboard directs the rare telephone call for him to the pharmacy or one of the other shops nearest where he sits. He receives mail addressed to him at the "Zone Boutiquaire" in Terminal One."[83] This kind of story called attention to the news media and was even filmed as a documentary. In the end, director and producer Steven Spielberg bought the rights to his life story as the basis for *The Terminal*. In another article, Matthew Rose qualifies Nasseri as a postmodern icon, a traveler whom no one will claim.[84] On the other hand, his experience among legal enforcements abruptly impacted many debates in the fields of architecture and sociology, also to the rethinking of the airport structure. New ways of use began to emerge due to the relations between people and the political stance of the airports. There have been even people who out of curiosity after having watched the film, started living in the airport terminals[85, 86] and also the refugees, stayed at the airport

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[83] Craig S. Smith, "The Saturday profile; 16 years on an airport bench, and 15 minutes of fame," News & Media, *The NewYork Times*, August 21, 2004, http://www.nytimes.com/2004/08/21/world/the-saturday-profile-16-years-on-an-airport-bench-and-15-minutes-of-fame.html?src=pm (accessed May 7, 2012).

[84] Matthew Rose, "Waiting For Spielberg," News & Media, *The NewYork Times*, September 21, 2003, http://www.nytimes.com/2003/09/21/magazine/waiting-for-spielberg.html?src=pm (accessed May 7, 2012).

[85] There are many news reports about people who live for a while in airport terminals inspired after having watched the movie "The Terminal". An example is the Japanese Hiroshi Nohara decided to stay in the terminal of Benito Juarez International Airport of Mexico City after arriving from Tokyo. Associated Press, "Mexico: For Resident of An Airport, a New Place To Stay," News & Media, *The NewYork Times*, January 1, 2009, http://query.nytimes.com/gst/fullpage.html?res=9F01EEDB123FF932A35752C0A96F9C8B63 (accessed May 14, 2012).

[86] Another example is situated in Turkey. After watching the movie "The Terminal" in 2004, Ahmet Avunca from Istanbul has passed five years at intercity bus terminals preparing for the life in the airport. Stating that he is homeless, he lives in customs-free zone of the Atatürk Airport, which he finds to be more safe than any kind of housing. "Terminal'i izledi Havalimanı'nı mesken tuttu," News & Media, *Sabah*, March 27, 2010, http://www.sabah.com.tr/Yasam/2010/03/27/terminali_izledi_havalimanini_mesken_tuttu (accessed May 6, 2012).

as a similar way like Nasseri[87] Actually this is a kind of tactic, benefits from the possible cracks on the rules of the ruling power organized to create a range of motion in an area. Thus he attracts the ruling power's attention.

Airports have also been stages of some alternative events and activities like protests. The passengers, deported or exiled from their countries or whose entries to other countries are denied, try to have their voice heard in this space. A Chinese human rights activist Feng Zhenghu is a remarkable example.[88] He was denied entrance into his own country, eight times due to his prior works as a human rights activist against the government. Although he had a visa to enter Japan, he wanted to return to his own country. So he began his protest, sleeping near an immigration checkpoint, at Tokyo's international airport in November, 4th 2009. He tried to survive with the help of tourists who provided him food and clothes, and he protested his exile by wearing t-shirts with messages in Chinese and English that explained the whole situation and used the social networks to share his life inside the airport, in diplomatic purgatory.[89] After his three months-protest, he was allowed to re-enter his country. In this respect, it is possible to say that airports have started to be an important space to express citizens' rights. According to *The*

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87 CBC News, "Emotional reunion for Iranian family at Vancouver airport," News & Media, *CBC News Canada*, March 15, 2007, http://www.cbc.ca/news/canada/story/2007/03/15/kamalfar-family.html (accessed April 16, 2012) Another story about being refugee in airport is about Iranian family, Zahra Kamalfar, her daughter and son who lived in a Russian airport for 10 months from 2006 to 2007. Zahra Kamalfar and her husband were arrested for taking part in a pro-democracy rally in Iran in 2005. After she learned her husband was executed, she found a way to flee Iran with her children. Their destination point was Canada, reached by passing through Russia and Germany. But on the way, German officials noticed their fake documents and sent back to Russia, as international law requires and family were arrested in Russia. For one year they lived in a refugee hotel room under house arrest until they are relocated to the airport. From this moment, They started to sleep on the benches until they were accepted from Canada.

88 "Chinese human rights activist stuck at Tokyo airport," *The Guardian*, November 13, 2009, http://www.guardian.co.uk/world/2009/nov/13/chinese-activist-japan-airport (accessed May 14, 2012).

89 Kyung Lah, "Chinese activist in limbo at Tokyo airport," News & Media, *CNN World News*, December 3, 2009, http://articles.cnn.com/2009-12-03/world/japan.chinese.activist_1_feng-zhenghu-concourse-chinese?_s=PM:WORLD (accessed May 14, 2012).

Guardian, in China, many activists had been arrested for non-violent protests and some of them had been forced to exile like Feng Zhenghu because of the Chinese government's rejection of public dissent of any kind. But apparently his protest became the key to return his country.[90] There are some people also protest their political situation by living at the airport.[91,92] Based on these cases, it is possible to say that there is more than being passenger in the airport.

Figure 3.3: Chinese human rights activist Feng Zhenghu's protest in airport

[90] "Chinese activist ends Tokyo airport protest," News & Media, *The Guardian*, February 12, 2010, http://www.guardian.co.uk/world/2010/feb/12/china-activist-home-tokyo-airport-protest (accessed April 15, 2012).

[91] Another example of protest is Sanjay Shah, who flew from Nairobi to Britain in 2004. He renounced his Kenyan passport and requested to live in Britain. Immigration officials at Heathrow airport refused him to enter the country despite his British overseas citizen passport. He was sent back to Nairobi. However he refused to leave the airport, fearing arrest due to lack of Kenyan passport and started to live in airport. He spent his 13 months sleeping in the departure lounges of the Jomo Kenyatta airport. He told The New York Times his staying in this place was also protesting at the refusal of the British government to give him full citizenship. After months, his application has been approved by officials from the British High Commission who emphasized his protest had been pointless and played no part in the decision to give the British passport. Adam Mynott, "UK waves in Kenya airport dweller," News & Media, *BBC News*, June 29, 2005, http://news.bbc.co.uk/2/hi/4635011.stm (accessed May 15, 2012).

[92] Adam Mynott, "Kenya airport dweller is British," News & Media, *BBC News*, July 12, 2005, http://news.bbc.co.uk/2/hi/africa/4673103.stm (accessed May 14, 2012).

3.1.4 User as a Consumer: Airport as a Commercial Space

Although airports have a strong political background and are attraction points for terrorists, they have reached the capacity to serve millions of passengers in a year due to the increase in the commercial investments in air transport. Since the 1920s when the airports were designed for commercial use, airport has gained an important position as an architectural (spatial) infrastructure. The airport, usually described as a transition space, has already become a commercial place. In other words, the experience of waiting in airports is transformed into a consumption activity, aiming to get more pleasure. The first examples of consumption activity used in airports were shopping units, which have become indispensable since the first duty-free shop established in 1947. Nowadays, the airport as a fun place includes tax-free shops, fast-food outlets, cafés, food courts and restaurants, places for listening to music and drinking as well as personal services such as beauty salons and hairdressers.[93]

In *Airport Interiors Design for Business*, Steve Thomas-Emberson describes the rise of airports in the business world in the following sentences:

> Today's airports have become veritable temples to government and municipal egos- and that's without adding the ' signature architect's' name to equation. In short, airports now have an iconic status attached to them, no longer shipping points to far-off places but cultural symbols indicating how a country, city or province positions itself. Airports themselves have become conduits for business and tourism. …. The bigger the airport becomes as demand grows, the more advanced the facilities will need to be... [94]

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[93] Justine Lloyd, "Airport technology, travel and consumption," *Space and Culture* 6, no. 2 (May 2003): 93–109.

[94] Steve Thomas-Emberson, *Airport interiors: design for business* (Chichester: Wiley, 2007), 12.

Figure 3.4: Tax-Free shops the departure area of Copenhagen Airport, Kastrup.

Figure 3.5: Super Car Competition taking stage in Copenhagen Airport, Kastrup.

The passenger defines herself/himself in a space different than transition area after s/he passes through the security and enters the sterile zone. The passenger is by now a consumer, too. The passenger may shop in stores that are exempted from the payment of local or national taxes. S/he could wait her/his flight in a cafe or bar, drinking or eating or s/he could spend her/his time, attending a competition to win the car.

The passenger, relaxed after shopping and dining, is ready to wait in queue in front of the last checkpoint of the government. This place is the relaxation zone between the security and passport control area. The shopping had its peak at the same time with the radicalization of security enforcements after September 11, 2001. After the attacks the use of airports fell and, at the same time, the growing cost of the necessary bigger security enforcements had to be in equilibrium in a certain way. The solution, as Emberson says, was enlarging the commercial profit.[95]

3.1.5 User as a Tourist: Airport as a Space of Leisure

It is possible to see it happening at many airports throughout the world: international arrivals area is used for the world premiere of carnival. While, in one case, the entrance of airport plaza is turned into the area for watching matches on a big screen, in other case the airport's information center becomes an exhibition area. The baggage carousels are transformed into a theater to entertain and amuse passengers with mime, and the car park's ground covered in sand for hosting a polo tournament, with riders and their horses.[96] Citing some passengers at the Singapore Changi Airport, "one can easily spend a day or two inside the airport

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[95] Ibid.

[96] "Enhancing the passenger experience," *Airport Business*, October 2010, http://www.airport-business.com/2010/10/enhancing-the-passenger-experience/ (accessed May 20, 2012).

without getting bored"[97] or even when travelling "with three kids, it was amazing – endless entertainment for them, with feeding the kois, butterfly room, play areas, free internet."[98] Apparently, features like these made possible for the Singapore Changi Airport to win the 2010 World's Best Airport Award through the votes of passengers.[99] These comments explain clearly how the shift from passenger to tourist in experiencing the airport, is perceived from the subject.

Figure 3.6: Events organized aiming to gather people for fun and advertising.

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97 Arkantos, "Airport Review," *The Guide to Sleeping In Airports*, July 8, 2010, http://www.sleepinginairports.net/list.asp?pagen=1136&thef=list&s=&act=1&did=7031 (accessed May 5, 2012).

98 Ahendo, "Airport Review," *The Guide to Sleeping In Airports*, January 25, 2010, http://www.sleepinginairports.net/list.asp?did=6696 (accessed May 5, 2012).

99 Skytrax, "Singapore Changi Airport is the world's best Airport in 2010," *Skytrax - The World Airport Awards*, n.d., http://www.worldairportawards.com/Awards_2010/Airport2010.htm (accessed May 12, 2012).

Figure 3.7: Leisure spaces in Singapore Changi International Airport.

In *Tourist Cultures: Identity Place and the Traveler*, the authors discuss the spaces of tourism, and make the definitions of tourist cultures, tourist identity and tourist spaces. They explain that spaces of tourism are spaces of movement, destination, experience, memory and representation. Yet, they are also spaces of desire, fantasy, creativity, liminality, reordering and enchantment. Increasingly, tourism is about the spaces of the virtual and the imaginary, too.[100] In this sense, beyond being a transition space, the airport becomes a space of tourism that in turn creates its own spaces of movement, destination, experience, memory and representation and also spaces of desire, fantasy, creativity, liminality, reordering and enchantment.

[100] Stephen Wearing, Deborah Stevenson, and Tamara Young, *Tourist cultures: identity, place and the traveller* (Los Angeles, London: SAGE Publications, 2010), 10.

Figure 3.8: Airport dance club at Spanish island of Ibiza.

In 2011, the Vancouver Airport Authority launched a contest to choose someone to live at YVR Vancouver Airport for 80 days and record his/her experiences to share with the world.[101] This advertisement/contest was for celebrating of YVR'S 80th anniversary and the chosen person would tell about the life in Vancouver Airport and the impact of YVR on the economy and community by posting videos, photos blog posts and social media content. Jaeger Mah, a graduate of Entertainment Business and Multimedia Applications, who runs his own video production company, Punchline Productions, was selected by public vote and started to live in the airport as a tourist. He spent his nights at the airport hotel, swam in the river, played with children in Airport Secondary School, had fun at the bars and spent time with the workers and passengers, etc.

[101] Jaeger Mah, "live@YVR," Blog, 2011, http://liveatyvr.tumblr.com/ (accessed June 27, 2012).

3.1.6 Exclusive Spaces for Privileged Users in Airport

So far, this part of the thesis has analyzed how users' identities have been changing according to their interaction with spaces as in the case of passing through the security gate, they are seen as potential criminals. And after crossing the security area, they are faced with commercial areas with lots of shops and their identities shift from potential criminals to consumers. In some cases, users may have a privileged position in the conception of space more than adapting to it. As an example, the spaces of VIP/CIP lounges are designed considering politically and commercially important users' expectations and aspirations in airports. In these places, the user's status is of primary significance. So the conceptions of spaces are formed around the statement that these kind of users can have the privileges to reach plane passing through spaces different from those of the other passengers.

Figure 3.9: London Heathrow Virgin Clubhouse in Heathrow Airport.

The airport's operational procedures are also different for these VIP and CIP passengers. VIP users don't have to wait in the queue of passport control points to reach the plane. Their security control is separated from those of the others so they can pass via the control point through an accelerated process. The VIP and CIP services assist these passengers during all entrance procedures, including extra security guarding against any possible criminal activity or other attacks to these passengers. Their leisure spaces such as restaurants, bars, healthcare facilities are also separated from the same other spaces designed for the rest of the passengers. These specific spaces are designed according to the needs dictated by the status of their specific users and in these spaces, the airport is not a multi-identity place anymore – it has only one identity that constructs the space. The use of these privileged and protected spaces is only open to member passengers, due to the services offered and also for security reasons, as many statesmen or bureaucrats are frequent users. Resembling a private airport inside the airport, these sections including their own circulations, are secluded from the rest of the airport.

3.2 Reactions of the Residents in the vicinity of Airports

Land use and environmental control in the airport planning is standardized by ICAO in 1985, in order to ensure the safety of landing and departure of aircraft and to provide the best possible conditions for the needs of the airport, the community in the surrounding area and the ecology of the environment.[102] Noise is admitted as one of the most important environmental problems for the surrounding of airports. Noise levels are increasing parallel to the number of

[102] International Civil Aviation Organization, *Land Use and Environmental Control*, vol. 2, 3 vols., 3rd ed., Airport Planning Manual 9184 (Montreal: ICAO, 2002).

aircraft's movements. Until this century, airports generally have been constructed at a distance from the existing cities, because of the risk of aircraft accidents and environmental effects of airports like a noise problem. However, with the spreading of cities, some airports have been squeezed within the cities.

Figure 3.10: Protests of the residents living in the vicinities of the Frankfurt am Main regarding its expansion.

The residents who live in the vicinity of the airport, being disturbed by the aircraft engine noise during the landing and takeoff, have organized protests periodically against these nuisances. European Union Against Aircraft Nuisances (UECNA) is a network of almost 40 airport community campaign groups across Europe. Their main concerns are the noise for residents living around the airports and under the flight path; the impacts of aviation on the climate change; destruction of both communities and people's land because of the expansion of

airports.[103] They have organized protests periodically against these nuisances. These protests are seen especially in European Countries such as Germany, Italy and France. As an example, the residents around Frankfurt Airports have been protesting weekly the increase in the noise level which prevents them from sleep ing at night.[104] As a result of the protests, night flights have been gradually banned. Before 2009, up to 17 flights per night were allowed, while in 2011, all flights between 23:00 and 05:00 were banned.[105] Since Frankfurt Airport opened its 4th runway in October 2011, the residents living in the vicinity of Frankfurt Airport also want the flight ban from 23.00 to 05.00 to be extended by two hours more and the new runway to be shut down.

Today, airports have began to be built at the core of cities. In this context, the existing cities' struggles with airports shouldn't be ignored during the design. The integration of the airport and the city became necessary to be reconsidered according to these rebellions or similar ones around the world. The balance between humanity and profit must be established correctly. Although the airports provide an economic contribution with their expansions, they forced the owners of the surrounding land to change their lifestyles by capturing their fields. For example, French farmers were forced to leave their land to build the new Nantes airport, and then in May 2012, they went on hunger strike for one month to stop this new airport in France. They managed to postpone the construction for two years.[106,107] In another event, farms operating around Esenboğa Airport, Ankara, are

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[103] UECNA, "European Union Against Aircraft Nuisances", 2012, http://www.uecna.eu/ (accessed February 9, 2012).

[104] AirportWatch, "Frankfurt Airport", 2012, http://www.airportwatch.org.uk/?page_id=7420 (accessed August 24, 2012).

[105] Victoria Bryan and Peter Maushagen, "Lufthansa hit as Frankfurt night flight ban upheld," News & Media, *Reuters*, April 4, 2012, http://www.reuters.com/article/2012/04/04/uk-frankfurt-nightflights-idUSLNE83300W20120404 (accessed June 4, 2012).

[106] "French campaigners go on hunger strike," *Exchange*, June 2012.

[107] ACIPA, "The 28th day of the Nantes airport hunger strike – 5 hunger strikers are still continuing.," *AirportWatch*, May 7, 2012, http://www.airportwatch.org.uk/?p=1869 (accessed

also required to be closed because of the "bad" smell, emitted by cattle. They also protested this decision by trying to close highway leading to the airport.[108,109]

Due to its isolated nature, an airport establishes a minimum relationship with the existing city. In that case, the question how the city programs and airports can be integrated should be reconsidered in this context.

3.3 Relations Between User and Airport Program

As described in the previous sections, an airport is composed of multi-spaces with various characteristics. User's identity has been changing according to her/his interaction with these spaces. While crossing the security zone, the user is considered a potential criminal. After the control point s/he becomes a consumer among dozens of stores: and a tourist while hanging around by watching the shows exhibitions or drinking in cafes, or, s/he is seen as a potential trespasser while crossing the gate of the state. As one moves through different sections, the perception of the space by the people and their status in it keeps changing according to the rules dictated by the dominant political powers such as state and capital. While being checked in the security zone, waiting in the queue of passport control reflects the political side of the space. The political stance is balanced with the places which the user feels comfortable by socializing with activities such as shopping or dining in a buffer zone between two countries. The airport as a border crossing is not only politically important but also it becomes one of the most

August 27, 2012).

[108] "Esenboğa'da 'kötü koku' krizi," News & Media, *Sabah*, January 6, 2011, http://www.sabah.com.tr/Yasam/2011/01/06/ankarada_kotu_koku_krizi (accessed August 30, 2012).

[109] "Eseboğa'da besiciler isyan etti," News & Media, *Ankara Haber*, August 27, 2012, http://www.ankarahaber.com/haber/Eseboga-da-besiciler-isyan-etti/116763 (accessed September 4, 2012).

important cornerstones of the 21st century economy. Used by millions of people, these spaces serve as gears in the capital machine. This is why, despite the increased control by the political powers/ state agent, the zones where this control is exercised are hidden among the leisure areas. Thus, the user finds relief in shopping and entertainment after passing the potentially stressful control zone. The airport as a commercial space, as a gate of the state, as a space of leisure or as a pavilion for the country has been assigned more than one spatial meaning, and the user's identity changes accordingly.

As we have discussed previously about Bourdieu's habitus, user performs the action according to conditions, probabilities and concessions that offered by space.[110] So that user obeys the conditions of the space that s/he is located in. However there may be some exceptional cases where the users resist the available spatial functioning. Obedience to the conditions of the space is eliminated in the case of primary needs, such as sleeping. It becomes possible to see the people, sleeping on benches or on the floor.

Figure 3.11: Passengers sleeping on benches or floor at an airport.

[110] Pierre Bourdieu, *Outline of a Theory of Practice*, trans. Richard Nice, Cambridge studies in social anthropology 16 (Cambridge, UK: Cambridge University Press, 2003).

According to De Certeau, the user develops tactics to overcome shortage in space. Using space as a means of protest or making space a home are the tactics developed by the user. These kinds of experiences are the signs of necessity for remodeling and rethinking the space.

CHAPTER IV

THE PRODUCT

4.1 Concepts/Ideas that shape Airports

To define how and according to what strategy a given space has been produced, according to Lefebvre, it needs to be analyzed through a critical analysis, rather than simply based on a scientific point of view. In this context, this thesis examines the production of space in three main sections which respectively analyze the process, the user and the product. Previously, the fact that the process is controlled by the mode of production has been discussed and, as Harvey indicates, continuously growing and multiplying "fixed spaces" are crucial for the sustainability of the capital.[111] Furthermore, the concept of space in our days' societies of control and the effect that social and economic competitive relations (corporation) have on space have been investigated previously in this study.

Citing Lefebvre, the mental space (conceived) as a dominant space in society is related to representations of power and ideology and control.[112] It is a space conceptualized by scientists, architects, urban planners and social engineers, helping the system constructing the infrastructure to represent its ideology.[113] In this sense, since the end of the 20th century the airports have become very important cornerstones of economic development. Among many other concepts of different fields and designs, the recent launch of the *aerotropolis* concept, has been trying to consolidate this condition.

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[111] Harvey, "Globalization and the 'Spatial Fix'," 25.

[112] Lefebvre, *The Production of Space*, 6.

[113] Ibid., 38.

This concept, a special example of the mental space, was developed upon the need for the capital circulation and stability of the economic growth by the economist and academician, John D. Kasarda, who has been focusing on the new urban form of the airport through the global management strategy.[114] He believes that urban design can help make both terminals and their surrounding development interpretable, navigable and therefore welcoming. Accordingly, airports can become meaningful places by being evolved into 21st century cities that are economically efficient, aesthetically pleasing and environmentally sustainable.[115]

The *aerotropolis* concept, where the design of airport has been shifted from city airport to airport-city, is the base of the examples selected in this section, which will discuss how the relationship between space and mode of production shapes the space itself.

4.1.1 Aerotropolis

The concept of "an airport integrated into the city", which Kasarda emphasizes, is not a new idea. In his 1929 article, "Building the City around the Airport", architect Thomas Mitchell mentions the relationships between aviation and urbanism, writing about the widely accepted opinion that rapid transport has contributed to the development of civilized life.[116] At the end of the 1920's, the topics of airport locations and accessibility were taken into consideration and it was stated that airports should be as accessible as railroad stations or terminals and that they should be situated close to the central business district because of

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[114] Kasarda and Lindsay, *Aerotropolis: the way we'll live next*.

[115] Kasarda and Appold, "Are Airports Non-Places?," 16.

[116] Janna Eggebeen, "Airport age: architecture and modernity in America" (PhD, New York: City University of New York, 2007), 148.

their potential in the economic development of the city.[117] During the same period, the architect Francis Keally portrayed a city which included business and residential settlements integrated into the airport structure. He predicted that future cities would spread out over large areas and the building roofs would become landing platforms for aircraft.[118] In 1939, the name "aerotropolis" was firstly used by the New York commercial artist Nicholas De Santis in his project of metropolitan sky-port of tomorrow. His proposal, similar to Keally's idea, included a 200-story building capped by an eight city blocks long and three blocks wide field which would incorporate landing platforms for aircraft on its roof.[119]

Since the 2000's, the "Aerotropolis" concept developed by Kasarda, has attracted investors' and governments' attention and has begun to be implemented in new airport designs. The concept of a city built around an airport with housings, offices, shops, schools is currently becoming so commonly that there are some aerotropoli under construction such as Durgapur and Ludhiana in India to be completed by the end of 2012.[120] This concept derives its success from its great potential to produce "fixed spaces" necessary for the capital continuity, as mentioned in the 2nd chapter. According to Kasarda, today's airports (especially larger ones) are not only places where aircraft operate and passengers and cargo transit, but they have also become airport cities.[121] He means that major airports have incorporated non-aeronautical facilities and services such as hotel and entertainment facilities, conference and exhibition complexes, shopping centers in addition to their core aeronautical infrastructure and services.

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[117] Ibid., 150–151.

[118] "Sunday Morning - Kellygrams," *Daily Capital News And Post Tribune* (Jefferson City, Missouri, December 6, 1931).

[119] Nicholas De Santis, "Skyscraper Airport," *Popular Science*, November 1939.

[120] "Bengal Aerotropolis Projects Limited."

[121] John D. Kasarda, "Airport Cities & the Aerotropolis: New Planning Models," *Airport Innovation*, April 2007, 106.

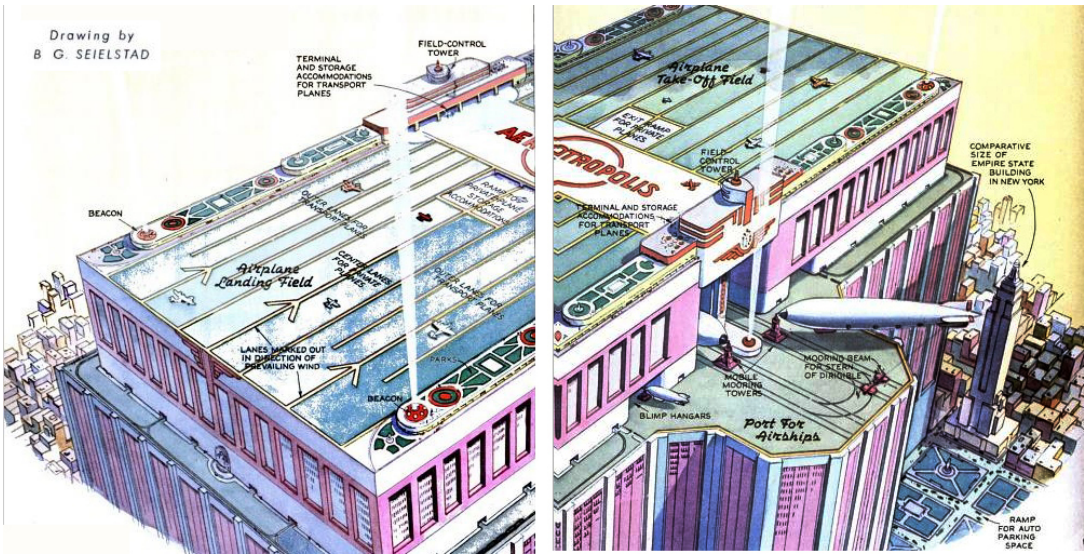

Figure 4.1: The " aerotropolis" proposal of Nicholas De Santis in 1939

Figure 4.2: The conceptual model of the Aerotropolis project, developed in cooperation between Dr. John Kasarda and Evolve Media,

He depicts aerotropolis as a city with an airport located at its core and surrounded by clusters of airport-linked business parks, information and communications technology complexes, retail, hotel and entertainment centers, industrial estates, logistics parks, wholesale merchandise marts and mixed-use residential developments.[122] This is a kind of new urban-form similarly shaped to the traditional metropolis but "consists of an airport city core and extensive outlying corridors and clusters of aviation-oriented businesses and their associated residential developments".[123] Kasarda emphasizes that airports as cities are now an effect iv part of global production systems.[124]

Aerotropolis, Renewable Types/The new Projective Cities Programme: AA Graduate Students Projects

Kasarda's approach to airport as a city has attracted the attention of several academic circles. As an example, the aerotropolis concept became the subject of a research project at the master's program of AA School in London between 2007 and 2008.[125] This program contains research exercises that develop the primary concepts key to the multi-scalar ambitions of the program: *architecture, type and the city*; seminar courses that explore and discuss the relationship between theory and practice, re-defining architecture within the context of the City as a cultural product and critique; and finally design studios that examine the concepts and representations of the *Idea of the City*. Two of these projects constitute important examples related to this thesis' point of view because of their way of reithinking the program.

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[122] Ibid., 108.

[123] Ibid.

[124] Greg Lindsay, "Rise of the Aerotropolis," Magazine, *Fast Company*, July 1, 2006, http://www.fastcompany.com/57081/rise-aerotropolis (accessed August 24, 2012).

[125] Architectural Association Graduate School, "Aerotropolis, Renewable Types."

The project of Yifan Liu, elaborates on the existing airport site in Chengdu, Peoples Republic of China.[126] Chengdu International Airport is 16 km away from the Chengdu city center and 2 km from Shuangliu, a county in the southwestern part of Chengdu. According to the 2020 master plan of Chengdu City, this airport will be surrounded by urban development and left stuck within the city. Liu draws attention to the master plan to show that the airport would have the potential to become another civic center. The available terminal and its environment is split by wire mesh walls, unregulated accommodations, some aviation facilities and a vast emptiness. Therefore, he creates a rectangle frame around the runway by eliminating the unnecessary voids. This rectangle frame which will become the border to frame the runway is formed by the airport program.

He also searches for a system or typology that can be integrated into the existing city, consisting of partial rather than monumental structures, solved in a single volume. This partial solution is inspired by the squares and the courtyard houses in China, which he analyzes focusing on aspects such as scale, house growth, hierarchy, circulation, etc., developing an airport plan by transforming their typologies. This proposal is trying to break the dominant figure (airport) into an urban fabric which consists of a series of courtyards at various scales accommodating a rich accumulation of urban activities, thus challenging the conventional courtyard as a rigid separation between solid and void relationship.

In this rectangular airport city, the architectural program is prepared hierarchically according to the importance the units have for aviation. Facing the runway the spaces essential to the aviation are positioned, while on the other side, facing the historical city are placed the programs belonging more to the city. Considering that the historical city expanded radially from the center, the airport

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[126] Yifan Liu, "The Great Flight Forward -- Chengdu, Peoples Republic of China" (MPhil, London: Architectural Association School of Architecture, 2008), http://issuu.com/projective/docs/yifan_airport?viewMode=presentation (accessed March 22, 2012).

city can easily be adapted to a similar growth in the 2020s. This proposal is an interesting example on how airports and cities might be integrated.

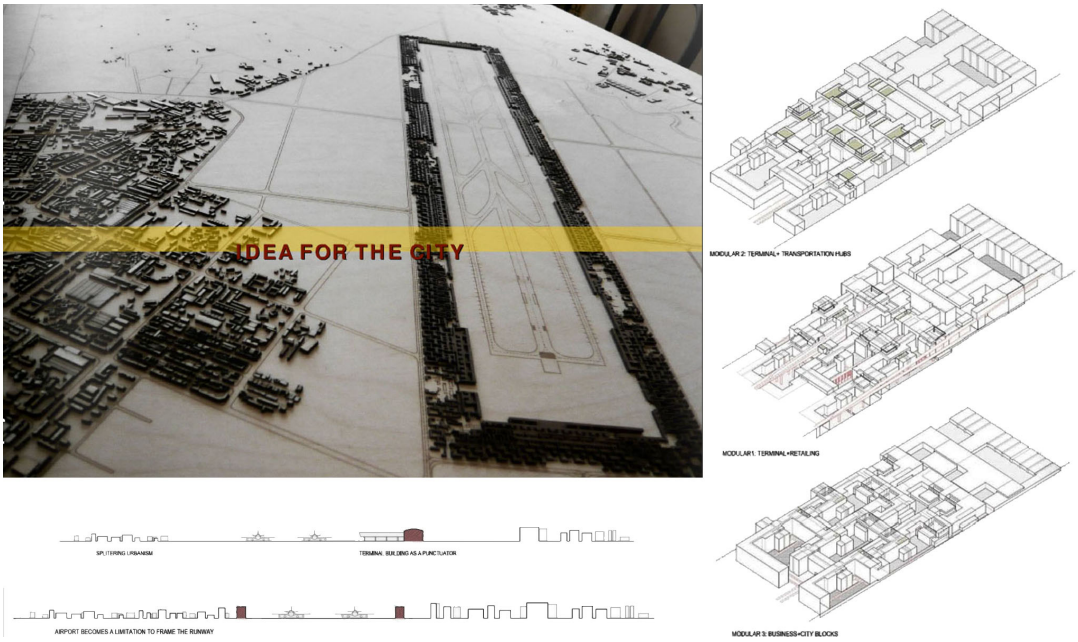

Figure 4.3: Diploma project of Y. Liu, of the AA school: Aerotropolis, Renewable Types

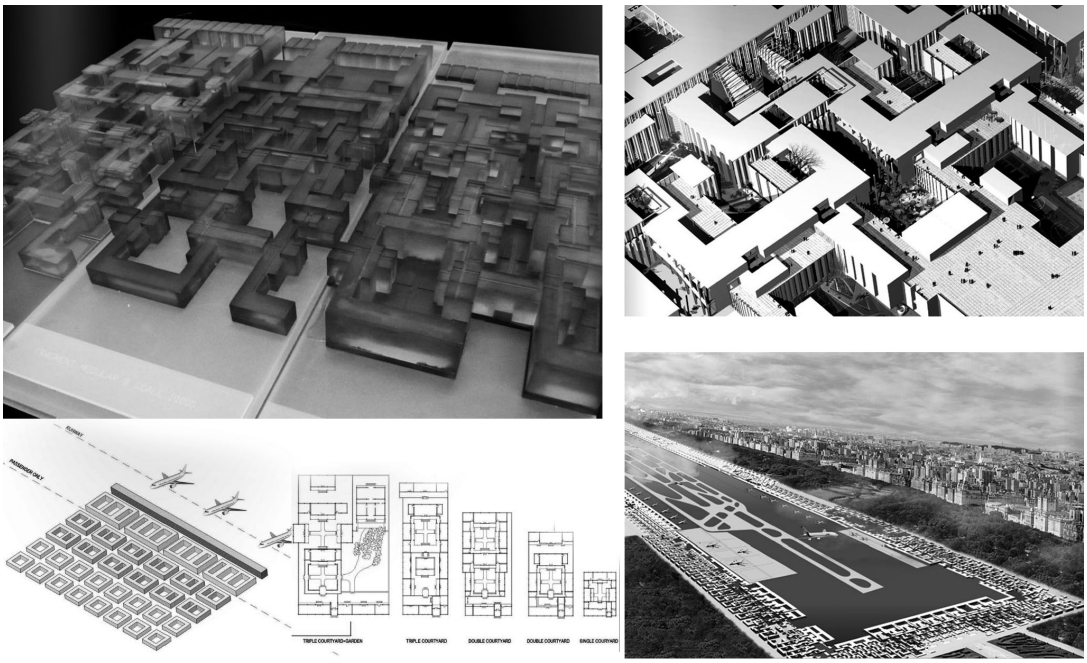

Figure 4.4: Fragments from Y. Liu's diploma project.

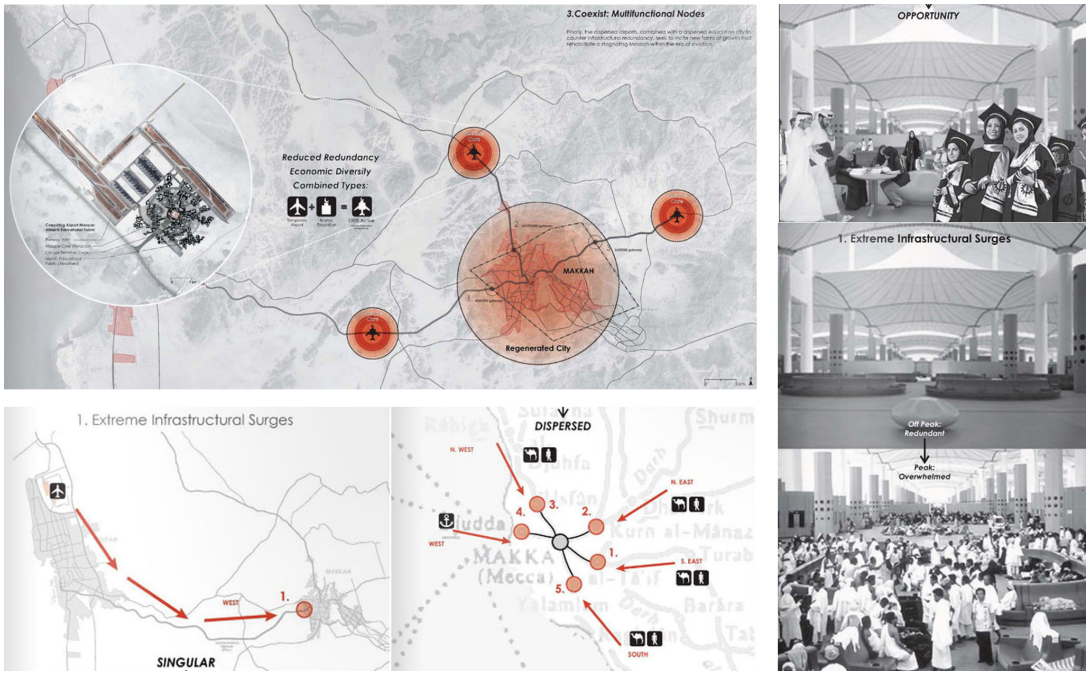

Figure 4.5: Diploma project of D. Fakhro, of the AA school's Aerotropolis, Renewable Types

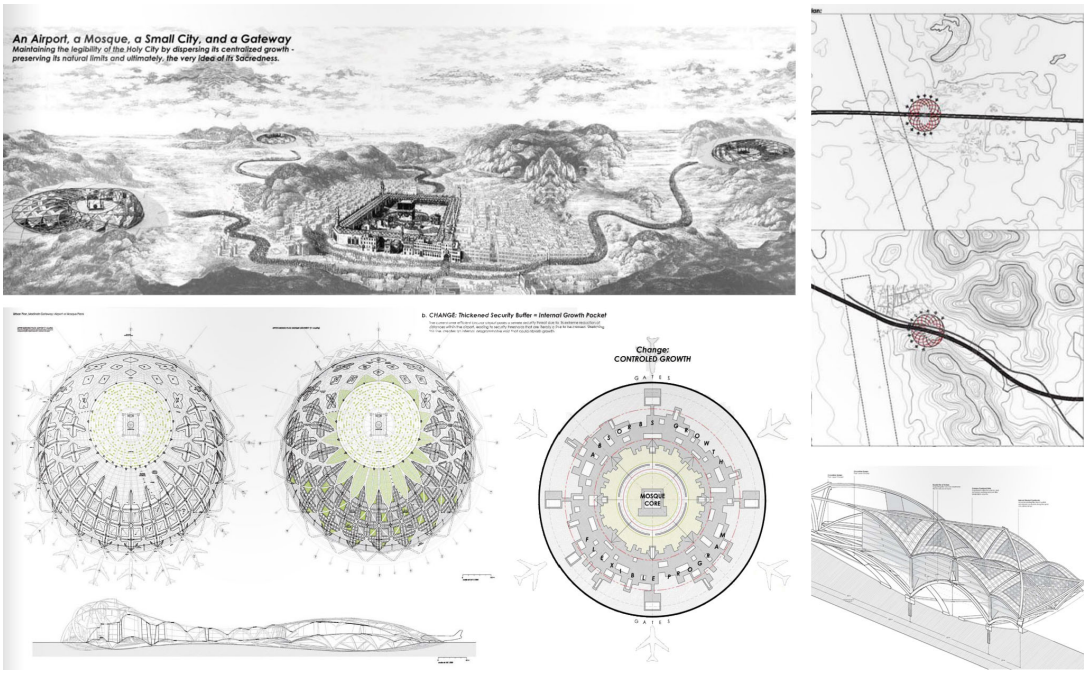

Figure 4.6: Fragments from D. Fakhro's diploma project.

The second project is Deena Fakhro's project in Makkah, Saudi Arabia.[127] This proposal is produced as an alternative airport to the only international airport in Jeddah, Makkah. During periods of pilgrimage (2 months of the year), the airport is filled with millions of people and, at present, all entries to the city are made through the only international airport in Jeddah, which is collapsing under the intense pressure of 4.000.000 single visits to the terminal within the interval of two months. Therefore, the pressure of this airport point must be rethought to ease the extremity of congestion occurring here.

Except for the pilgrimage season, the airport becomes redundant due to the decrease in the passenger capacity. Consequently, Fakhro adds the university architectural program into the airport city program to enliven the space used only periodically at certain times but which turns into a phantom for the rest of the year. Universities are institutions that also operate only periodically. After a ten-month training period, the school season is closed and pilgrimage season is opened. During the pilgrimage, the flexible education spaces can be transformed into passenger spaces (from dormitory to hotels, cafeterias to cafes). Spaces can be designed multifunctional for different uses. Thus, the city will be able to diversity its economy during the off-peak hajj season.

The Circle project at Zurich Airport, by Riken Yamamato & Field Shop

The Circle project, situated at Zurich Airport, is a suitable example to understand the relation between global capital and fixed space.[128] It is the winner project of an architectural competition, designed by the Japanese architectural firm,

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[127] Deena Fakhro, "The Holy City and its discontent -- Makkah, Saudi Arabia" (MPhil, London: Architectural Association School of Architecture, 2008), http://issuu.com/projective/docs/deena_fakhro?viewMode=presentation (accessed March 22, 2012).

[128] Flughafen Zürich AG, "The Circle."

Riken Yamamato & Field Shop, which aims to design a small town, connected with the existing airport. The area is located at the intersection of international and regional transformation networks (plane, train, bus, etc.) which is suitable for the circulation of people and capital.

Figure 4.7: The Circle, at Zurich Airport, designed by Riken Yamamato & Field Shop

The announcement of the competition states that "The Circle at Zurich Airport" aims to prove that innovations in the field of so-called "airport cities" are possible, as are uncompromising quality and top-level excellence outside inner cities."[129] It is a kind of experiment to find out which programs the airport cities can consist of. In this project there are seven program modules which include hotels, health and beauty centers complete with outpatient clinic, education facilities, restaurants, shops, offices and special services. The city is a complex

[129] Ibid.

structure which involves the whole of mix-used facilities where everyone can find whatever they are looking for. If we look at the city, among many other aspects, we can see a complex structure that involves many mix-used facilities where all needs are answered. This is what this project with its various program titles is trying to emphasize, while experimenting with the concept of the city. In this project, the seven major program titles aim to create the city concept.

Erik Cohen mentions two different types of tourism attractions in general: the "natural" and the "contrived".[130] The natural one is exemplified with physical, cultural, ethnic or archaeological sites which have not been tampered with for touristic purposes. The "contrived" one is exemplified with sites and sights which were specifically created for touristic purposes and are totally artificial in character. The area affected by tourism is expanding by new designs of contrived attractions, suitable for every interest. "The Circle at Zurich Airport" is a striking example to understand how the airport program is restructured according to the demands of tourism, and then to see how spaces of various types of tourism like health, educational, shopping, business are created within an airport.

The health care facilities in "The Circle" project create the opportunity for health tourism with a potential to attract the international customers from all over the world. The Health and Beauty Center includes services such as diagnosis and prevention, dentistry and minor outpatient treatment, spa treatments and cosmetic surgery.[131] This international health service provides their patients with a short-term accommodation, and comfortable and pleasant spaces for their ease. As previously mentioned in this chapter, the capital needs the human circulation and in order to attract people, the spaces that serve their desires and tastes are provided.

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[130] Erik Cohen, *Contemporary tourism: diversity and change*, 1st ed., Tourism social science (Amsterdam: Elsevier, 2004), 134.

[131] Flughafen Zürich AG, "The Circle."

One of the seven program modules at the “Circle” project is the Education and Knowledge module which is planned to be a platform of advanced training opportunities for institutions in Switzerland and abroad, think tanks and research functions.[132]

Another module at "the Circle" project is planned to host shopping facilities thus making the project one of the important commercial centers in the country.

Nowadays, the focus is more and more upon international business which in turn means commercial transactions taking place between two or more regions, countries and nations beyond their political boundary. Contacts, exchange of information, congresses, exhibitions, business trips and meetings are requirements of an interactive business environment. Therefore, offices near airports become more rational for the companies. Cohen classifies business travelers as the most important group of partial tourism. He mentions that although their primary traveling purpose is business, they succeed in combining business with pleasure and devote at least part of their free time on the trip to touristic pursuits.[133]

Four of the seven main program modules in the Circle project are the programs of touristic attractions, and the rest consists of services like accommodation. In this project, the city concept is provided by featuring tourist-oriented programs. While job opportunities are provided for citizens in the country, at the same time, the flow of money is accelerated by the circulation of foreign and domestic tourists. The placement of office blocks and education units in order to attract capital and make way for new jobs, which in turn will bring the need of housings, have been seen as steps to turn the airport into a potential future city

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[132] Ibid.

[133] Cohen, *Contemporary tourism: diversity and change*, 31.

4.1.2 "Bigness"

> ….Bigness no longer needs the city; it competes with the city; it represents the city; it preempts the city; or better still, it *is* the city....[134]

Through the architecture of this century, common detection in most of the projects including airport is the overload expansion of their programs and competition with the urban scale. Buildings are designed to be multifunctional, thus to ensure the circulation of capital. New types of spaces are designed through expectations and desires. Even in many concepts, architectural programs do not consist of functions designed according to space requirements but also to the city such as accommodation, entertainment, shopping, etc. This makes a structure 'bigger taller and deeper than ever', as Rem Koolhaas and Bruce Mau explain with their theory of bigness in *Small, Medium, Large, Extra Large – S,M,L,XL*.[135] He mentions the potential of this mutation in the forms of new structures for the reorganization of the social world.

Bigness is an existing problem which has been "a condition almost without thinkers, a revolution without program",[136] because, according to Koolhaas, the size of a building alone embodies an ideological program, independent of the will of its architects. This makes big buildings less architectural although their enormity seems more architectural. He mentions that this growth in spaces cannot be controlled by just architecture anymore. From engineers, contractors, manufacturers, to politicians and others, many groups share the role of the architect. He also advocates that a single volume with the quantity and complexity of the facilities it offers, is itself urban although it is incapable of establishing

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[134] Koolhaas and Mau, *S,M,L,XL*, 515.

[135] Koolhaas and Mau, *S,M,L,XL*.

[136] Ibid., 499.

relationships with the classical city.[137] And This idea is most strikingly embodied in 21st century airports.

In his article written in the 1960s, Reyner Banham dwells on the program expansion of airports since the beginning of commercial usage. Many new units were needed as bigger and heavier aircraft previously used by the military became available for commercial use. Green-grass basins became useless, thus landing and take-off operations were concentrated on concrete strips. The tower was constructed to check the landings and departures due to the increase in the number of aircraft. The hangars and the petrol pump were constructed for the maintenance of air planes. In the words of Banham, "like a demented amoeba, the airport turned itself inside out" by growing and disintegrating.[138] Today, airports have expanded to host an area of approximately million square meters under one roof. It would be more clarifying to analyze the "theory of bigness", which has emerged in response to the enlargement of buildings, on a typology still on expansion.

Koolhaas' "theory of bigness" is based on five "theorems":

1. Beyond a certain critical mass, a building becomes a Big Building. Such a mass can no longer be controlled by a single architectural gesture, or even by any combination of architectural gestures. This impossibility triggers the autonomy of its parts, but that is not the same as fragmentation: the parts remain committed to the whole.

2. The elevator – with its potential to establish mechanical rather than architectural connections-and its family of related inventions render null and void the classical repertoire of architecture. Issues of composition, scale, proportion, detail are now moot. The "art" of architecture is useless in Bigness.

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[137] Ibid., 514.

[138] P. Reyner Banham, "The obsolescent airport," *Architectural Review* 132 (October 1962): 257.

3. In Bigness, the distance between core and envelope increases to the point where the facade can no longer reveal what happens inside. The humanist expectation of "honesty" is doomed: interior and exterior architectures become separate projects, one dealing with their stability of programmatic and iconographic needs, the other – agent of disinformation – offering the city the apparent stability of an object. Where architecture reveals, Bigness perplexes; Bigness transforms the city from a summation of certainties into an accumulation of mysteries. What you see is no longer what you get.

4. Through size alone, such buildings enter an amoral domain, beyond good or bad. Their impact is independent of their quality.

5. Together, all these breaks – with scale, with architectural composition, with tradition, with transparency, with ethics – imply the final, most radical break: Bigness is no longer part of any urban tissue. It exists; at most, it coexists. Its subtext is fuck context.[139]

The first one is about architectural gestures which are useless when a building becomes a big building. Airports contain many different functions at the same time. As previously mentioned, it is a bigger space composed by a combination of spaces such as control areas, shopping areas or accommodations. Due to the size of these parts which we are used to perceive as units of city programs, they are designed as separate cells. Nevertheless, they have to function behaving as a whole in a single volume.

Nowadays, designing an airport is a complex process involving different kinds of design methods. The airport is a very complicated structure with multifunctional planning which needs serious rational spatial standards and measurements. In the airport design, working out the circulation and spatial solutions is more important than architectural gestures. Airports are transition

[139] Koolhaas and Mau, *S,M,L,XL*, 499.

spaces which billions of people pass through every year. The circulation of people, goods and aircraft are in the foreground of design. A properly functioning terminal is the key word for design. Even before the building is constructed, it has to be checked whether it will work or not. There are some scientific methods developed to control if the design works properly according to precise data. In airport design, simulation is an important mean to check the performance of the space of aircraft, passengers, or vehicles.[140] Computer programs are developed to do these necessary calculations, because the architect is incapable of controlling these circulations alone.

The second theorem is about mechanic functional links becoming more important than architectural links in large buildings. Airports are among those structures where these kind of mechanical connections and technical solutions are frequently used. Given the long distance to go through from the entrance to the plane boarding, shortening the time interval by means of escalators and elevator become indispensable. Moreover, at the end of the early 1970s, "astroway", a system of moving sidewalks was devised by engineers because of the miles long walking distance within the airport, which has to be designed like a machine.[141]

The third theorem is about the existing gap between the facade and the core of the building, which makes it impossible to understand what goes on inside. That is why architects and interior architects develop separate projects. Bigness transforms the city from a summation of certainties into an accumulation of mysteries. This notion, as Deleuze indicates, clarifies the transition of disciplinary societies from the precise separating borders to the coded modules of control societies.[142] Structures have already become multifunctional modules gathered

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[140] Robert Horonjeff et al., *Planning and Design of Airports*, 5th ed. (New York: Mc Graw Hill, 2010), 153.

[141] Gordon, *Naked airport: a cultural history of the world's most revolutionary structure*, 221.

[142] Deleuze, "Postscript on Societies of Control," 5–6.

under a single roof. Usually, when one observes them from the outside, the perception is a single big volume, without any knowledge of the inside where there may be nightclubs, museums, cinemas or leisure areas, until one enters and experiences them.

4.2 Everyday Practices that shape Airports

Today the number of aircraft as a contemporary mode of transport is increasing rapidly and in some airports, thousands of airplanes are departing from and arriving to per day, meaning almost a plane (either departed from or arrived at airport) per several seconds. Airplanes should depart and land in time so that the aircraft and passenger traffic can properly function. However, scheduled flights can be delayed due to some significant meteorological and natural conditions such as tornadoes, hurricanes, volcanoes, etc. Flights can also be canceled due to circumstances within the airline's control such as crew problems, aircraft cleaning, baggage loading, fueling, etc. Due to a number of reasons for flight cancellations, passengers have to wait for the next flight which may take hours or days to depart again. In such conditions, passengers spend their time in airport's waiting areas in order not to miss the next flight. They rest for a while on the benches as a temporary solution while they wait. As flight are cancelled, benches become furniture not only for sitting but also for eating, supporting baggage, or sleeping. Users adapt the usage of benches according to their primary needs because of the compulsory waiting at the airport. It has been already mentioned in the third chapter that users can control space through their tactics (in De Certeau's words). They transform the space or product according to their needs by developing tactics no matter the main aim of produced space and product may be. This is about finding out a huge gap in the design, a kind of resistance to the initial design.

Figure 4.8: *Sleeping on the Benches of Airport*

One of the most striking examples is the user's struggle with the sleeping problem in airports. Due to long time waiting periods in airports, passengers need places to rest. Yet, there had not been enough areas to sleep or rest until early years. Thus, the users transformed certain waiting spaces into resting areas. Web sites and blogs are designed to give tips to passengers how to sleep at the airports.[143] In fact, this was an effort to share these tactics with masses via Internet to create a collective memory. Adapting the space according to the needs is a kind of resistance to the existing condition. As a result, airport benches started to be used not only as seating units but also as sleeping units. Therefore, the user gets the chance to draw designers' and the managers' attention so that these people responsible for the passengers comfort may try to find the solution by providing cots, pillows, blankets in waiting lounges or by designing products for resting. (Fig. 4.9)

Hence, this problem becomes a very valuable challenge for designers to remodel and rethink the space. There are several design solutions for the problem of sleeping in the benches. In this part of the thesis, these design examples will be

[143] "The Guide to Sleeping In Airports," Collective blog, *The Guide to Sleeping In Airports*, 2012, http://www.sleepinginairports.net/ (accessed April 7, 2012).

analyzed and the effects of these design examples to the architectural program will be discussed.

Figure 4.9: Cots and blankets for passengers in an airport.

Figure 4.10: Larvin David's modular seating design for airport terminals.

There are various examples to solve the problem of sleeping in airports, such as the benches of the international terminal of Milas Bodrum Airport, designed by Tabanlioğlu Architects with more comfortable material and added detachable armrests that offer the opportunity to sleep more comfortably. Another solution is modifying benches for sleeping activity as in Larvin David's design,

where standard benches are modified with a headrest and footrest to prop the foot. (Fig. 4.10) Using this design, passengers can sit, eat and sleep on the benches.

Figure 4.11: The plan of Helsinki Airport lounge, named almost@home.

The process can produce more than a single solution to a specific problem. As is the case at the Amsterdam Schiphol Airport, Helsinki Airport and Paris-Charles de Gaulle Airport, the general small scale choice which uses the design of furniture (i.e. benches) has been replaced by the design of bigger resting areas. These airports include several resting spaces for standard passengers containing TV areas or sleeping couches where people can rest and spend their time until the next flight. Moreover, the design of the Helsinki Airport lounge, named

Almost@home, is based on the concept of home in every detail, except the need to pay a specific fee for using it.[144] Spaces like kitchen, living room, home office, shower, reading area, dining, etc. aim to make people feel at home. Similarly, at Charles de Gaulle Airport, there is a temporary area based on the same concept, but open to everyone for free, provided that brands like Ikea, Philips and Sony make their own publicity. Partnerships have been established between well-known brands and airport management in order to create branded areas free of charge offering passengers a space to relax before their flight.[145]

Figure 4.12: Lounge in Helsinki Airport, decorated on home design concept.

[144] SSP Finland, "SSP Finland :: Almost@home Lounge," Company website, *SSP Finland*, n.d., http://www.sspfinland.fi/en/restaurants-cafes-lounges/terminal-2/lounget/almost-home-lounge/ (accessed August 20, 2012).

[145] Raymond Kollau, "IKEA opens temporary airport lounge at Paris CDG Airport," *Airlinetrends.com*, 2012, http://www.airlinetrends.com/2012/07/15/ikea-lounge-paris-cdg-airport/ (accessed August 21, 2012).

Figure 4.13: Lounge in Paris-Charles de Gaulle Airport.

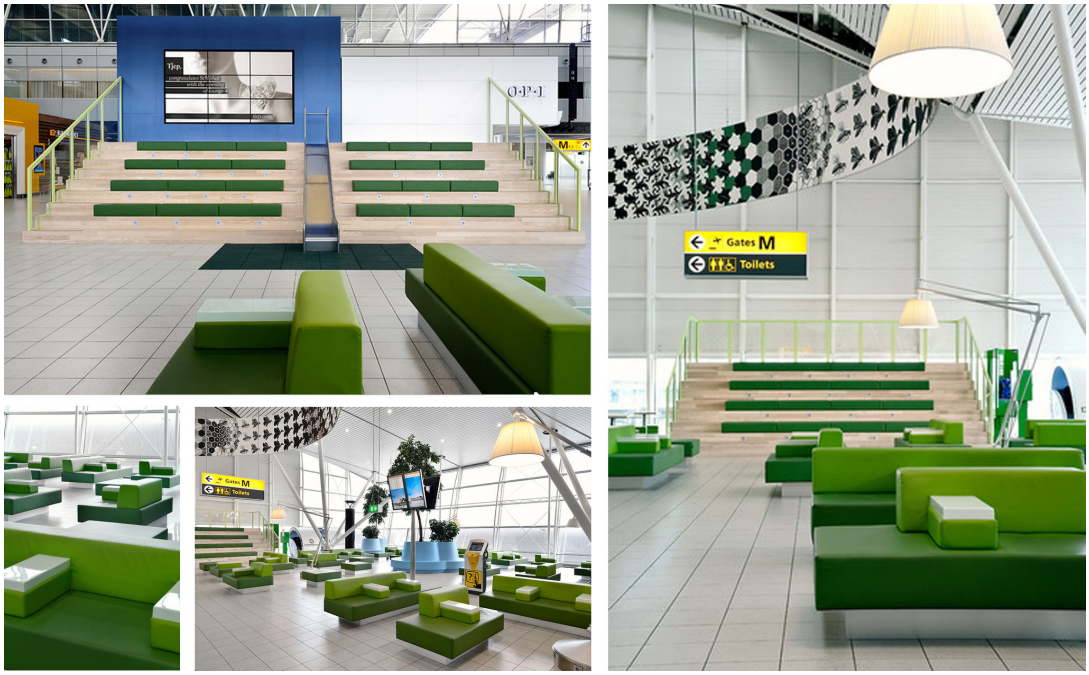

Figure 4.14: The re-design of the Lounge 4 at Amsterdam Schiphol Airport, by Tjep studio.

SLEEPBOX is another design solution for the sleeping problem in airport. Many passengers prefer to have a comfortable nap in order not to have the risk of missing the plane by staying at airport hotels. This situation was the starting idea of the Arch Group, designers of the SLEEPBOX, resting cubicles 1.4 meters wide, 2 meters long and 2.3 meters high, that can be placed at the waiting areas of the airports.[146] SLEEPBOX is a small cubicle which passengers can book and where they can have a rest for a short period of time in airports. It is a mobile space, equipped with a bed, table, HD television and Wi-Fi – almost like a hotel room, missing just the bathroom. This product is designed to address the problem of rest and privacy faced in airport.

Figure 4.15: SLEEPBOX, designed by the Russian company Arch Group.

[146] OOO Sleepbox, "Sleepbox," Product Marketing, *Sleepbox*, n.d., http://www.sleepbox.com/ (accessed March 22, 2012).

Figure 4.16: New designs added to architectural program.

Space will be needed to use SLEEPBOX and similar spatial solutions. One of the reasons for the wide acceptance of the solution which gathers all the functions of the airport under single giant roofs, is the versatile possibility it gives to continuously create place for new functions and even enlargement. Inside the safe area created under a single roof, spaces like pavilions can be articulated, renewed, destroyed and rebuilt. New designs are added to the program, the old and unpopular ones are destroyed according to the demands of the user and operator. This is about capitalism's endless and insatiable need for spatial expansion in order to survive. Thus, the spaces has become *temporary* like *pavilions*.

CHAPTER V

DISCUSSION ON THE AIRPORT ARCHITECTURAL PROGRAM

5.1 Evaluation of the Current Airport Architectural Program

Due to the political and ideological nature of space, Lefebvre talks about the necessity to study space not only in a scientific way but at the same time by means of critical solutions, that is, looking at how and with which strategies it has been produced.[147] Also he underlines that people who criticize the uncomfortable conditions in the airport space and the effects of the airports on the surrounding environment must be taken under consideration. In this context, there are two determinants of the program. The first is the dominant mode of production that controls how space is produced and experienced and the other is the user both adapted to the space and also adapting the space according to his/her needs. We have already discussed how the dominant power directs the space of the airport, uses it to sustain its own existence, and keeps the user under control in the second chapter, and the way users affect the space and how they adapt to it in the third chapter.

Actually, the scale of the space they both are engaged in is different. The target of the mode of production is growth in an urban scale whilst the user's intervention mainly remains in the human scale.

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[147] Lefebvre, "Reflections on the politics of space," 342.

5.1.1 "Urbanization" of the Airport

In the 21st century, airports started to be presented as airport-cities. In the aerotropolis concept, developed by Kasarda, the airport will be in the core surrounded by the city. Here, the idea is not the transformation of the airport into the city; yet, it is about locating the airport in the core of the new development zones, which are constructed in a way to stimulate the economy. The urbanization of airports has been discussed in some academic circles. For example, as we examined in the fourth chapter, there are research projects on the concept of aerotropolis at the master program of AA School in London.

In parallel to the airport city concept discussions in academic circles, in reality, the projects around airports are currently under construction. The process of formation of the airport program has previously been studied in the second chapter. Moreover, the way the program is constructed to respond to the demand of mobile capital has been discussed. Accordingly, airport programs are subject to continuous changes and renovations. The capital needs the user since s/he provides the flow of money by using specific spaces, such as duty free shops, cafes, and entertainment areas. Therefore, the capital produces spaces in line with the user's wishes and desires, shaped depending on the demands of the majority, to gather and keep users at these specific spaces. It is in that sense that the touristic activities are an important part of the airport program. Tourism is defined as "the activities of people traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".[148] Spending time out of their usual places is what the capital demands. Already examined in the first section of the fourth chapter, in the program of "The Circle",

[148] WTO Statistics and Market Research Department, *Collection of Tourism Expenditure Statistics*.

an airport city being implemented at present, programmatic modules housing different touristic activities, such as entertainment, business, shopping or hotels can be observed. These modules aim at providing the flow of capital by attracting more and more people. Aside from the people who are continuously on the move, there are programs being created to get the attention of potential users living in the city. This is provided by means of areas offering services peculiar to everyday life usage, such as education, health services or accommodation. Therefore, the new architectural programs consist of spaces that help to increase the circulation of people (i.e. temporary user) and at the same time, serve the permanent user. On the other hand, spaces needed for capital circulation must be able to adjust according to changing preferences and wishes so that they can be renewed or demolished and rebuilt for new requests and fashions. This means that, the main themes of the Circle project are flexibility, diversity and variability. Similarly, Durgapur Aerotropolis, which is much bigger than the Circle, consists of the necessary programs for the circulation of people and capital, such as various theme parks, IT zones, etc.

Rem Koolhaas describes these cities as "generic cities" in *S,M,L,XL*, mentioning the characteristic of these cities in detail:

> It is easy. It does not need maintenance. If it gets too small it just expands. If it gets old it just self-destructs and renews. It is equally exciting —or unexciting—everywhere. It is "superficial" -like a Hollywood studio lot, it can produce a new identity every Monday morning.[149]

Koolhaas asserts that cities are becoming "generic cities" like airports. He qualifies the in-transit condition of the city to explain its new characteristics.

Besides the architects and economists who discuss the integration of airports and new development zones with living spaces, it will be appropriate to

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[149] Koolhaas and Mau, *S,M,L,XL*, 1250.

take into account the residents who live in the vicinity of airports and therefore are in danger due to its environmental effects.

The third chapter focuses on the fact that many residents living around the existing airports have established community campaign groups to protest against the noise and environmental problems caused by airports and to prevent airport expansion. Some of these groups have even managed to restrict flight hours. This rebellion and the achievements of the residents reveal the problem that can emerge while building an airport near living spaces.

5.1.2 "Domestication" of the Airports

Airport is a new type of building which emerged in the beginnings of the 20th century. Since it came into existence, it has intertwined with technology. There are many organizations carrying out researches on such issues like making journeys faster, giving passengers greater ease in the chain of procedures, minimizing problems during take-off and landing, security enforcements, etc. Moving walkways, check-in automates, x-ray tools, fingerprint recognition technologies, retina scanning machines, digital guides and many more technological advances have been produced and executed as solutions to many problems in airports. Therefore, the airport revises itself continuously by means of new technologies and by the insertion of new spaces. However, the user may find it difficult to keep pace with these changes, and these continuous changes increase the sense of temporariness. In fact, the airport is primarily a transition space whether it becomes a city or not. Consequently, this condition of being transitory makes the spaces of the airport temporary from the perspective of the user, and there is more adaptation than resistance to what is temporary.

The user/passenger will continue to adopt the rules of the space until s/he is

stuck at the airport. Then, s/he will start to organize the space according to their primary needs such as eating, sleeping. During the long waiting time, the user/passenger tries to render the space as comfortable as a home; s/he can convert the benches into a bed or public toilets into a personal bathroom. This is a kind of appropriation of the existing space. Architects try to respond to these tactical operations by proposing new design solutions from benches to resting areas.

Figure 5.1: Virgin Atlantic Upper Class Clubhouse at London-Heathrow Airport.

Whether used commercially or not, the main point of these new designs is providing a more comfortable environment for the user. Therefore, it is possible to state that there is an attempt to domesticate airports by designing spaces with the concept of a home containing a kitchen, a living room, rest rooms, etc. However, in many cases, as in that of Paris-Charles de Gaulle Airport, this effort could not go

beyond being merely *a platform* which seems to have been added subsequently to the airport's machine-like structure.

Figure 5.2: Lounge in Paris-Charles de Gaulle Airport.

The architect can really understand the relation between the user and space only by means of the user's interpretation of the usage of that space. The way space is perceived and used by the passenger provides important data that may lead to diversity in design solutions. As it is not always possible to see acts of resistance in airports, in situations where there is no concern regarding primary needs, the user obeys all the rules of the airport space. This adaptation process is described with the concepts of “field” and “habitus” by Bourdieu, and discussed more in detail in the third chapter. Furthermore, the airport is likened to a volume containing various playing fields (such as government, commerce, tourism, entertainment and

etc.), each of which is shaped and manipulated according to its own rules. If we try to read the relations between the dominant mode of production, the user and the space, it is seen that space is mainly rather controlled by the dominant mode of production, than by the user. Furthermore, the user is also under the control of the mode of production. Nevertheless, an "ideal city" must be raised on equilibrium. In "The Right to the City", Harvey indicates that "the freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights".[150] Perhaps, here, the task of the architecture must be, citing from Sargın's article of "Designing Urban Program", being able to construct spaces of resistance against the domination of capital space.[151]

Figure 5.3: Fragment from the diploma project of Yifan Liu, at the AA school: Aerotropolis, Renewable Types.

[150] David Harvey, "The right to the city," *New Left Review* 53 (October 2008): 23.

[151] Güven Arif Sargın, "Kentsel Programı Tasarlamak...," *Planlama*, no. 3 (2005): 43, http://www.spo.org.tr/resimler/ekler/246444d94f081e3_ek.pdf (accessed February 9, 2012).

One of the projects of AA has been designed with a point of view supporting this task. It is an interesting example due to the way it interprets the in-between state, as Sargın indicates.[152] This is achieved by means of human scale-sized fragmented courtyards, without having to cut the relationship between the city and the airport by sharp borders or single large buildings. While trying to break the dominance of airport in the urban fabric, it accommodates a rich accumulation of urban activities, and challenges the conventional courtyard as a rigid relationship between solid and void. Therefore, voids and solids can be created as potential spaces of resistance.

5.2 Discussion on an Alternative Airport Program

This thesis has tried to examine and discuss the airport architectural program by means of three constitutive components, namely process, user and design. As airports are nowadays being relaunched as airport cities, they are becoming spatial organizations whose scale has been expanded. Hence, the architectural program of airports must be rethought and redesigned as an "urban program" by considering the relationships of these tree constituents.

Based on the observations described in the previous chapters, it is possible to reconsider the architectural program. Examining the present airport architectural program, Mathis and Michael Güller describe airport activities in three categories: core business, airport-related activities and airport-oriented activities.[153]

Core business is all about aviation activities and technical operation directly

[152] Ibid.

[153] Güller and Güller, *From Airport to Airport City*, 41.

supporting air traffic function. Airport-related activities are about air-freight and air-passenger movements. Logistics and distribution activities or retail and accommodation are some of the examples for this category. The last category, airport-oriented activities are the activities which are not directly related to aviation. These activities are preferably settled in or around the airports, thus, having an easy access to the premises and make use of the airport's large user potential.

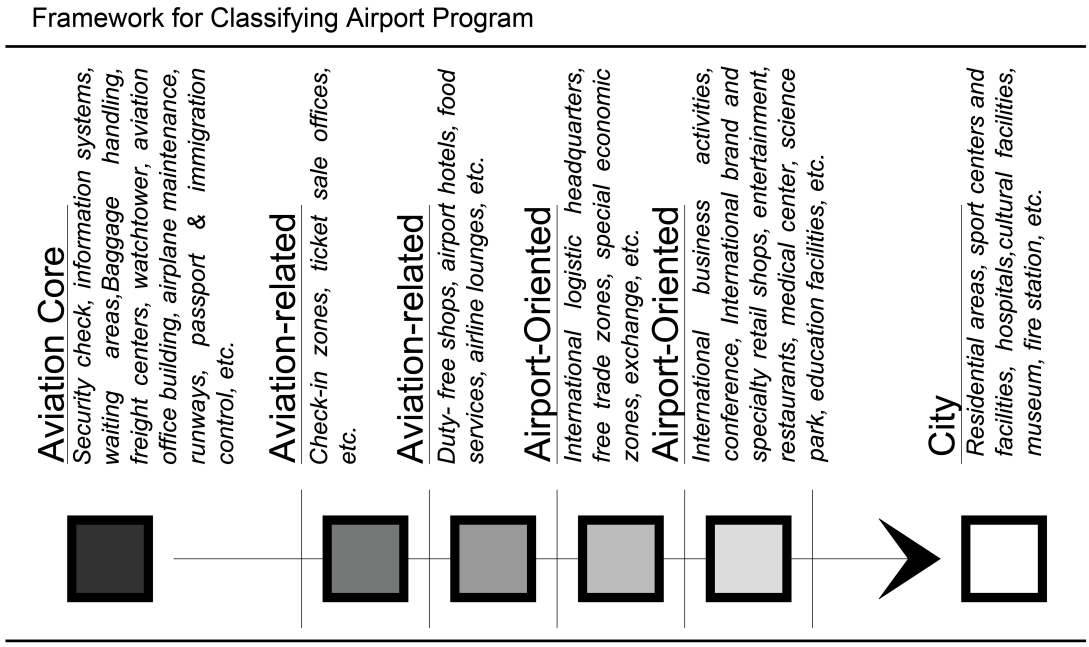

Figure 5.4: Framework for Classifying Airport Program.

In the 21st century, airports need to be approached as urban programs. To do so, these three categories above-mentioned will be handled under six programmatic modules according to their relation to air traffic or city. (Fig. 5.4) The first programmatic module is "aviation core"; it is surrounded by a security line

and contains activities directly related to aviation such as baggage handling, freight centers, watchtower, aviation office building, airplane maintenance, runways, etc. The second one is still related directly to aviation, and consists of aviation services yet can be located outside the aviation core. These services such as check-in zones or ticket sale offices are the programs that do not necessarily require a serious security measures. The third module is still "aviation-related" containing programs only for airport users benefiting from duty-free shops, airport hotels, food services, airline lounges, etc. The fourth contains "airport-oriented" programs, concerning just transportation and business related to aviation such as international logistic headquarters, free trade zones, special economic zones, exchange, etc. The fifth module also, contains "airport-oriented" commercial programs. These programs are international business activities, conferences, international brand and specialty retail shops, entertainment, restaurants, a medical center, a science park, education facilities, etc. Finally, the sixth module is related to the city such as residential areas, sport centers and facilities, hospitals, cultural facilities, a museum, a fire station, etc. This division of programs into six modules will be useful in reconsidering the relation between aviation and the city.

In the operation of an airport, security measures are one of the important problems and security control points are mandatory for the airport architectural program. The increase in the volume of the airport is caused by the planning of all programs in a single mass due to the security problem. After users enter the airport, they are forced to spend their time in this safe and sterile area, in which programs concerning the city are interspersed as decors. This kind of expansion should be stopped to prevent the elimination of the human scale in the design of airports.

The number of passengers and aircraft increases proportionally as the volume of the airport grows. Due to the factors that will be explained below, this kind of growth becomes harmful to the people living in the vicinity of the airport.

Therefore, in order to prevent uncontrolled growth, the airport could be designed in small scale parts. The previously analyzed project of AA student, Liu, which tried to emphasize this approach as an urban pattern, can also be appreciated from this preventive point of view. (Fig.5.3)

Contemporary airports are completely isolated from their environments due to their introvert planning. Although this isolation is to prevent the problems such as security, noise and air pollution, the 21st century airport-city concept is about the integration of the airport with the city. Therefore, the important question is how the integration between the city and the airport should be provided. The noise of aircraft is a big health problem for people living around the airport, where the amount of sound depends on the number of runways and aircraft. There are more than 40 groups around the world protesting against the noise and environmental problems caused by airports. These kinds of protests highlight the problem of designing airports near the cities. Thus, the existing programs should be reconsidered according to the demands of residents living near airports.

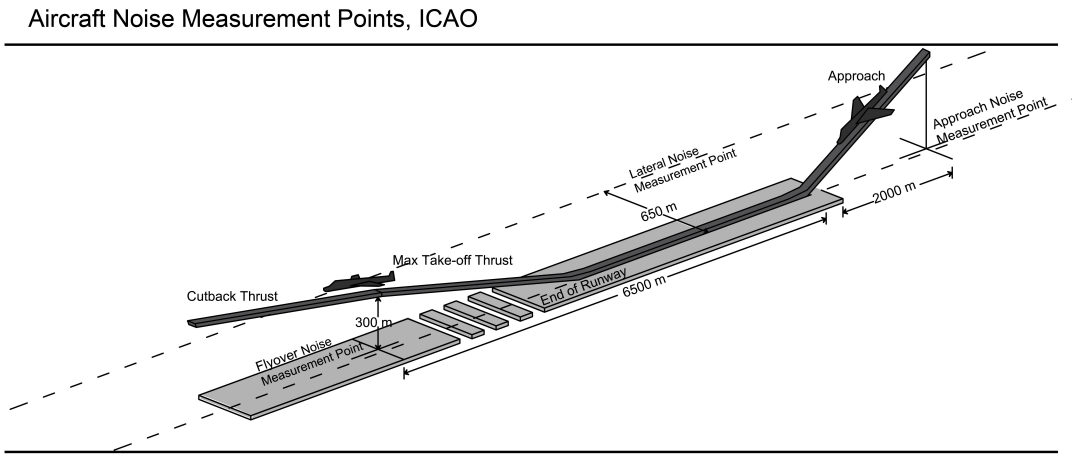

Figure 5.5: Aircraft Noise Measurement Points.

According to ICAO, the maximum noise level of aircraft is defined as it is shown in the Figure 5.5 and airplanes shall not exceed the noise levels specified at the following points:

a) lateral noise measurement point: the point on a line parallel to and 650 m from the runway center line, or extended runway center line, where the noise level is at maximum during take-off;

b) flyover noise measurement point: the point on the extended center line of the runway and at a distance of 6.5 km from the start of roll;

c) approach noise measurement point: the point on the ground, on the extended center line of the runway, 120 m (394 ft) vertically below the 3 descent path originating from a point 300 m beyond the threshold. On level ground this corresponds to a position 2000 m from the threshold.[154]

Fields	**Small Airports** *(airports where there have been less than fifty thousand landings and departures per year)*		**Big Airports** *(airports where there have been more than fifty thousand landings and departures per year)* **or Military Airports**	
	$L_{daytime}$ (dBA)	L_{night} (dBA)	$L_{daytime}$ (dBA)	L_{night} (dBA)
Noise-sensitive Areas (Education, Culture and Health Facilities), Camping Sites, Hotels, Motels etc.	63	53	68	58
Residential Areas	65	55	70	60
Mixed-Used Areas (Residential Areas, Workplaces, Industrial Areas, etc.	67	57	72	62
Industrial areas	70	60	75	65

Table 5.1: Regulation for Assessment and Management of Environmental Noise, Ministry of Environment and Forestry.

[154] *Environmental Protection*, vol. 1 - Aircraft Noise, 5th ed., International Standards and Recommended Practices Annex 16 to the Convention on International Civil Aviation (Montreal: ICAO, 2008).

The noise level rises above 75 dBA within this range, becoming harmful to human health, forcing people to wear headsets to minimize the effect of noise. Therefore, airport programs should be designed taking into consideration noise level limits. Accommodation, school, health or other facilities that are noise-sensitive areas should not be constructed within these high level noise zones. (Table 5.1) The number of aircraft landing and take-off in a day and the number of runways must also be calculated according to these noise zones.

Using these arguments as a start point, this thesis proposes an airport program alternative to the current airport programs. It is developed in three stages, each successively responding to the problem of uncontrolled growth (stage1), the environmental problem of noise (stage 2), the problem of integrating the city and the airport (stage 3). The focal point of these stages is to allow the production of spaces of resistance in airports.

5.2.1 Alternative Airport Program

Stage 01 – Solution to the Problem of Uncontrolled Growth

The first stage will consider the measures that could be taken in the architectural program to prevent the uncontrolled growth of an airport. As airports are gateways to countries, it is necessary to create certain limitations in entrances to the area. In current airports, all programmatic modules are generally designed inside a single volume with tight security measures. (Fig. 5.6) As a result, along with the increase in commercial facilities, which, in fact, are not related to aviation, the building volume expands due to the need for a single-entry security solution. An example for this situation is Beijing Capital International Airport, a huge 980000 m^2 structure designed under a single roof. Nevertheless, among the six

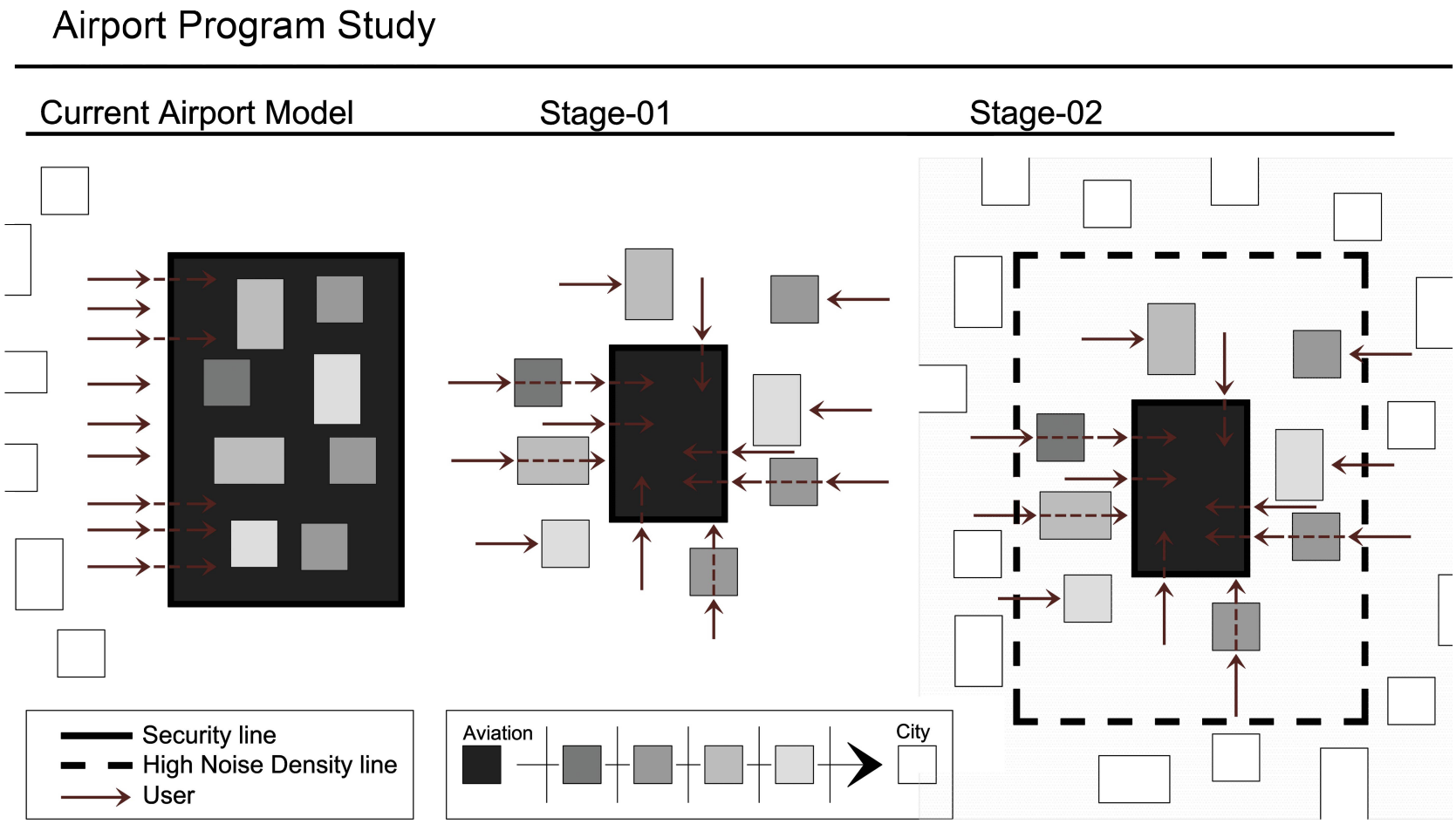

Figure 5.6: Airport Program Stages

programmatic modules mentioned above, only the "aviation-core" module needs to be located in a tight security zone, leaving the rest of the modules out of this zone. This solution gives the commercial spaces the possibility to serve not only the people already in the security zone, but also those living in the areas around airports, creating comparatively a small scale environment rather than a single-piece huge volume.

Stage 02 – Solution to the Problem of Noise

In the second stage, the area affected by the noise coming from the increasing number of aircraft and apron is taken into consideration in designing the program. Due to high noise levels, areas near the landing fields are not suitable for housing or other structures that must avoid noise. Therefore, the program modules, except the city related programs module, can be scattered within this high noise level area. Within the area in between the "aviation-core" module and the boundary, drawn according to the noise level, the quality of living can still be kept high by means of noise reducing acoustic obstacles. This area could have certain security measures, although not as much as those of the aviation-core. As a solution to the noise problem, ICAO suggests a green acoustical barrier near the runway to reduce the effects of noise.[155] (Fig. 5.7)

If there is need for further growth and expansion, extra airport structures could be added and yet located in a proper distance from other airports by considering the noise level limit and by providing easy connection between these structures.

At this point, another solution could be small-scale regional airports. In her thesis, Aslı Apaydın, discusses about “regional airports”, which serve major airports by providing assistance to passengers from the region it is located, in

[155] International Civil Aviation Organization, *Land Use and Environmental Control*, 2:.

order to diminish the passenger and cargo load of major airports.[156] In her thesis, she proposes a new regional airport program, more related to the city context.

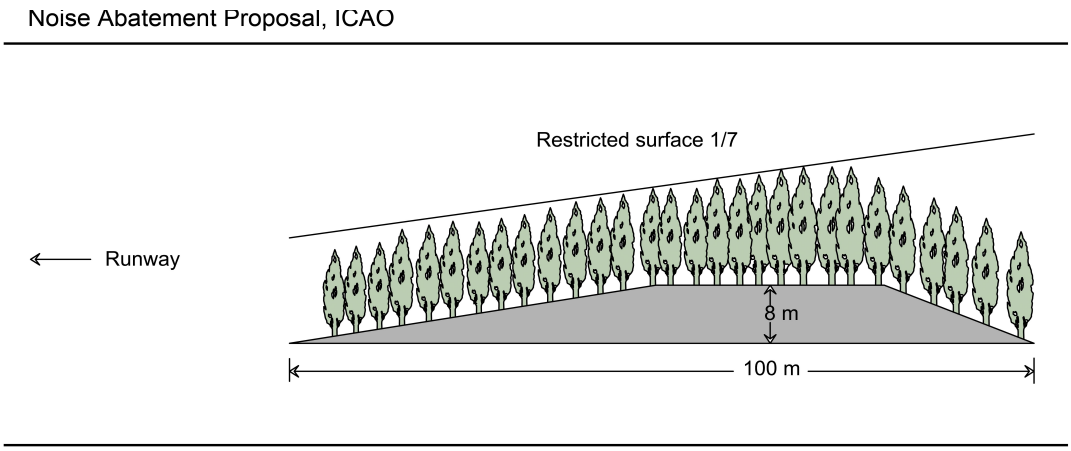

Figure 5.7: Aircraft Noise Abatement Proposal, ICAO.

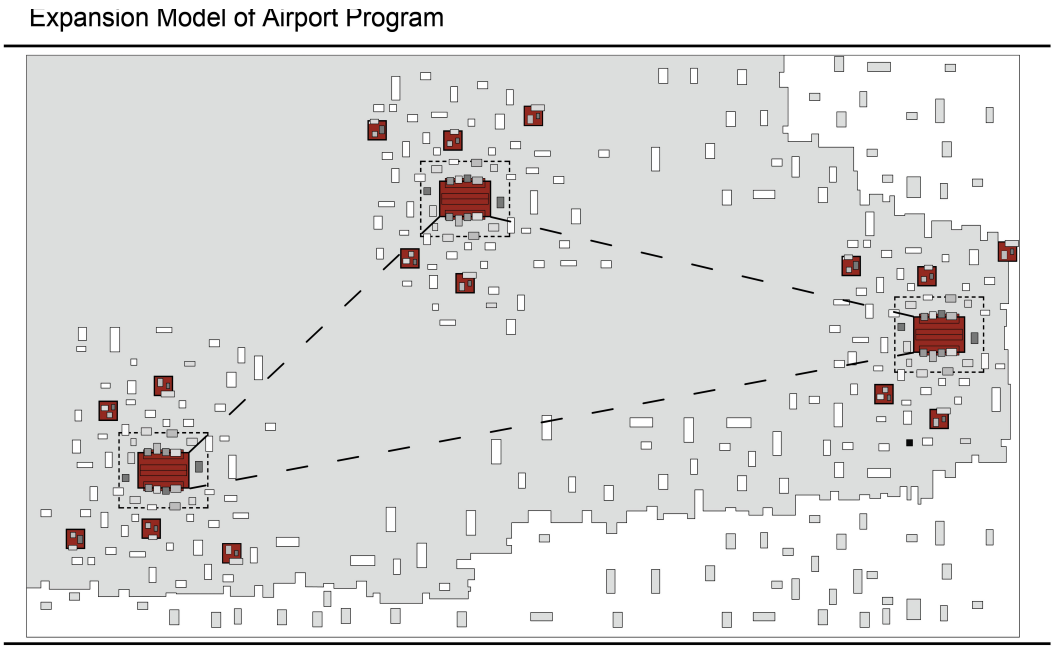

Figure 5.8: Expansion Model of Airport Program

[156] Aslı Apaydın, "Designing a New Architectural Program: The Norm and Attributes of Regional Airports -- Kütahya/Afyonkarahisar/Uşak" (MArch, Ankara: Middle East Technical University, 2007), 9–10, http://etd.lib.metu.edu.tr/upload/12609153/index.pdf (accessed March 22, 2012).

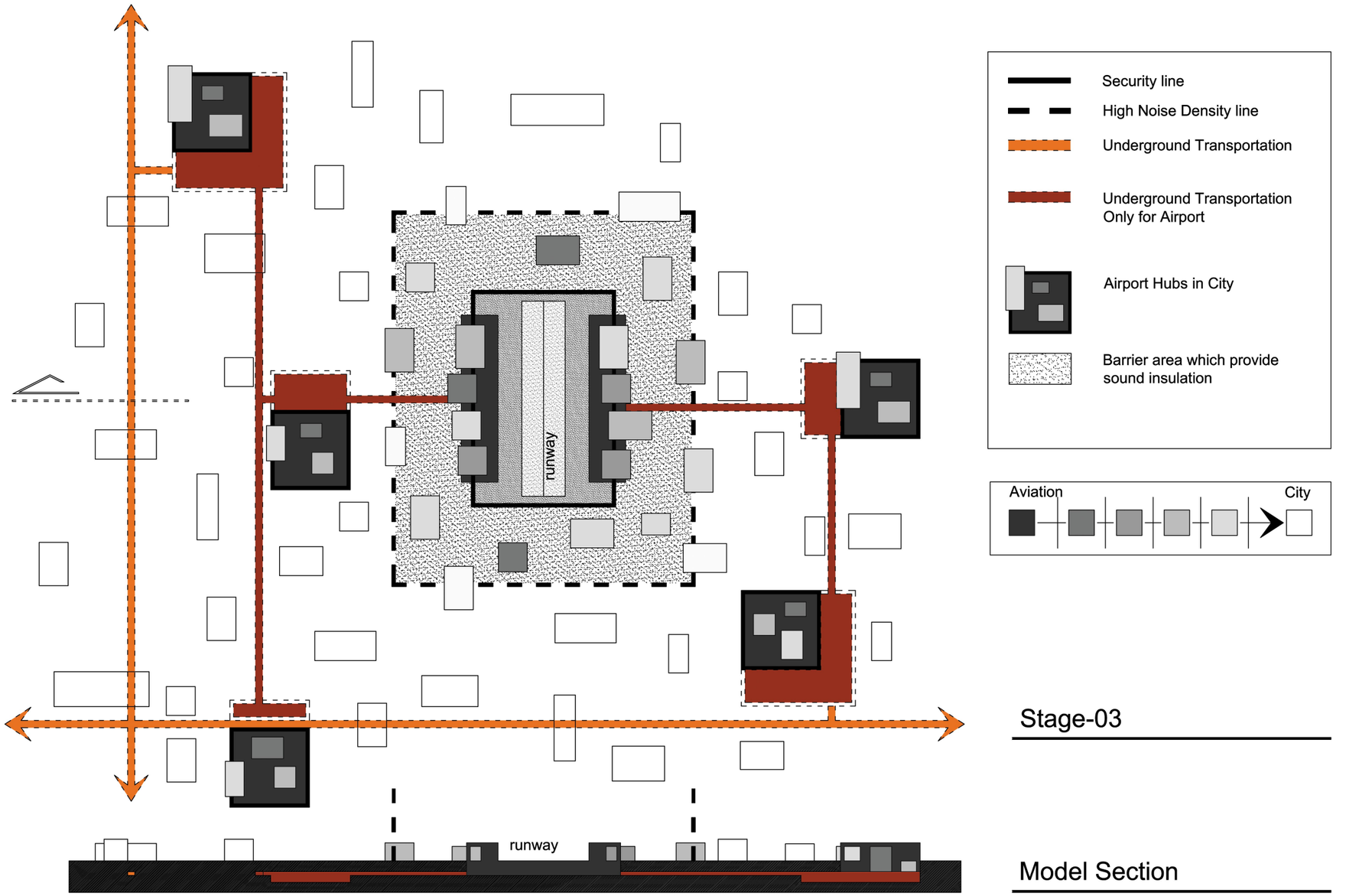

Figure 5.9: *Alternative Airport Architectural Program – Stage 3*

Stage 03 – Solution for Integrating the City and the Airport

At the third stage, the connections between the city and the airport come to the fore. Several commercial programs are made available to be used by the people in the city by means of safe zone hubs scattered throughout the city, but still connected to the airport and to other hubs by a private and secured underground transportation network. While housing programs serve the citizen, airport hubs (containing the programmatic modules between 2 and 5 as shown in the Figure 5.9) scattered among the city texture can still be safety zones. Although this solution creates more than a single security point, it will help to integrate the airport with the city. The main objective of the alternative airport program is to involve the expectations of the users as the real owners of the space, as well as those of the investors in the planning process.

CHAPTER VI

CONCLUSION

This thesis has discussed and criticized the architectural program of the contemporary airport by underlining its evolution from being just a transportation space into a “city”. In doing so, the main argument of the thesis is to integrate the city with the airport by giving a special importance to the user (both the passenger and the inhabitant of the city). It has been argued that the user has to have a significant position in the process of integration; the user's rights over the space, which is limited by the domination of global capital, are to be enhanced. In light of these discussions, the thesis has proposed an alternative airport architectural program integrating the city with the airport with a significant positioning of the user.

The architectural program of the airports has been discussed by focusing on three dialectically related constituents of the program, which are “process,” “user,” and “product” (building). “Process” refers to the influential actors in shaping the space of airport rather than to the architectural design process generating the built form. “User” refers to the actors who have both active and passive roles in the organization of space. “Product” denotes the space itself, transformed according to the wishes and demands of both the user and the mode of production. On the basis of the argument of the thesis, these constituents have been significant in the development of the alternative airport architectural program in a way to respond to the requirements of the integration with the city.

Concerning the increase in passenger capacity and their position as a gate

for the country, airports become the significant political and commercial space of globalization. That is, they are valuable and suitable "fix spaces" of global flowing capital due to their hundred thousands of visitors every day. Considering all these numbers as potential consumers to be targeted, the airport is a perfect commercial space to serve for flowing capital. However, space should be considered together with both its investor and its user. This thesis aims to establish a balanced relation between user, investor and product (airport as a space) by examining the airport architectural program in terms of the social relations among them.

Spaces of resistance, where the user can demonstrate his/her existence against the domination of the capital's spaces, are being limited more and more. The focus of this thesis is to create awareness on this situation and to reconsider the airport architectural program aiming to increase user's rights over the space. Already mentioned in the third chapter, an example of this can be seen in the efforts of the residents living in the vicinity of airports coming together and forming more than 40 different groups throughout the world to protest against the airports and draw attention to the noise and air pollution created by airports. Pollution and noise due to airports are not the only reason for the protests. Airport expansion and growth harm the life of the neighboring areas as in the example of farmers deported from their land, mentioned in the third chapter.

Beyond these protests against the pollution and noise caused by airports and the expansions of airports, there is also the issue of artificially created thematic spaces (such as the IKEA lounge in the Paris airport) that the user is forced to cope with. As the main purpose is to keep the user inside a secure single volume, these spaces can hardly be more than a decor. This brings to the minimization of the user's communication and relevance to the space. This thesis has approached these kinds of problems faced by the user as important data in the reconsideration of the architectural program of the airports. Based on this approach, the thesis has proposed that user-oriented commercial and cultural spaces, such as cafes,

restaurants, museum, etc., are to be located outside the security zone, rendering them integral parts of the city, rather than mere decors.

Today, airports are not only transit spaces; they have begun to be designed together with living areas. This means that the airport and surrounding areas have to be designed by considering the people who use the airport and live in the vicinities of the airport. In the fifth chapter, the thesis has presented an alternative airport architectural program bringing solutions to the problem of uncontrolled growth, of noise, and integrating the city with the airport by giving a special importance to the user. The alternative program has been developed as a result of the analysis and discussions in the previous chapters. As the main argument of the thesis is to integrate the airport building with the city by considering the user (both the passenger and the inhabitant), a research with a different argument may help to deduct new problems pertaining to the airport, and proposes new program models as answers to these problems.

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