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MASTER THESIS

**THE TIME OF MODERN:
SPACE, ARCHITECTURE AND TIME MANAGEMENT
IN EARLY REPUBLICAN TURKEY**

MERVE KÖZ

THESIS ADVISOR: ASSOC. PROF. (PhD) AHENK YILMAZ

CO-ADVISOR: ASSOC. PROF. (PhD) KIVANÇ KILINÇ

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ABSTRACT

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Köz, Merve

Msc, Architecture

Advisor: Assoc. Prof. (PhD) Ahenk Yılmaz

Co-Advisor: Assoc. Prof. (PhD) Kıvanç Kılınç

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This study focuses on the reflections of the idea of time management on workplaces and domestic places planned and built by the Turkish state in the 1930s within the scope of its cultural reforms. By examining factory complexes, the workers' houses built within the premises of these complexes, and the Girls' Institutes, the thesis problematizes how time management in spatial planning can be evaluated within the scope of urban planning and architectural design in early republican Turkey. With the advent of the Industrial Revolution, the concept of efficiency in factories became an important phenomenon, and studies on time management increased. The scientific management principles (Taylorism) set by Frederick W. Taylor to increase efficiency in factories marked the beginning of a new revolution and was influential on many other professions, including architecture and city planning. With the emergence of modernism as a popular discourse in architecture starting from the early 20th Century and its use of industrial methods, such as mass production and standardization, these principles were integrated into design discourses. From public life to the interior of the homes, rationally managing time and space became central to modern life and societies.

This thesis shows that in the case of early republican Turkey, the state wholeheartedly embraced the ideals of Westernization and modern citizenship, and implemented reforms to regulate the everyday life. Time management became an integral part of this process. In the 1930s various foreign and Europe-educated Turkish architects and planners contributed to the development of the new capital city Ankara,

new public institutions, as well as major industrial complexes built across the country. The implications of abovementioned developments were twofold. First, through the planning of a new capital city and factory complexes in various cities and towns, the newly established nation-state aimed to build models of a modern urban order which reflected time management principles to a great extent. Second, the modernization discourses of efficiency, order and management entered on the discursive level to domestic spaces through technical and vocational education with the Girls' Institutes and idealized forms of minimalized home designs.

Key Words: Time Management, Spatial Planning, Efficiency, Scientific Management Principles, Modernism, Early Republican Turkey



ÖZ

MODERNİN ZAMANI: ERKEN CUMHURİYET TÜRKİYE'SİNDE MEKÂN, MİMARLIK VE ZAMAN YÖNETİMİ

Köz, Merve

Yüksek Lisans Tezi, Mimarlık

Danışman: Doç. Dr. Ahenk Yılmaz

Yardımcı Danışman: Doç. Dr. Kıvanç Kılınç

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Bu çalışma, zaman yönetimi fikrinin Türk devletinin kültürel reformları kapsamında 1930'larda planladığı ve inşa ettiği işyerleri ve yaşam mekanlarına olan yansımalarına odaklanmaktadır. Tez, fabrika komplekslerini, bu komplekslerin binaları içinde inşa edilen işçi evlerini ve Kız Enstitülerini inceleyerek, Erken Cumhuriyet Döneminde kentsel planlama ve mimari tasarım kapsamında mekânsal planlamada zaman yönetiminin nasıl değerlendirilebileceğini sorunsallaştırmaktadır. Sanayi Devrimi'nin ortaya çıkmasıyla birlikte fabrikalarda verimlilik kavramı önemli bir fenomen haline geldi ve zaman yönetimi ile ilgili çalışmalar arttı. Fabrikalarda verimliliği artırmak için Frederick W. Taylor tarafından belirlenen bilimsel yönetim ilkeleri (Taylorizm) yeni bir devrimin başlangıcını işaret etti ve mimarlık ve şehir planlaması dahil olmak üzere diğer birçok meslek üzerinde etkili oldu. Modernizmin 20. yüzyılın başlarından itibaren mimaride popüler bir söylem olarak ortaya çıkması ve seri üretim ve standardizasyon gibi endüstriyel yöntemleri kullanması ile bu ilkeler tasarım söylemlerine entegre edildi. Kamusal yaşamdan evlerin içine kadar, zamanı ve mekânı rasyonel bir şekilde yönetmek modern yaşam ve toplumların merkezi haline geldi.

Bu tez, Erken Cumhuriyet Türkiye'si örneğinde, devletin tüm Batılılaşma ve modern vatandaşlık ideallerini gönülden benimsediğini ve günlük yaşamı düzenlemek için reformlar uyguladığını göstermektedir. Zaman yönetimi bu sürecin ayrılmaz bir parçası haline geldi. 1930'larda, çeşitli yabancı ve Avrupa'da eğitim görmüş Türk mimar ve planlamacılar, yeni başkent Ankara'nın, yeni kamu kurumlarının ve ülke genelinde inşa edilen büyük sanayi komplekslerinin gelişimine katkıda bulundular. Yukarıda bahsedilen gelişmelerin sonuçları iki yönlüdür. Birincisi, yeni kurulan ulus-

devlet, çeşitli şehir ve kasabalarda yeni bir başkent ve fabrika komplekslerinin planlanması yoluyla, zaman yönetimi ilkelerini büyük ölçüde yansıtan modern bir kent düzeninin modellerini inşa etmeyi amaçladı. İkincisi, modernleşme söylemleri olan verimlilik, düzen ve yönetim kavramları, Kız Enstitüleri ile teknik ve mesleki eğitim ve minimize edilmiş ev tasarımlarının idealize edilmiş biçimleri aracılığıyla söylemsel düzeyde ev alanlarına girdi.

Anahtar Kelimeler: Zaman Yönetimi, Mekânsal Planlama, Verimlilik, Bilimsel Yönetim İlkeleri, Modernizm, Erken Cumhuriyet Dönemi



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Merve Köz
İzmir, 2021

TEXT OF OATH

I declare and honestly confirm that my study, titled “THE TIME OF MODERN: SPACE, ARCHITECTURE AND TIME MANAGEMENT IN EARLY REPUBLICAN TURKEY” and presented as a Master’s Thesis, has been written without applying to any assistance inconsistent with scientific ethics and traditions. I declare, to the best of my knowledge and belief, that all content and ideas drawn directly or indirectly from external sources are indicated in the text and listed in the list of references.

Merve Kız

Signature

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February 3, 2021

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ABBREVIATIONS

ABBREVIATIONS:

SOE State-Owned Enterprise

GDP Gross Domestic Product

MoMA Museum of Modern Art



CHAPTER 1

INTRODUCTION

Time is considered as the most significant resource in modern management thinking, and the only way to prevent wastage and control this resource is to find a way to manage it (Yılmaz and Aslan, 2002). Time is a phenomenon with an endless flow that cannot be controlled, and it contains the past, present, and future (Smith, 1998; Aydın ve Gürbüz, 2012). With the start of the Industrial Revolution and the increase in technological developments, time management began to be reflected in all areas related to production. With the definitive transition to the clock system, time management studies accelerated, and many philosophers and economists such as Adam Smith and Benjamin Franklin searched for ways to manage time well and to increase productivity.

Anthony D. King defined the words “modern” and “modernity” as “as of the present” (King, 1995). The word of “modernity”, which started to be used in the 16th century, has been adopted and used more as a concept with the Industrial Revolution (Berman, 1982: s. 17). Revolutionary studies on time management were executed by Frederick W. Taylor. Taylor argued that productivity in production can be increased by observing workers in factories. Taylor, who is interested in managerial staff as much as he observed the workers in his works, argued that managers do not have a sufficient command of many jobs; therefore, he believed that their relations with workers should be improved (Eyre, 2010). In 1911, Taylor published his studies on ways to increase productivity in his production under the name of “scientific management principles”. Taylor argued that if production is handled systematically, maximum efficiency would be achieved; therefore, according to him, the system and the workers should act together, and he supported these ideas with the following words:

In the past the man has been first; in the future the system must be first. This in no sense, however, implies that great men are not needed. On the contrary, the first object of any good system must be that of developing first-class men; and under systematic management the best man rises to the top more certainly and more rapidly than ever before (Frederick W. Taylor).

The idea of time management has gained prominence since the Industrial Revolution. Efforts to increase productivity, especially in factories, have contributed to this term. With Taylor's publication of scientific management principles and the spread of these principles to other production areas, some new concepts emerged within the scope of time management. The emergence of the concept of "space-time", and the innovative designs that are the outcome of modern architecture led to studies on space and time management.

According to Mumford, cities, together with art and architecture (through monuments, buildings and public spaces), leave traces in people's minds. Hereby, the concept of "time" becomes visible in cities (Mumford, 1938). The increase in urban populations due to industrialization has increased the need for city planning. This situation led to the making of "ideal city" arrangements; therefore, rational plans consisted which is seeking efficiency in urban planning. Many planners and architects sought ways to increase productivity at the urban scale, and Garden City and Industrial City planning be accepted the first examples of rational planning. With the Industrial Revolution, technological developments have increased, and new types of materials have been integrated into modern architectural designs. The reflections of industrial production, standardization in factories, and mass production on architectural designs have been in the form of collective housing, and the rationalization of spaces in house planning started with the rationalization of the kitchen.

Building further on this background, as a result of these time management studies, concepts such as efficiency, accessibility, rationalization, and standardization came to the fore and gained a place in many areas. This study examines the reflection of these concepts on architectural and urban spaces by creating an undercurrent basis with modernity. Besides, the study aims to discuss the relationship between the ideology of establishing a new nation-state in the early Republican period and the concept of "time management in spatial planning". The thesis shows that in the case of early Republican Turkey, the state wholeheartedly embraced the ideals of Westernization and modern citizenship and implemented reforms to regulate the everyday life. The launch of cultural reforms reflected a desire to create a modern community and form institutions to represent these ideals. Time management became an integral part of this process. Therefore, the thesis proposes to examine at the spatial planning in the early Republican period within the framework of the concepts that were

the yield of time management. Furthermore, in the 1930s various foreign and Europe-educated Turkish architects and planners contributed to the development of Ankara, its public institutions, as well as major industrial complexes built across the country. Eventually, with the help of the examination of foreign and Europe-educated architects' and planners' works, the study aims to provide a fresh perspective for the examination of spaces by keeping these concepts in the focus of the study in the early Republican period. In this context, the thesis evaluates the spatial reflections of the state's cultural and economic reforms in the 1930s, in line with the efforts to build a new and modern nation-state following modernization ideals. By examining major factory complexes and the Girls' Institutes built during the period under study, it explores the ways in which the concept of time management informed both the design of workplaces and their residential complexes and how modern domestic spaces were imagined in the education of women.

1.1. Scope of the Study

The basic principle of Taylorism was to regulate time and bring both efficiency and discipline to the workplace. Scientific management principles studies have basically been aimed beneficial using of time and increasing efficiency. Modern nation-states followed this logic; for creating a modern citizenship it was essential to discipline and regulate the time, and for rationally organized use of urban spaces. Time management principles, which were the profits of scientific management, started to be applied in many areas with the spread of modernism. For that reason, in this study, scientific management principles helped to examine the period by focusing on the reflection of time management principles in the spaces. Within this scope, this study presents an analysis of the early Republican period in the context of time management principles in spatial planning. Besides, the thesis provides the opportunity to examine the translation of the terminology of time management into that of spatial planning and its connections with the concept of modernism at an urban and architectural scale.

Studies on the urban and architectural history of early Republican Turkey constitute an extensive body of literature but a great majority of them have not paid enough attention to the issue of time management in relation to architecture and urban development. In response, this thesis aims to answer the following questions: How were theories and principles of time management applied in the new spaces of Turkish

modernization? How were spaces produced within the scope of time management in the early Republican period and how did people influence it? How did concepts that are the yield of time management diffuse into urban spaces? What were the contributions of modern architecture to time management in early Republican Turkey? In short, the thesis focuses on how modernization was performed rather than looking at how it was represented in the early Republican era; thus, it examines the ways in which modernization operated. To this end, the thesis provides a new perspective on how time management, following the basic tenets of Taylorism, found its counterpart in architecture and spatial planning in the context of the early Republican Turkey.

1.2. Aim of the Study

The study aims to show the ways in which the idea of time management influenced and informed the planning of factory complexes and the education of women to lead the transformation of the domestic spaces into modern kitchens and homes. First of all, the study reveals the concepts that need to be considered to understand the reflections of time management on spatial settings. Thanks to the use of concepts such as efficiency, rationalization, accessibility, and standardization, time management principles were applied first to factories with the advent of modern urbanization.

While examining the factory complexes in 1930s Turkey, the thesis aims to show the relation of the idea behind their location and planning in the city with the concepts of time management in mind. Besides, it examines the roles of the residential settlements of such complexes in the rational planning of the settlements. Secondly, the thesis aims to discuss the relationship between the institutes built for the girls in the early Republican period and the desire to create a modern nation. The main goal is to explore the contribution of Girls' Institutes to the application of time management on the discursive level on how domestic spaces are imagined. In the early Republican period, the link between the modernization of domestic spaces and the concepts of efficiency and rationalization were established through the Girls' Institutes. Finally, the thesis draws attention to the relationship between the arrangement of workers' houses in factories and time management principles. Overall, this study is intended to be a reference for future studies on spatial planning in the context of time management.

1.3. Methodology

This thesis utilizes a mixed methodology: literature review and spatial analysis. It examines time management in spatial planning at various scales from urban scale to the scale of housing units. The concepts of efficiency, rationalization, order, and standardization are the basic concepts in these studies for examining modernization of the early Republican period. The literature on scientific management studies and their reflections on modern design strategies provided the research with a broader perspective to discuss the historical process of the early Republican period within the scope of time management in spatial planning. This discussion formed the basis of spatial and diagrammatic analyses of urban and architectural design decisions in workplaces and domestic places applied as part of early Republican period modernization strategies. What follows are the scope, aim and methodology of the study.

The study is organized as five main chapters. After the introduction in the first chapter, the second chapter includes the general literature review about time management. In the second chapter, firstly, a brief explanation will be given about the concept of time. While the precise date of time management emergence is not known exactly, the historical process of time management concepts will be analyzed by citing the earliest research results. Although the studies are discussed chronologically on the notion of time management, the analysis will be especially through the works of Frederick W. Taylor, regarded as the father of scientific management. This chapter will also cover the definitions of the principles of modern and modernism, which developed around the same time as the Industrial Revolution. As industrialization increased, the rate of migration from the village to the city increased, and new settlements were required as a result. Therefore, this chapter will also address the field of modern city planning and the principle of rational, well-planned, well-managed urban spaces, especially through Le Corbusier's works. As in a factory environment, the demand to use the spaces more functionally and efficiently was not limited to city planning but was often used in architectural design. Lastly, the chapter will touch on the developments of mass housing settlements in Germany in the 1920s and the model kitchen design known as the Frankfurt Kitchen.

In the third chapter, the study will examine the historical process of the concept of modernism in the early Republic period, including the late Ottoman Empire period,

and how key concepts emerged together with the Industrial Revolution, such as efficiency, mass-production and standardization, began influencing the public discourse on spatial planning. In the early Republican era, the desire to create a new and modern nation to replace the Ottoman Empire, which lost its influence politically and economically after the First World War, came to prominence. As the rate of industrialization grew by projects introduced by the Turkish State, the designs were assisted by modern materials, and the rise and speed of transport vehicles were taken care of. As the number of railway lines has expanded, city arrangements have grown from the new capital city Ankara to all other cities to reflect these new transport networks. Therefore, in this chapter, foreign architects and city planners, as well as internationally educated Turkish architect's importance of Turkey's restructuring starting from Ankara will be highlighted, and comprehensive information will be provided about their works. Finally, spatial settings of cultural reforms that were implemented in the early Republican Period will be discussed. The chapter will conclude with a review of how reforms and their spaces reflected the efforts by public institutions as well as domestic spaces to give order to daily life, echoing the rationale behind industrial development and preparation of factory complexes.

In the fourth chapter, architectural design and city planning practices in the early Republican period will be discussed within the scope of time management principles. Firstly, how these principles were implemented with the support of the state how were reflected in businesses and domestic life in the country will be discussed. Sümerbank factories will be investigated which were built and operated by the state. On the basis of the Kayseri and Nazilli factory examples, attention will be drawn to the outcomes of the buildings in the city. Besides, how the management of time and space impacted structures, where they were constructed and the relationships between the settlements will be shown with their site plans in the city. Discussions on reflections on efficiency and other time management principles on the design and usage of domestic spaces will be also included in the chapter. As a result of Atatürk's reforms on education, the chapter will address how the discourses about of rationalization and efficiency reached houses and their housework organization with the opening of Girls' Institutes. In this regard, several examples of worker' houses built will be examined within the examples of Kayseri and Nazilli factory complexes during the 1930s, and examples will be detailed in the planning of these settlements and their contribution to city life.

Chapter 5 will include a summary of the literature studies in which time management studies and early Republican modernization were evaluated in time management context. After giving information about the purpose of the thesis, chapter will conclude with a general summary and deductions from the studies on workplaces and domestic places within the scope of the time management principles. It concludes how the modernization studies of the state were examined within the scope of time management principles during the early Republic period, and how they will be a guide for future studies.



CHAPTER 2

SPACE AND TIME MANAGEMENT

The concept of time is the most important phenomenon that cannot be brought back. At the same time, it is a very difficult concept to be described and studied on it. In this chapter, firstly, after briefly explaining the concept of time, the importance of managing time will be emphasized and information will be given about the emergence of the concept of time management. Although the exact date of the emergence of time management is not known exactly, the history and development of time management will be examined by mentioning the earliest research findings. While the studies on the concept of time management are examined chronologically, especially through the works of Frederick W. Taylors, known as the father of scientific management. The criticisms directed to Taylorism will also be discussed in this chapter.

One of the biggest factors in the acceleration of time management efforts was seen during the Industrial Revolution. Especially after the acceptance of the importance of time management to increase productivity in factories, the concept of time management has started to be discussed in line with that of efficiency. Mass production and industrialization, which started with the Industrial Revolution, revealed that change in many areas was necessary. Therefore, this chapter will cover the meanings of modern and modernism concepts, which rose simultaneously with the Industrial Revolution. The increase in industrialization increased the intensity of migration from the village to the city, and as a result, new settlements were needed. This chapter will also cover the developments in the realm of modern city planning and the idea of a rational, well-planned, well-managed city spaces, especially through the works of Le Corbusier.

The desire to use the spaces more functionally and efficiently, like in a factory setting, was not limited to city planning but was also employed in architectural design. To illustrate this, the chapter will briefly touch upon the designs of mass housing settlements in 1920s Germany and the model kitchen design known as the Frankfurt Kitchen.

2.1 Managing Time

Time is the constant infinite movement of life and occurrences that take place in almost inevitable progression from the past, into the present, through the future (American Heritage, 2002; Oxford, 2011). Besides, time is a relative concept and is very difficult to define (Yüksel, 2014). Since time is such a valuable resource that cannot be brought back, the concept of “time management” has been dealt with quite a lot recently (Yılmaz and Aslan, 2002). In this section, after examining the development of the concept of time management throughout history, the principles developed by Frederick Winslow Taylor, also known as the father of scientific management, will be discussed in detail.

2.1.1 The History of Time Management

One of the most important features of time is that it is a phenomenon that varies from person to person. In modern science, the concept of space-time first emerged with non-Euclidean geometry in 1830 and was consisted in 1905 with the discovery of Einstein's theory of relativity (Yüksel, 2014). Hitherto separate concepts of space and time combined after Einstein's theory. While time is a relative concept that changes depending on the viewer's location, with Einstein's contribution started to be understood as a single concept combined with space. (Giedion,1941). Time can also be defined as a process that continues without the control of the individuals and covers all the moments from past to future including today (Smith, 1998; Aydın and Gürbüz, 2012). Even though it cannot be perceived by means of senses, it is a phenomenon that has physical, psychological, sociological, and philosophical meanings (Güven and Yeşil, 2011; Aydın and Gürbüz, 2012).

For the philosopher Parmenides, time is an illusion that guides our perceptions. However, Plato argued that time is not unreal and is a moving representative of things that cannot be changed (Yüksel, 2014). While Aristotle defined time as a countable phenomenon, in “*Time for Aristotle: Physics IV. 10-14*” Ursula Coope (2005) defended the idea that time is a number. Coope developed his interpretation of the concept of time over Aristotle's definition by acknowledging that time is measurable. According to Coope, measurability should not be a feature that determines time. Therefore, it can be argued that several scholars believe that time gives meaning to movement since it is a continuous phenomenon (Tengilimoğlu et al., 2003; Tutar, 2007; Aydın and

Gürbüz 2012). Time can also be considered as the elapsed time between the start and end of an event (Yüksel, 2014). In other words, time cannot be stopped and all people experience this phenomenon equally (Akatay, 2003; Aydın and Gürbüz, 2012). As Mehmet Gürbüz and Ahmet Hamdi Aydın point out in “*Time Concept and Management*” time is a phenomenon that affects all people and is perceived in the direction of the movement of celestial bodies in the solar system. However, because of all this condition of relativity, even there are many definitions of time, and it is difficult to come up with a perfectly clear understanding (Türkmen, 1999; Aydın and Gürbüz, 2012). One important step in the understanding of time was Einstein’s Theory of Relativity. While physicists depict the dimensions in 3 different units in length, width, and height in the world, Einstein added time as a different dimension (Aydın and Gürbüz, 2012). For Einstein, time is a dimension that arranges the events according to their occurrence and gives meaning to the events (Boslough, 1990; Güçlü, 2001). Einstein both challenged and built on Newton’s theories who had said that “[t]ime flows without stopping in one direction” (Boslough, 1990; Güçlü, 2001). How and when the concept of time begins for people is not really known (Aydın and Gürbüz, 2012). People often describe time by comparison, and recurring events in nature have help to define it (Tutar, 2007; Aydın and Gürbüz, 2012).

Time is also an important concept in modern management thinking and it is seen as a basic resource for investments (Webber, 1972; Yılmaz and Aslan, 2002). Yılmaz and Aslan argue that although time is an important factor for production, it is a concept that is least understood and has the most problems with its management (Yılmaz and Aslan, 2002). The same authors also believe that in modern societies time must be managed well to be used effectively and efficiently. Because, to manage time, people need to be aware of the time they live in (Yılmaz and Aslan, 2002, p. 26). Regarding the issues raised by these scholars, Peter F. Drucker said: “Time is the scarcest resource; and unless it is managed, nothing else can be managed” (Yılmaz and Aslan, 2002 p. 26). The reason is that time cannot be collected and stored like raw material and it cannot be accumulated as with money (Yılmaz and Aslan, 2002). Therefore, the only thing that can be accomplished over time is to manage and control its wasting (Yılmaz and Aslan, 2002; Yüksel, 2014). Hasan Yüksel defined the concept of time as an irreversible resource as power, money, and value. At the same time, since time is

considered as a “power” source by society, it has been an essential element and resource that guides our daily life (Forsyth, 2010; Yüksel, 2014).

Jean De la Bruyere said the following about the importance of time management: “It is those who make the worst use of their time who most complain of its shortness.” Likewise, Jay has pointed out in “*Time Management*” book, that time is fixed and if the duration of your work cannot be completed within the time you have, then it is the work that needs to be changed (Jay, 2002, p. 6). Management of time becomes especially relevant at this stage. According to anthropologists, hunter-gatherer people could survive with 15 hours of work per week. Despite this, people discovered that using time better will give them more benefits. With the agrarian revolution, weekly working hours changed. Although people who were engaged in agriculture had a more comfortable life, they increased their weekly working hours (Jay, 2002 p.14).

Time management initiatives began with using water and hourglasses in 1500 BC and people tried to measure the flow of works (Conboy, 2020). However, the earliest references to time management date back to the 6th century AD. For instance, Benedictine monks organized their activities by planning the time (Conboy, 2020). Jay argues that as communities became more structured and organized, time management was also inevitable (Jay, 2002). Benedictine monks were the first to manage time by cutting the ties between nature and time. They managed the time by arguing that there should be a time-dependent order in the monastery in order to eliminate the “enemy idleness” and chaos, which were thought to have caused the collapse of the Roman Empire (RTÉ Archives, Conboy, 2020). After that, researchers believe that clock use was not regular until the 14th century and clock-related technologies continued to be developed until the end of the 17th century, whereas the use of clocks began to become widespread in the early 18th century (Jay, 2002). Despite all this, Jay writes, not many attempts have been made to put time at the center of time management studies (Jay, 2002).

In modern societies, time management started due to the need to regulate the time of managers who have a busy working life and then started to become widespread all over the world (Güçlü, 2001). The primary goal in time management is to use time as efficiently as possible with better planning of each moment (Güçlü, 2001). At the same time, time management benefits the determination of priorities with the help of planning (Güçlü, 2001). Many names in the field of time management have come to

the forefront with the increase in technological developments, and various studies have been started to make good use of time. Simultaneously, factory owners tried to provide order and discipline about time to their employees in the early 1700s (Jay, 2002). Increasing time-related problems in business life caused time management to be concentrated in this area (Ward, 2019). As a result, sanctions were made against workers who did not come to work on time in most of the factories (Jay, 2002).

The transition to the clock system was first started by Josiah Wedgwood in Staffordshire potteries to correct the problems regarding time (Jay, 2002). Economist Adam Smith made a theoretical study related to capitalism and for Smith, the amount of labor given to a product determines the value of that product. At the same time, According to Jay, Smith emphasized that the time that nations spend to work is the fortune of that nation (Jay, 2002). He developed the theory of eliminating wage differences and created the concept of Gross Domestic Product (GDP) (Sharma, 2020). Smith also emphasized the importance of the division of labor in factories to increase efficiency (Jay, 2002). Because Smith believed that if productivity increases, earnings will increase and this will only be achieved by saving time (Jay, 2002). One example to illustrate this was Benjamin Franklin, a diplomat, publisher, philosopher, and an American statesman who was seen as the father of time management. Franklin had experienced various problems at the beginning of his business life (Jay, 2002). He was an unemployed person who filed for bankruptcy twice at the age of 28.

On the other hand, it can be argued that the negative developments experienced in his business life encouraged him to work about time management. Franklin tried to find the solution to his problems by changing his approach to work and set goals for himself (Jay, 2002). He started to record the goals and priorities in a little black notebook, which can be called a “daily planner” today. Franklin was disturbed by the fact that the unforeseen and disrupting daily planning made the program ineffective, thus he arranged his programs accordingly, and added music and entertainment to his daily plans (Gannon and Buchanan, 2011). Franklin determined 13 basic values and prepared daily reports in line with these values. These values include many different concepts from humility to attitude. Thanks to his writings, Franklin became a writer whose opinions were accepted and respected by his environment (Jay, 2002). Franklin, who advocated that time should be managed in many ways, directed the following question and its answer: “Dost thou love life? Then do not squander time, for that is

the stuff life is made of" (Jay, 2002, p. 15). Inventing the "Time is money" discourse for developments and growth in the industry, Franklin re-emphasized how valuable time is (Jay, 2002).

Another example is Eli Whitney, who gained a reputation as the inventor of "cotton gin," got out of the job as a result of the problems he experienced in the patent of the product. He moved to the North to find a more profitable job, where he could pay her debts (Jay, 2002). In 1798, the USA was preparing for a possible war with France and the state did not have enough muskets. As the muskets were made only by men, the number of muskets held by the government was very low (Jay, 2002). Whitney said that he could make 10,000 muskets in two and a half years and he agreed with the government on this issue (Mirsky, 1974). Adopting "efficiency enhancement" as its basic principle, Whitney wanted to use machines rather than male power to make weapons (Jay, 2002). While this was accepted as the beginning of mass production, this meant that unskilled workers could also produce muskets using machines (Jay, 2002). The products could not be delivered on time due to the inability to purchase the factory area and the yellow fever epidemic that occurred in those years (Mirsky, 1974). This situation of Whitney was not seen as a failure, but it was an industrial revolution because this situation provided job opportunities for thousands of unskilled people (Jay, 2002).

In the early 19th century, factory owners began to see time and money relationships completely equal (Jay, 2002). This was not normally a concern for ordinary people, because most people still did not have a watch at home (Jay, 2002). With the effect of the industrial revolution in the 19th century, the concept of time gained more importance due to the increase in the number of factories along with their capacities (Ward, 2019). The sole purpose of the business owners was to have the required number of workers at the same time to ensure the operation of the machines (Jay, 2002).

In the early 20th century, many engineers, entrepreneurs and scientists were looking for solutions to how to increase efficiency by doing more work at the same time (Jay, 2002). The most prominent of all, Frederick W. Taylor, the inventor of the scientific management idea, advocated increasing the production system by observing workers' activities. Taylor thought that employees could only increase their productivity with money, and he pointed out the need to give incentives to employees

(Taylor, 2019). Taylor's ideas represented great progress for that period and laid the groundwork for future work to be better. (Jay, 2002). Frank and Lillian Gilbert have also started to use the work-study technique, which has become popular with many business owners eventually, and is the discovery of Taylor (Taylor, 2019). They even experimented by attaching light bulbs to workers' fingers to track workers' movements and find out how to increase productivity (Jay, 2002).

Henry Ford was one of the greatest advocates of Taylor's ideas. Ford aimed to increase efficiency by applying Taylor's techniques and mass production methods (Jay, 2002). Ford has advocated the importance of time management and said the following on the subject: "It has been my observation that most people get ahead during the time that others waste." Ford has opened a new era in the automobile industry by producing the Model T. Thanks to Ford and his iconic car design, the car has become imperative for people, rather than a luxury. Thus, Fordism can be called a unique trend in producing standardized products and delivering them to large masses (Kumar, 1995). Model T is considered the beginning of a second industrial revolution after Alexander Graham Bell's telephone invention and Eli Whitney's invention of "cotton gin" (Gannon and Buchanan, 2011).

In the 1950s, the concept of time management began to turn into individual managers' time organizing and this is very similar to Benjamin Franklin's point of view about time management mentioned above (Jay, 2002). Initially, time management was generally built on reminders and taking notes (Jay, 2002). Supporters who think it's important to manage time are aimed to use time better by planning with better diary use. Today, while emphasizing significance of time management, the importance of determining one's own goals and priorities has been also emphasized (Jay, 2002). Stephen R. Covey, who is the author of "*The 7 Habits of Highly Effective People*" and has significant success in self-awareness guide about time management, has worked to make people more effective, safer, and more responsive (Simon & Schuster, 1989; Jay, 2002). (Simon & Schuster, 1989; Jay, 2002). His book has been translated into more than 30 languages and has sold more than 12 million copies. One of the most effective aspects of the book is discipline, and it is not just about time management (Jay, 2002). Likewise, Franklin Covey, which was founded in 1997 under the leadership of Hyrum W. Smith, Stephen R. Covey, and Franklin Quest, is one of the largest companies on time management (Jay, 2002). This institution, named after

Benjamin Franklin, one of the pioneers of time management, has sold millions of Franklin planners (Jay, 2002). Company also provided training, seminars, and consultancy services on time management (Jay,2002). For Hyrum W. Smith, the company is not only in planning, but even seminar works also is not among the duties of the company. The main purpose of the company is to give people personal control in their work (Jay, 2002). After giving a brief historical overview of the concept of time, how it was understood as well as its management, in the following section, I will examine in detail the formation process of the concept of Taylorism, the principles of scientific management, its application process, examples, and results.

2.1.2 Frederick Taylor, Taylorism and Scientific Management

As was briefly mentioned in the previous section, Frederick W. Taylor, the founder of the modern management movement, is known as the first person to do regular and systematic work in industrial settings to increase productivity (see Figure 2.1). Scientific management principles, which he published as a result of the experiments and studies he carried out in the workplaces throughout his business life, have been one of the cornerstones of industrial engineering. In this section, after examining Taylor's business life and how his time studies started, the scientific management principles and policies of application in workplaces will be discussed.



Figure2. 1. Frederick Winslow Taylor (Wikipedia.org)

Frederick Taylor was born in Philadelphia, Pennsylvania, in 1856. Considering completing his education at Harvard University, Taylor ended his formal education life due to visual impairments (Blake and Moseley, 2011). After that, Taylor started his business life as an apprentice patternmaker in a small manufacturing company in Philadelphia (Kanigel, 1996). Taylor reflected on that part of his career later on: “I

look back upon the first six months of my apprenticeship as a patternmaker as, on the whole, the most valuable part of my education” (Kanigel, 1996, p. 49). Then, using his family connections, Taylor started to work as an apprentice at Midvale Steel Works in 1878 and then promoted as a “gang boss” (Blake and Moseley, 2011). He was assigned to supervise the employees for the first time, and was promoted consecutively for several years, holding the title of chief engineer (Kanigel, 1997). Taylor wanted to know more about the work itself by watching the workers in this process. Taylor, who initially forced workers to work faster, received reactions from workers such as slowing down the work. (Blake and Moseley, 2011). In response to this problem, turning towards scientific research, Taylor started time-motion studies using a stopwatch and a clipboard (Blake and Moseley, 2011). Although the experiments disrupted the relations between Taylor and the workers, these studies revolutionized the change of order in the workplace. (Blake and Moseley, 2011). In the next part of this section, I examine how did this change come along. “Time studies,” which started in 1881 at Midvale Steel Works, formed the basis of Taylor's future management science theories (Mee, 2020). For Taylor, workers in factories or workshops should be examined in detail to increase the productivity of production. He argued that minimizing the time spent by workers and their actions is the most important factor in increasing productivity (Mee, 2020). As well as the time factor, the increase in production and the development of mass production techniques have been also influential (Mee, 2020). Taylor, who patented more than 40 products throughout his life, also wrote a book about reinforced concrete and an article series which is titled “*The Making of a Putting Green*” (Blake and Moseley, 2011). In 1890, Taylor started working as the general manager of the company named Manufacturing Investment Company but quit his job as a result of disagreements with the managers. In 1893 he established his own business as a consulting engineer (Papesh, n.d.; Blake and Moseley, 2011). Taylor then started working at Bethlehem Steel, a steelmaker in 1898, and continued to develop his ideas there (Masterclass, 2020). While working there, he collaborated with Maunsel White (who is a politician, merchant, and entrepreneur) to develop a heat treatment process that converted existing cutting tool alloys into a new form of steel that retained its durability at high temperatures and allowed factories to operate machines at much greater speeds. Taylor and White won a gold medal at the Paris Fair in 1900 with these collaborations (Blake and Moseley, 2011). Taylor installed systems of production planning, functional foremanship, and differential

piece rates (Nelson, 1992). Taylor acted in this way, with the conviction that workers, unlike the manager department, have limited intelligence and are innately lazy people who act with momentary pleasure (Marshall, 2003; Özdemir, 2012). Meanwhile, Taylor observed that managers do not have enough ideas in the realization of many jobs (Masterclass, 2020). According to Taylor, the reason was that because workers and managers had to work in cooperation (Eyre, 2010). He also observed that workers do not have the main motivation for work, and believed that the problem of standardization in products would be inevitable if the factory manager has little contact with the workers (Özdemir, 2012). Therefore, Taylor supported the idea of “a fair day's pay for a fair day's work,” as he considered money to be their motivation for workers. He argued that workers should be paid as much as the product they produce (Eyre, 2010). In doing so, Taylor adopted the basic principle of increasing the efficiency of the works and started to conduct various experiments to increase productivity (Masterclass, 2020). The first of the experiments aimed to increase the efficiency of shovel production by designing new shovels by optimizing different materials, and in the other experiment, it aimed to transport pig iron to railway vehicles faster and more (Masterclass, 2020). He also tried a more effective method of laying bricks by following the movements of masonry workers (Eyre, 2010). Using biomechanical analysis for these experiments, Taylor achieved three times more yield than on the first day. These experiments and other time and motion studies formed the basis of Taylor's management theory (Masterclass, 2020). Taylor did most of his work on the studies of time, and as a result of this time and motion studies, he concluded that some workers might be more productive than the others (Eyre, 2010). Therefore, determining the definition of the job clearly and choosing the right person for that job were among the most important factors of productivity (Eyre, 2010).

In addition, Taylor showed that increasing labor productivity was one of the main factors in reducing the completion time of a job (Masterclass, 2020). One of the biggest benefits of saving time was that it helped to maximize the amount of profit (Masterclass, 2020). In the later stages of his career, Taylor observed the work done with the help of a stopwatch. With the help of these observations, he regulated the unnecessary movements of the workers and argued that by working in this particular way, the workers would switch to a machine-like production (Britannica, 2018). Nevertheless, Taylor had disagreements with the managers for openly sharing his

thoughts and had to leave the company in 1901 (Blake and Moseley, 2011). After negative developments in his business life, Taylor started working independently as a consulting engineer and during this period, he devoted himself to developing scientific management theories and marketing his method (Blake and Moseley, 2011). Also, in this period, he began teaching intensively in the USA and Europe, and later became a professor at the Tuck School of Business at Dartmouth College. There he was instrumental in the development of Harvard University's innovative graduate program in business administration (Kanigel, 1997; Lepore, 2009; Blake and Moseley, 2011). In 1910, an Eastern Railway company made a proposal to the government to increase the rate of freight used, but the United States Supreme Court rejected the company's offer and advised them to use Taylor's scientific management system instead (Blake and Moseley, 2011).

Such developments must have contributed to his recognition and popularity. Shortly after, in 1911, Taylor published the “*Principles of Scientific Management*” where he argued that efficiency and productivity can be increased by optimizing and simplifying work (Eyre, 2010). The organized labor movement forced Congress the next year to summon Taylor before a House Committee to inquire into his shop management system (Blake and Moseley, 2011). Taylor continued his work until 1915 and died on March 21, 1915, of the flu. He “was heard to wind his watch” about half an hour before he died, according to his biographers (Copley, 1923). It can be said that this is a very natural action for a person who did revolutionary work with his work on the stopwatch and clipboard.

Taylor initially called his management “shop management” and Henry L. Gantt, a mechanical engineer, made a great contribution to the popularization of the term “scientific management” (Masterclass, 2020). Robert F. Hoxie (1915) who was an American economist and he worked on labor history, has published many articles on Taylor and his thoughts. In “*Scientific Management and Labor*,” personally approved by Taylor, Hoxie defined scientific management as a system created by industrial engineers to benefit workers and society. At the same time, according to Hoxie (1915), Taylor emphasized that there should be a fair and scientific distribution in scientific management together with other elimination of avoidable waste, control of production processes, improvement of production methods. According to Taylor, the first way to organize production in the workplace was to systematize production, improve

equipment and machinery and ensure standardization (Nyland, 1996). In addition to these, the cost accounting, repair and maintenance systems of the work had to be implemented regularly (Nyland, 1996). Following these arrangements, the scientific manager will control the production and employment, and organize the purchases together with the sales. Taylor had argued that while doing all these, the education of the workers should have also been controlled (Nyland, 1996). In this case, it can be said that Taylor's system is not only related to “time-motion” and financial aspects, but it also involves the entire organization program (Nyland, 1996). As Taylor stated in his book “The Principle of Scientific Management” (1911), people do not make any effort to improve their work unless their financial losses. With the growing of mass production, the need for competent people has increased, considering the developments in technology and the sector (Taylor, 1911). The search for competent people who run business, from household services to large companies, has also increased. Taylor (1911) believed that production should be made more systematic by educating each person with a particular competence. Even though many analysts think that Taylorism consists only of time studies, control of the workforce and surcharges, Taylor understood his theory in broader terms; he argued that every institution involved in production, whether state or private, should be restructured by making more radical changes (Nyland, 1996). In addition, Taylor (1911) argued that the information in his book can be applied to all home and business activities and that if the principles of scientific management are well understood and applied, it will be very successful and good results will be obtained. For Taylor, the main goal of scientific management is to ensure the maximum welfare of all workers and employers. In this case, it will not be enough to provide a unilateral welfare situation. Because there are numerous conflicts between employers and workers, and these incomprehensible issues must be resolved in order to increase production and efficiency (Taylor, 1911). Here is an example to illustrate: a single employer and his employee can produce 2 times more production and earn more money by acting together and working at the same time intervals. In larger companies, these are necessary to ensure minimum capital costs, to increase of commitment between employee and employer, and maximum welfare. This may be the case in all regions or even between countries, as a high daily production means earning more money than the workers of the rival firm can earn. Taylor (1911) summarized this situation as follows: “In a word, that maximum prosperity can exist only as the result of maximum productivity” (Taylor,

1911: p. 5). If production is inefficient, few products can be sold and the purchasing power decreases while the price of the product increases. The idea is that the inefficient work of a worker indirectly affects the economy of the country in general. Taylor believed that managers should apply scientific management principles in order to prevent such inefficiencies (Taylor, 1911).

On the contrary, Taylor (1911) argues that if the employer wants to get the highest efficiency from the worker, the worker should be rewarded and believes that people have a natural tendency to avoid work. In summary, Taylor (1911) points out that if the employers work in cooperation with the workers and the wage increases of the workers at a rate of 30% to 100%, laziness and all idleness will disappear. In this process, workers would understand that, contrary to what they used to believe, increasing per capita production will not cause workers to lose their jobs (Taylor, 1911). Taylor offers 4 principles for the highest efficiency and welfare for both the employer and the employee:

- Reviewing every stage of the work instead of the old “rule of thumb” working method;
- Gathering all the information and reducing the work to formulas and rules with the help of tables;
- Selecting employees in accordance with the requirements of jobs; train, develop and teach according to the work;
- Working in cooperation so that workers can do the job in the best and most efficient way;

Giving the manager the training of how to do the job and the division of labor, and to strengthening the relations between the manager and the workers (Taylor, 1911, Nyland, 1996, Eyre, 2010, Blake and Moseley, 2011, Akın, 2019). There are several scholars who approached Taylorism principles critically. Studies in the history of the field of management are generally examined in three parts: structure, people, and system and situation oriented (Özdemir, 2018). Cahit Talas (1983) criticized Taylor in his book “*Social Economy*” by stating that the Scientific Management Principles mechanize people, that workers do not make as much profit as employers and that they work hard. Francis Fukuyama (2000) was also critical. He wrote that with Taylorism, humanitarian problems are addressed only from an engineering perspective in his

“Trust: The Social Virtues and the Creation of Prosperity” book. In addition, Taylorism's opposition to teamwork and the fact that each worker has a different job description also stirred criticism. Because in modern methodology, it has been emphasized that the best way to increase productivity and efficiency is to consider business systems as a whole (Eyre, 2010). One of the biggest criticisms about Taylorism is that it ignores the humanitarian side of workers and there is no appreciation for them other than money. In addition, Taylor, who advocates that managers should do all planning and thinking, prevented workers from contributing to the production of the work (Caldari, 2007). Another area of contention for the opponents of Taylorism is the theory that the scientific process can inevitably determine the “one best way” to conduct a particular work method to optimize productivity (Ralston, 2014). The implementation of the “one best way” made it impossible for the workers to come up with their wishes about their working lives and to generate ideas about innovative production methods.

In sum, scientific management includes a definition that basically depends on its general principles and it can be applied in many different ways, without a precise philosophy and operating mechanisms. It can be argued that there is a solution for scientific management to solve all problems of workers or employers. In addition, with the use of scientific management principles, Taylor promises a more peaceful environment for workplaces, away from quarrels and conflicts. One of the greatest achievements of “Scientific Management”, “Taylorism” and “Task Management” is that in theory, every worker is systematically trained to work at the highest efficiency, and managing time is at the core of all of them. The idea was that thanks to this training, unlike in former workplaces, managers and workers shared equal responsibility and achieved success together. In this way, workers would display a peaceful and friendly approach in spite of behaviors of employers and all the difficult conditions in their working lives. Taylor has argued that the most important factor in scientific management was that everyone working under the system in small or large enterprises would provide a direct gain (Taylor, 1911). The idea of scientific management, which started in the United States and spread to be used in many countries, has been developed and used by different people over the years. Even if the application of scientific management principles decreased significantly after the 1930s, it has

continued to be used in many countries, especially in health, insurance, banking, and food businesses (Pruijt, 1997).

2.2 Managing Time in Space

In this section, first, I examine the definition and emergence of the concept of the modern, the features and types of the modern city, and the criticism these types received. Then, in the second part, I will focus on the emergence of modern architecture as well as its features viewed through the space-time concept. The discussion will be supported by examples that illustrate how management of spaces was implemented in the 20th century.

2.2.1 Managing Time and Space in Modern Cities

In order for us to understand the concept of the modern city, we need to briefly revisit the dictionary meanings of the two words that make this noun phrase. The word “modern” defined in the *Oxford English Dictionary* (1989) as “characteristic of the present or recent times, as distinguished from the remote past” (King, 1995). The word “modern”, which is defined as a new and independent of the products of the past, is derived from the Latin word “modernus.” Although the history of the word modern is not very clear, it is known to be of western origin (Özyalvaç, 2013). Marshall Berman examined modernity in 3 stages in his book “*All That Is Solid Melts into Air*” (Berman, 1982). The first phase is the phase from the early 16th century to the 18th century when people began to perceive modern life. Between these centuries however, people did not have much of an idea of what it would look like. The French Revolution can be assumed as the beginning of the second phase. With this great revolutionary wave, modernity started to spread in personal, political, and social life. At that time, the concepts of modernization and modernism emerged and started to take root in this process. According to Berman, in the 20th century which is the third phase of modernity, this dilemma disappeared and modernization spread all over the world (Berman, 1982: p. 17).

The use of the words modern and modernist was first seen in the late 16th century. In the case of the words, “modernism”, “modernity”, “modernizer”, and “modernize”, these started to be used at the beginning of the 18th century (King, 1995). Although modernization, which means adopting modern ideas, was used only in 1770, there

were statements such as that aristocrats were “modernizing” their old houses in the 1750s (King, 1995). Since “modern” and “modernity” are interpreted to mean “as of the present,” they are in fact not necessarily geographically fixed, and they float in space (King, 1995). However, in the literature, the concept of modernity generally was associated with the USA and Europe (King, 1995).

The word “city” is derived from Latin and means as a “community of citizens” (Adam, 1995). The city is the point where the power and culture of the society has been concentrated throughout history is the most intense (Mumford, 1938). Lewis Mumford argues that cities can be defined as the product of time. With art, the city can have permanent features and, in this case, time becomes visible. The main reason is that time leaves traces in people's memories, thanks to the monuments, buildings, and public spaces (Mumford, 1938).

At the turn of the century, increasing demand for healthy working and living conditions caused planning to exceed the city limits. Thus, new ideas about ideal cities and neighborhoods began to flourish. Two such examples that aimed to fix the ailments of congested cities, and reorganize them at the intersection of the urban and rural areas were the Garden City and the Industrial City. In these examples, we can see how rational planning intended to organize and regulate the use of city spaces and industrial production was part of these ideal cities. The first of these, the Garden City Movement, which has been built in many places in the world, was started in 1898 by Ebenezer Howard. Howard’s Garden City emerged as an alternative to crowded city centers in Europe and aimed to bring the best aspects of the rural areas and urban centers. Following the Garden City principles, Letchworth became the first such settlement in 1899. Garden City principles, which became widespread in several countries, played an effective role in the planning of post-colonial capitals in the early 20th century.

The Garden City can be seen a response to the development of cities following the Industrial Revolution (see Figure 2.2). After the industrial revolution at the end of the 18th century, rapid industrial development affected many different fields. In this period, when cities and society were undergoing restructuring, the way of production and their lifestyles began to change and the relatively uncomplicated structure of cities changed; therefore, this also started to affect the materials used (Dunnet, 2000). In the beginning of the industrial revolution, the biggest effects in the city were the construction of large roads and larger water channels (Benevolo, 1980). In that, the

construction of new houses increased with the increasing population and the migration, there was also an increase in public buildings, factories, warehouses and ports (Benevolo, 1980).

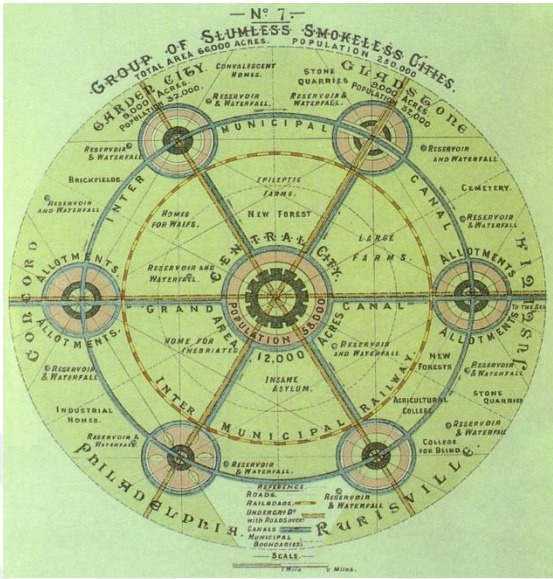


Figure2. 2. Garden City Concept (Wikipedia.org)

As Thomas Southcliffe Ashton mentioned, in *The Industrial Revolution* “[a] new sense of time was one of the most striking psychological features of the industrial revolution;” beforehand, objects were changing more slowly and even considered almost stationary, but after the revolution, the increasingly precise functional criteria and the tradition of making long-term economic forecasts have rendered this strategy difficult (Benevolo, 1980, p. 5). While the cities started to become extremely dense and congested, the necessity to build new residential areas and workers' quarters emerged (Enlil, n.d). Factories, railways, and residential areas determined the form of industrial cities in these periods when the need for production, transportation, and living spaces increased (Enlil, n.d). In the industrial cities where the grid system planning was used more, priority was given to the acceleration of transportation from houses to the factories (Enlil, n.d). Also, massive amounts of goods produced during the industrial revolution could reach distant locations by railroads, and societies were developing not only in economic terms but also in socially and culturally. Thus, it was possible to increase efficiency by saving time through such innovations (Utikad, 2012). In time, with the increasing population density in the city, factories were moved to the city periphery and they were removed from the city center and residential areas

(Prowmes, n.d). To solve the transportation problems that come with this situation, houses were built around industrial zones (Prowmes, n.d).

When we arrive the 20th Century, we can see that various suggestions were made for high-density urban life, and the most common of these were the city plans by Le Corbusier. James Dunnett emphasized in *Modern City Revisited*, Le Corbusier was an advocate of the dense urban configuration and he produced urban plans and supported them with his architectural studies (Dunnett, 2000). Le Corbusier presented his city plan called “Ville Radieuse” (The Radiant City) (see Figure 2.3) in 1924 and published the book he prepared with the same name in 1933 (Merin, 2015). It can be said that Le Corbusier's design was especially inspired by Ebenezer Howard's The Garden City project (Dunnett, 2000). Prefabricated and high-rise residential buildings sit on a large green area and suggest vertical growth, unlike other planning models, which are generally based on expanding the city outward (Merin, 2015). Le Corbusier explains his rationale as follows: “The city of today is a dying thing because its planning is not in the proportion of geometrical one fourth. The result of a true geometrical lay-out is repetition, the result of repetition is a standard. The perfect form.” (Merin, 2015). Thus, he was able to increase the density in a small area but still referred to the traditional city features with its horizontal continuity despite its innovativeness and the use of strict lines (Dunnett, 2000).

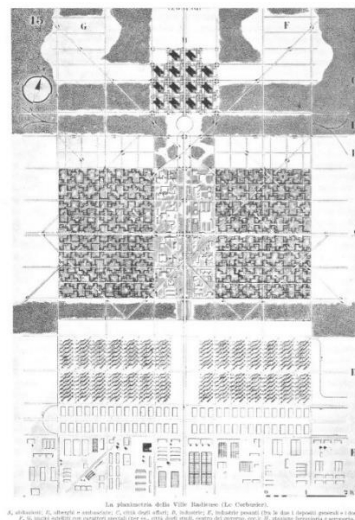


Figure2. 3. Villa Radieuse (Merin, 2015)

One of the greatest features and the most controversial part of the Radiant City was Le Corbusier's desire to gradually eliminate the streets. However, although

Corbusier did this, his main purpose was to bring economic and cultural activities that could not be carried out in the city to the buildings (Dunnett, 2000). Also, Corbusier summarized in his “*The Four Routes*” book this situation as follows: It is very important to be able to meditate by spending a comfortable and peaceful time after a busy working day. This can only be done if houses take on a new role in human life. The most important way of organizing human life is possible by making an arrangement throughout the city and using the concept of space effectively and innovatively (Corbusier, 1947 p. 161). Le Corbusier further developed his work following the idea of a Linear Industrial City with the design of a single housing complex in France, Unité d’Habitation, (Dunnett, 2000). However, this time the linearity was applied vertically rather than horizontally. This 20-storey residential block was built together with the spaces and social and recreational areas for many different uses (Dunnett, 2000).

Overall, Le Corbusier’s city plans can be seen as an attempt to “scientifically” manage city space and time, as well as personal ones through the design of the individual units and their connections. Though, as James Howard Kunstler stated in “*The Geography of Nowhere*”, his designs lacked a meaningful relationship with the environment as well as human scale (Kunstler, 1994). Lewis Mumford likened the Corbusier's city design to a “buildings in a parking lot” and said, “The space between the high-rises floating in a superblock became instant wastelands, shunned by the public” (Kunstler, 1994). Although the modernist ideals seemed to dominate city planning in the period until World War II, wartime planning generally resulted in low-quality products in many regions (Deckker, 2000). After World War II, with the rapid spread of monotonous political and industrial structures in the cities, planning activities couldn't meet the basic needs such as building houses where people want to live (Deckker, 2000).

2.2.2 Managing Time and Space in Modern Architecture

The emergence of new technologies in the 19th Century caused the urban population to increase and the expansion of the cities together with it. Therefore, while the pace of urbanization was accelerating, new approaches to design and construction became necessary (Gallagher, Frampton and Wark, 2019).

In the early 19th century, there was a general dissatisfaction among historians, architects, and critics about the eclecticism that had influenced European and American architecture. With the emergence of new technologies and materials, there has been an opportunity to move away from this trend and to create new ones. In this respect, although the exact history of the concept of “modern architecture” is uncertain, it can be said that all buildings in the modern period began to change under the influence of modernism (Colquhoun, 2002).

Several studies have been conducted to explain modern architecture and art related to the issues of space and time (Michelis, 1949). In the early 20th century, the artists, while making their visuals that were in 3 dimensions in space, switched to the so-called 4-dimensional space, namely the concept of space-time (Michelis, 1949). Giedion explains that Cubism:

views objects relatively: that is, from several points of view, no one of which has exclusive authority. And in so dissecting objects, it sees them simultaneously from all sides—from above and below, from inside and outside. It goes around and into its objects. Thus, to the three dimensions of the Renaissance, there is added a fourth one-time. (Giedion, 1946, p. 357).

In modern architecture, architects generally aimed to achieve the same goal. With the advancement of material production technology, they increased the use of glass in buildings and combined it with concrete masses or steel. They created unexpected differences between the glass density used and transparent surfaces between indoor and outdoor spaces (Michelis, 1949).

At the Chicago World’s Fair, which was organized in 1893 and where the roots of modern architecture were most evident (see Figure 2.4), Louis H. Sullivan and his friends designed a completely “modern building” (Marcum, 2018). In 1896 Louis H. Sullivan mentioned that his “form follows function” discourse in “The Tall Office Building Artistically Considered” essay (Craven, 2018). In this article, he denied ornamentation in buildings and emphasized that exterior design should reference and reflect the structural function, and he was a pioneer for many referred to as a modern architect (Craven, 2018). Also, in this period, the emergence of technology and steel structures developed with the industrial revolution enabled the use of elevators for passenger and freight transportation.

Many architects in Europe and the United States who believed that there should be a new architecture in accordance with the era consisting of new technologies and

materials, were influenced by the architectural innovations in the World's Fairs, which reflected in their designs (Gallagher, Frampton and Wark, 2019). For instance, Frank Lloyd Wright, one of the pioneers of modern architecture, was influenced by the International Fair in Chicago 1893, and particularly by the design of a temple with traditional Japanese architectural features that he saw there, and this informed Wright's design principles: Wide openings, open plan layout, wide roofs, and non-structural walls were used in his designs (Marcum, 2018).

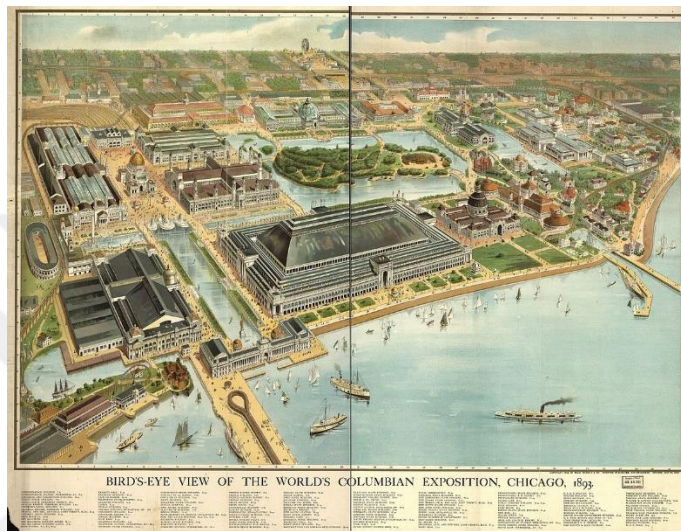


Figure2. 4. Birds Eye view of Chicago Worlds Columbian Exposition (Wikipedia.org)

In the first years of the 20th century, technological developments affected every aspect of the everyday life. As people's movements were increasing, products produced in factories could be brought to the market quickly and easily (Gallagher, Frampton and Wark, 2019). In this period, with the use and spread of scientific management principles spearheaded by Taylor himself, time management and efficiency studies started to be more popular, and these studies led to an increase in production. At the same time, new materials and technological developments began to be included in architectural designs. One of the best examples of this was the establishment of the Bauhaus school in Germany in 1919 under the leadership of Walter Gropius, together with Marcel Breuer, and Ludwig Mies van der Rohe. The designers aimed to design for a better world by including all the innovations in design and technology at the school's curriculum (Rowe, 2011). Bauhaus designers used flat roofs and plain facades, adopted an open and flexible plan. The furniture and daily objects were designed to be functional and made of basic geometric forms (Gallagher, Frampton and Wark, 2019). In the meantime, such tenets in modern architecture, borrowing from industrial

production, began to be reflected in the design of mass housing production in Europe. Housing units were designed in a minimal fashion, with an open plan, free from ornaments to ensure the low cost and speed production process. (Gallagher, Frampton and Wark, 2019). In 1925, Ernst May was appointed to Frankfurt as a city architect and drew attention with his work on the settlements of the workers. One of the most important things May emphasized in urban design while designing the city was that it should be a self-sufficient design and provide accommodation for the masses of people; therefore, he was attentive to the idea of affordable mass housing designs. Under May's leadership, 15,000 units of dwellings were built in Frankfurt, accounting for 90 percent of the total construction done so far. This result would not have been achieved if May's work in design and construction had not been economical and efficient. In the house designs, which were made in contrast to Le Corbusier's "existence-maximum" statement, everything was designed to meet the minimum needs of human beings (Frampton, 1980). Along with storage areas, spaces were made efficient with the use of folding beds and the laboratory-like kitchens.

These model kitchens were the most important point of the new houses. They were designed by the Austrian architect Grete Schütte-Lihotzky, where maximum efficiency was achieved in terms of space and time (Frampton, 1980; p. 138). This design, which can be considered as the prototype of a modern kitchen, was designed to provide speed and comfort in homes, similar to an industrial working environment. The basis of the design of the "Frankfurt Küche" is the Taylorism movement, named after Frederick Taylor, who, as was discussed earlier in this chapter, produced a lot of work on the optimization of working times (Frederick, 1912) (See. Section 2.1.2). The kitchen, which was designed to reflect an idea borrowed from the industrial production as well as business optimization at the maximum level, was made most efficient by measuring the movements in the kitchen with the stopwatch technique used by Taylor in factories. Thus, it aimed to reduce the amount of time women spend in the kitchen while increasing the time she will spend together with her family or for personal tasks (Lihotzky, 1926).

In this chapter, the concept of time and its relationship with modernity, the emergence of the management process, and the history of time management have been examined through Frederick W. Taylor's work and Taylorism. The chapter also summarized how the architectural, structural and material innovations during and after

the Industrial Revolution affected the planning of modern cities and the design of domestic spaces. The next chapter will deal with similar issues in the context of early Republican Turkey and explain how the idea of managing space and time became central to modernization efforts and cultural reforms.



CHAPTER 3

MODERNIZATION AND TIME MANAGEMENT IN EARLY REPUBLICAN TURKEY

Modernization, which is a versatile concept, has affected all branches of art and science since its emergence. In this chapter, I will first examine the various meanings of modernization concept, and then summarize the process of Turkish modernization which is widely accepted to have started in the late Ottoman period.

Afterwards, the chapter will examine the Industrial Revolution in the context of Turkey, as well as its reflection on the concept of mass production, which is itself a result of this revolution, and its relationships with the efficiency and time management. The desire to establish a new and modern country replacing the Ottoman Empire, which lost its power politically and economically after the First World War, came into prominence in the early Republican Period. Meanwhile, in the post-war period, foreign architects and planners, who were not able to continue living in their home countries, and especially in Germany, generally migrated to the United States whereas several of them moved to other countries, including Turkey (Nicolai, 2011). In addition, some foreign architects and city planners were specially invited by the government. In this part of the chapter, their importance of Turkey's restructuring will also be highlighted, and detailed information will be given about their work.

Due to the devastation of continuous wars, Anatolia needed to be reconstructed in a short period of time. With the increase in the pace of industrialization via projects implemented by the Turkish state, designs were supported with new materials and have been taken care of by the increase and speed of transportation vehicles. While increasing the number of railway lines, the arrangements of cities grew reflecting these new transportation networks. In line with the arguments above, this chapter also takes a brief look at the changes that took place in the new capital city Ankara, which was imagined as a model for the rest of the country, and on the influence of foreign architects in its urban development.

Finally, I discuss the spatial settings of cultural reforms that were implemented in the early Republican Period. Changing the capital of the country provided more opportunities for reforms to be carried out spatially. Besides, the opening of public institutions throughout the country accelerated the spread of reforms. The most

prominent of these examples are the Public Houses (Halkevleri). After mentioning the importance of the Public Houses, brief information will be given about their function and how such institutions, became the spatial equivalents of cultural reforms in Turkey and their transmission to the public. The chapter will end with a discussion of how reforms and their spaces reflected the attempts to give order to everyday life through public institutions as well as domestic spaces, echoing the logic behind industrial production and the planning of factory complexes. In this time period, the concept of time management and scientifically managing the use of spaces became central to their implementation.

3.1 Turkish Modernization

Aksakal argues that modernization aims to find a solution to the existing production system, social structure, and state structure, and although it looks like a unidirectional phenomenon, it is a multi-dimensional phenomenon. In other words, modernization can be called an unending “today” and endless “now” ideology of capitalism that started in Europe in the 16th century (Aksakal, 2010). Modernization movements in the Ottoman Empire gained acceleration especially due to the loss of continuous wars, the increase in state’s expenditures, and the weakening of the Empire. In this process, with the Karlofça (1699) and Pasarofça (1718) agreements at the beginning of the 18th century, it was necessary to make changes in the structure of the Empire and modernize the army (Belge, 2003; Aytekin, 2013). Along with all these developments, the influences from the West started to become seriously felt in the era of Selim III (Aytekin, 2013). The Ottoman Empire was in constant interaction with the West due to its location. Although the Ottomans regarded their interaction with the West as a problem, the contribution of the Ottoman-Islamic civilization cannot be denied during the formation of Western civilization (Aytekin, 2013)

The bases of Ottoman-Turkish modernization date back to the Tulip Period and it accelerated especially after Mahmut II lifted the Guild of Janissaries (Aksakal, 2010). However, some see the issue within a larger lens and analyse the process by which the state is trying to rebuild itself in 3 periods. These processes are divided into Tanzimat (1826-1908), Meşrutiyet (1908-1920), and Cumhuriyet (1920) periods (Aksakal, 2010). Taking into account all of these, the first half of the 19th century can still be regarded as the period when modernization was fully embraced. If we need to pinpoint

a more specific time period, the declaration of the Tanzimat edict can be accepted as a start of Turkish modernization (Bilgin, 1998). From another perspective, Turkish society has still the effects of the 1893 War in its memory, which is seen as a breaking point in terms of both reform efforts and political events. After these developments, Sultan Abdulhamid II made a transition to the period of autocracy by using the “Cesar” administration with the intention to get out of the chaotic environment (Aksakal, 2010). If we look briefly at this period, it is observed that the basis of a modern country was laid. In the framework of education, communication, transportation, and socio-political accumulation, changes were made for the future (Aksakal, 2010). During the era of Sultan Abdulhamid, many public schools were opened (Aksakal, 2010). At the same time, with the revival in mass media, it can be argued that the people experienced the Ottoman Enlightenment to some extent (Aksakal, 2010). To clarify, in the 19th century, and in the first 10 years of the Abdulhamid era, what Ottoman-Turkish modernization had experienced was the most active change of that century (Lewis, 2008; Aksakal, 2010). As a result of Abdulhamid’s policies as well as reaction to his rule, many ideas for the future of the Empire developed, including Ottomanism, Islamism, Turkish nationalism and Westernism (Mardin, 1989; Aksakal, 2010).

Beginning in 1900, the concepts of modern and modernism were more frequently used in the articles and books about Turkey's social and political changes (Arlı, 2015). Kemal Karpat (1959) in “*Turkey's Politics: The Transition to Multi-Party System*” has emphasized that the concept of westernization (*garplılařma*) and the concept of modern Turkey, were taken together in the European literature. Likewise, in “*The Emergence of Modern Turkey*” (1961), Bernard Lewis used the concepts of modernization and westernization almost synonymously in many parts of the book. Kevin Robins also defined “modernization” the same as “westernization” for nation-states around Europe (Vale, 1992; Uysal, 2004). As a result of all this, for instance, İsmet Özel argued that the concept of westernization in Ottoman-Turkish modernization has always been towards Europe, including in the early years of the Republic of Turkey (Aytekin, 2013). While the process of change of the West was always faster than the Ottoman Empire, the latter was never able to “complete” the westernization, that is, the modernization process, although its borders were so close to each other (Aytekin, 2013). Aytekin argues that although the pace of progress was

different in Ottoman-Turkish modernization, the westernization process has always been continuous (Aytekin, 2013).

As Nilüfer Göle argues, modernity means separation from the tradition and cultural habits of a society (Göle, 2002; Aytekin, 2013). Instead of continuing the modernization of Turkey from the Ottoman era westernization processes, it has progressed as a counterargument to the so-called Ottoman cosmopolitanism (Aytekin, 2013). Unlike the cosmopolitan modernity of the Tanzimat era, the idea of the Republic of Turkey was composed of national values and people-oriented discourses (Aytekin, 2013). For Zürcher, Turkey's nationalist ideology as a nation-state of the modern Republic of Turkey to be “modern” but “self-defined” has been transformed into a phenomenon (Zürcher, 1993; Uysal, 2004). For instance, Mustafa Kemal Atatürk, the founder of modern Turkey, said that the Turkish Republic “would live as an advanced and civilized nation in the midst of contemporary civilization.” In this context, the process of nation-building in the Republic of Turkey was suitable for the concept of “modernization” which involved a nationalist approach (Uysal, 2004).

Thus, as Gülsüm Baydar discussed in *“Architects, Style and Power: The Turkish Case in the 1930s”*, in early Republican Turkey, “nationalism idealism” served as the “modernization” process of the dominant “state ideology” (Baydar, 1990; Uysal, 2004). Further, for Bozdoğan, Turkey's modernization did not stem from socio-economic reasons, such as in the West, but it was adopted as an official policy and program and was implemented by its elites' cadres (Bozdoğan, 2002; Uysal, 2004). In this process, as in the Ottoman era, the Republican nationalist ideology was carried out as a government program in which the “modernization” process same as the “westernization” (Uysal, 2004). According to Robins, the initial modernization process of the Republic of Turkey has been a direct acceptance of Western values (Uysal, 2004). Therefore, this process does not reflect “true modernity” for Robins and it creates the perception of the “illusionary modernity” (Robins, 1996; Uysal, 2004).

According to Feroz Ahmad, Turkish modernization and westernization could only be achieved through a correct adaptation of state law and daily life to “secularization” (Ahmad, 1993, p. 194) Therefore, several reforms had to be made to achieve this. These reforms meant that the Republic of Turkey would become a Westernized nation by gaining a new “national-cultural identity” (Uysal, 2004). Bozdoğan defines this new nation-building process as an identity declaration

(Bozdoğan, 1995; Uysal, 2004). The purpose of the state after the World War I was to transform Turkey into a modern nation-state. In this way, a secular national-cultural identity could be attributed to the society, which was unified as a single nation with a secular character (Zürcher, 1993; Uysal, 2004). According to Grahame Fuller, “The Kemalist era, the post-Ottoman state, has become Westernized, a homogeneous and ethnically-based nation-state” (Fuller, 2010; Aytekin, 2013). In the next section, after a detailed discussion of the modern and modernism concepts and giving an overview of how these concepts emerged and were appropriated in Turkey, I will show how modernization was reflected in the spaces and planning of cities, as well as the contribution of foreign architects to these designs.

3.2 Modernization in Space: New Times, Cities and Citizens

Developments such as industrialization and transformations of spaces have occurred as a result of modernism. If we look at its emergence historically, modernism in Western Europe was a process that followed a consistent development from the Renaissance to the Enlightenment and the Industrial Revolution, paving the way for the formation of the cultural and social history of the twentieth century. However, contemporary scholars have argued that modernization in Turkey, implemented through state sanctioned projects and reforms, was a top-down social and cultural regeneration program (Bozdoğan, 2002). After the First World War, the collapse of the Ottoman Empire, and the Turkish War of Independence, the economy was weak and the country was worn out from the power struggles within itself (Franck, n.d.). In “*Erken Cumhuriyet Dönemindeki Almanca Konuşan Mimarlar*” [*German-speaking Architects in the Early Republican Period*] article, Franck argues that when the WWI ended, the old forms of the states in many countries in Europe, such as Germany, Austria, Italy, were abolished and almost all countries from the Balkans to the Baltic Sea, mostly Republican democratic new states were established. Yet all of these social systems were very fragile. The new democracies could not draw strength from a recognized tradition, so the political power structure could easily be shaken. The instability and fragility of the new states increased with the economic crisis of the 1920s. With the coming to power of national socialists in Germany, the political climate in the country and neighboring countries has become even more severe. The political, economic, and professional troubles of the period led to the immigration of highly qualified experts, especially in Germany, Austria, and other countries, hoping

to find jobs under affordable and politically acceptable conditions (Franck, n.d.). With the rise of the National Socialist regime in 1933, well-known modernist architects like Mies van der Rohe and Walter Gropius migrated to the United States. Some others moved to Turkey and Palestine. The Turkish government welcomed these foreign experts and offered them important posts in state institutions (Nicolai, 2011).

Meanwhile, the Republic's declared goal was to keep up with the cultural advancement and technological achievements of the West. This agenda included the adoption of modern architecture and the planning of new cities and neighborhoods following modern city planning principles. According to the Industrial Promotion Law (Teşvik-i Sanayi Kanunu) dated 1927, technical personnel could be brought from abroad for industrial facilities; foreign planners, engineers, and architects could also be employed. In addition to the appointment of experts, bright and successful students at universities were sent abroad, preferably to Germany, to receive a special training. Besides, some Turkish architects studied at architectural schools abroad (Franck, n.d.)

During this time, as Esra Akcan mentioned in “*Çeviride Modern Olan Şehir ve Konutta Türk - Alman İlişkileri*” [*Turkish - German Relations in City and House Modern in Translation*], their contributions began to transform everything from the vocational training models used in these schools to the administrative organization of the country through the preparation and implementation of new zoning and building regulations. However, many of these experts did not speak Turkish, which rendered an effective communication with the locals difficult (Akcan, 2009). Ernst Egli and Clemens Holzmeister were worked primarily in the field of architecture in Turkey. Besides, people who left their homeland for political reasons, among them were significant names in architecture and planning such as Martin Wagner, Bruno Taut, Margarethe Schütte-Lihotzky, and urbanism expert Ernst Reuter (Franck, n.d.). Not everyone in exile was in the same conditions (Nicolai, 2011). Indeed, a two-class society prevailed among foreign specialists. One of the privileged persons was Ernst Egli; one reason for this was that Egli had arrived in the country very early and had adapted perfectly (Franck, n.d.). The other reason was that he had a very good relationship with Atatürk. Atatürk had been close to him from the very beginning, always showing his support and encouragement. Clemens Holzmeister was also a privileged specialist; this privilege stemmed from the fact that he designed important public buildings, both for the military and the Grand National Assembly. (Franck, n.p.).

Akcan summarized the beginning of his relationship with Holzmeister, while Holzmeister was a lecturer at the Academy of Fine Arts in Vienna, the then Turkish ambassador asked him to propose an architect specializing in ministry buildings. Holzmeister said that he did not know such an expert, but that “any architect with some courage and experience and whom the Turkish government can trust” could undertake this job. According to Akcan, this was the correct answer, because a few months later Holzmeister would receive a proposal for the architectural project of the Ministry of Defense building and then undertook the projects of all the Government Center buildings and the Presidential Palace (Akcan, 2009).

The modernization project executed by the state of the young Republic, in almost every city in Turkey had found its reflection especially in the public spaces (Aritan, 2008, p. 49-56). The new government, naturally, gave priority to the rebuilding of war-torn cities and the establishment of technical infrastructure; therefore, first of all, Western Anatolia's war-torn cities had to be repaired, the capital city would be established, and the roads and railways to be built (Franck, n.d.). The modernization project within the borders of the new nation-state was directly implemented by the state. Moreover, for the modernization project, which is aimed to be operated effectively, it was necessary to introduce a new order in which the public spaces are transformed completely (Aritan, 2008, p. 49-56).

Railways and their unique patterns (“station streets” and station buildings), which contain the basic criteria of the Republican modernization, make serious references to collective and rational life practices. They also constituted an effective public modeling area on an urban scale. Having a dominant importance of railways in 1930s in the Republic of Turkey, foreign capital-intensive industries, commercial activities and independent override national transport policy adopted towards a rational planning and spreading the country “with iron netting” became a target (Aritan, 2008, p. 49-56). In this context, railways, which connect regions with the shortest possible routes and with the fastest technology of the period, carry raw materials to industrial spaces and agricultural products to be exported to cities and port cities, became the main mechanism of establishing a rational and accessible life in a short time. On the other hand, it could be said that the public passenger transportation developed through railways and the station buildings extension of the railways also made serious contributions to the collective life, which the Republic administration

wanted to develop. The above-mentioned station buildings spread a public life that is based on collective use of common spaces and creates new daily practices (such as going to work regularly, catching the train on time, gathering in waiting areas, developing new relations with other citizens while waiting) throughout the country. The “station streets” were opened on which station buildings were located at or close to the city centers. The station streets (main or secondary boulevards), which are connected to the square within the system of boulevard-square-state structures, both rationalized the new modern urban life and enabled the effective use of collective spaces by the city dwellers to socialize (Aritan, 2008, p. 49-56).

In other words, the urbanization process was tried to be triggered with investments such as the establishment of railway networks and the construction of public buildings in Anatolian cities. Ankara was one such example. (Asiliskender, 2009b, p. 153-154). Emphasizing the spatial policy of the central state to gain control over the country with the establishment of a railway network centered in Ankara and spreading towards the edges of Anatolia, this project also realized the economic goal of regulating the domestic market, ensuring its integrity and efficiency, and linking production and consumption centers (Tekeli, 1998; Zeybekoğlu, 2009, p. 217). Besides, new administrative buildings were erected in certain parts of the city as reflections of modernization (Şahin, 2017). Ankara had a new meaning as the capital of the Republic and also presented a model for other Anatolian cities. It was an effective model in urban planning (with Cumhuriyet Squares and Atatürk Statues) but also in terms of the new lifestyles it cultivated (Yeşilkaya, 2005, p. 14).

The most basic structuring produced by the state-centered Republic on an urban scale was the modernist urban planning practice, which was observed to be particularly rationalized and state-centered (Aritan, 2008, p. 49-56). In fact, the Republic, which took over a limited transformation and planning accumulation that developed in port cities from the Ottoman Empire, rapidly implemented modernist city planning in the 1930s (Tekeli, 1998, p. 61-63). Moreover, modernist planning did not only operate at the application level and activated an approach that started to be considered cities as areas that can be planned and even need to be planned in the light of scientific data, based on the acceptance of “certain conditions give certain results” at the conceptual level. This approach can be seen in many cities developed during the early Republic, but especially in Ankara (Aritan, 2008, p. 49-56).

According to Cengizkan, to prepare the Ankara City Plan, a map was needed to be used as a base (Cengizkan, 2010). Therefore the 1924 Şehremâneti Map, which is the first map of Ankara in the Twentieth Century, was prepared (see Figure 3.1). Through this map, argued Cengizkan, it has been known that some planning decisions were made in the area extending from Taşhan to the Station (Cengizkan, 2010). To this end, 400 hectares area was expropriated for the establishment of Yenışehir and the Ministries. Public institutions turned southwards instead of the historical center (Ulus), and the constructions which were reflecting the quality and prestige of the Republic accelerated. This expropriation determined the direction of development of Ankara as well as the direction of Atatürk Boulevard, which would establish the old-new Ankara connection (Biçer, 2013, Ankara Belediyesi, n.d, p. 47). Since it was believed that the flawless reconstruction of Ankara as a symbol would be identified with the success of the regime, a very intense work started for the reconstruction of the city (Ankara Belediyesi, n.d, p. 48).

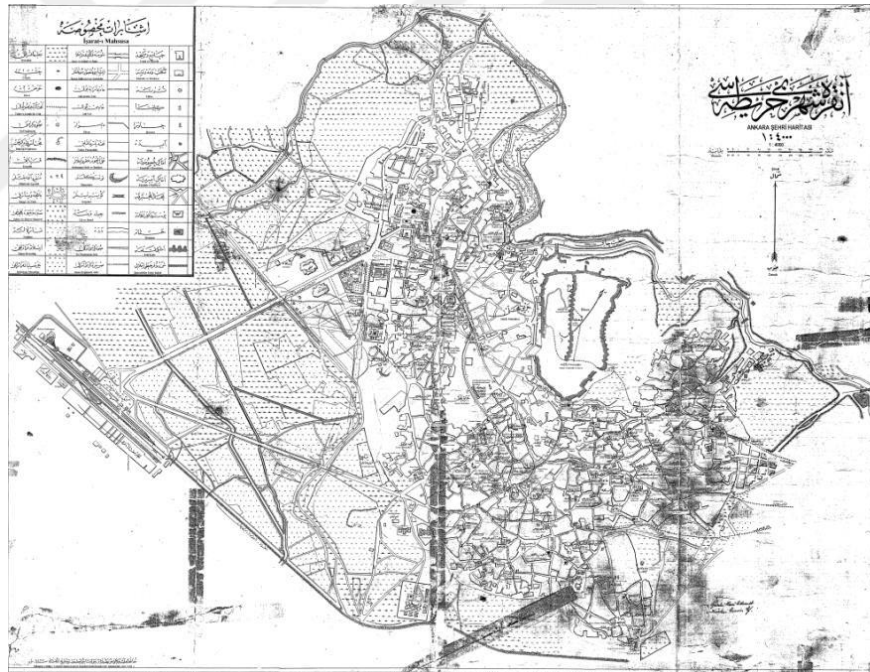


Figure 3. 1. “Şehremâneti Map” (Mihçioğlu Bilgi, 2010, p. 5)

Accordingly, many foreign architects and city planners with expert qualifications were invited to Turkey (Alpagut, 2018). Initially, German city planner Lörcher was invited to Ankara in 1924 to plan Ankara as a modern city. This “first modern plan” plan was of great importance in terms of forming a base for the plans made afterward (see Figure 3.2). For Cengizkan, it was understood that especially the basic settlement and development decisions of the Yenışehir region were shaped later on in line with

the predictions of the Lörcher Plan (Cengizkan, 2004; Ulubay, 2020, p. 94). In the early years of the Republic, new buildings and social and cultural facilities were needed for the use of the public in Ankara. While new roads were constructed in the city, important public buildings were also commissioned and built (Dinçer, 2014, p. 40). With the Lörcher Plan, the basic decisions were taken regarding Kızılay and its surroundings, which is the symbolic center of the city today (Cengizkan, 1998, p. 34). With the planning of an area of 150 hectares in Sıhhiye in 1925 and the settlement of some ministries in this area, the development direction of the city was also determined. In this period, the most important public place where the new lifestyle was represented in Kızılay, which did not show a city center feature. The urban space had become a public space by being equipped with squares and statues that should be found in a capital city. For Cengizkan, in 1928 Ankara became a city that was established with the motivation for founding all the elements of the nation-state in physical spaces (Bozdoğan, 2001, p. 39).



Figure 3. 2. “Lörcher Plan” (Ulubay, 2020, p. 94, Goethe, 2020)

While the reconstruction and construction work continued, an internationally invited competition was held for the zoning plan that would organize the reconstruction of the whole city (Dinçer, 2014, p. 41). The Austrian planner Hermann Jansen won the Ankara City Development Plan competition opened in 1928 (Cengizkan, 2010). Jansen’s plan attempted to create an urban development plan that emphasizes the use of open green spaces and public life (Ulubay, 2020, p. 95) (see Figure 3.3). In this plan, large and long streets intersecting at right angles, loosely textured residential areas between these avenues and public buildings extending

successively along the axes were located (Altaban, 1998). Jansen's plan was put into practice in 1932. In this planned period, the construction of the economic institutions needed by the country and the city in and around Ulus continued (Dinçer, 2014, p. 41).

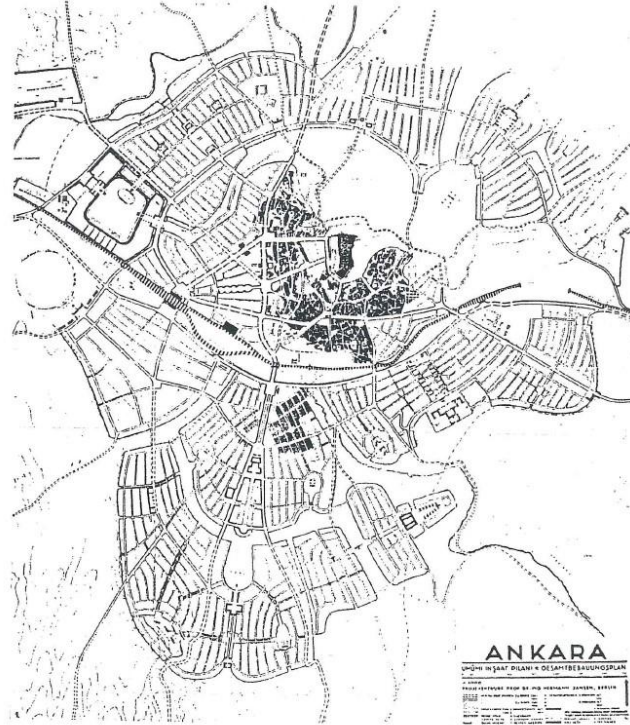


Figure 3.3. “Jansen Plan” (Nicolai, 2011, p. 115)

As well as modern planning which aimed to increase the efficiency of movement in the city, certain building types played a role in instilling in people rationalized everyday habits. Factory complexes are one of these examples. As Ahmet Eyüce argued in “*Modernlik ve Türkiye’de Modern Mimarlık*” [*Modernity and Modern Architecture in Turkey*], industrialization, which is the most radical transformation process in history, has caused both the restructuring of production relations and, as a result, significant changes in consumption habits desired by consumers (Eyüce, 2011, p. 58-60). According to the author, the industrialization process was followed by radical changes in the social structure that continue in many countries (Eyüce, 2011, p. 58-60). Based on the fact that all human actions that makeup life will take place in a spatial setting, the changes caused by industrialization in the structure of society have brought along brand-new spatial requirements. This can also be called new formations and new forms of association in the structured environment. Industrialized production structures are at the top of the new building types created by new spatial requirements. These are large-sized, wide-span, and high-ceiling structures that result from their

production features. The growth of the factory area over time has led to their transformation into large industrial complexes. The factories were followed by warehouse and storehouse-type structures, which are also a special type of building (Eyüce, 2011, p. 58-60).

Modern architecture is a design idea with a deep-rooted discourse of creating spaces and associating spaces in order to solve the space requirements by using the possibilities of new building materials (Eyüce, 2011, p. 58-60). In other words, in modern architecture, the relationships between interior and exterior spaces or the way interiors relate to nature are structured on a concept of continuity and unity. In addition to this, it is recommended to ensure the same continuity utilizing a sense of fluidity to be created in the interior spaces (Eyüce, 2011, p. 58-60) Bozdoğan argues in “*Arkitera Diyalog Buluşmaları, Modernizm ve Ulusun İnşası*,” that the reason for the existence of modern forms are the new industrial construction methods (prefabrication of building materials and mass production of concrete, steel, glass and components such as new synthetic materials). These were hardly present during the early Republic in Turkey. Flat roofs were neither “logical” nor “economical”, given the state of the construction industry and the lack of advanced insulation techniques, particularly the climatic conditions of the northern and mid Anatolian regions, including Ankara and İstanbul. At a time when the common construction style was still limited to traditional load-bearing construction made of brick or stone, large spans and wide cantilevers were not “rational” at all. After all, the famous modern buildings that gave the early Republican period their distinctive architectural character were often made as formal concessions to the aesthetic rules of “International Style” modernism. In most cases, they were hybrid buildings where modern forms (terraces, consoles, rounded corners, continuous outer windowsills) were used side by side with traditional materials, traditional construction methods and traditional understandings of symmetry and proportion (Bozdoğan, 2001, p. 296).

The Turkish government had a certain architectural demand in the context of its political vision because the new architecture had to have a progressive and dynamic effect, and also had to be functional (Franck, n.d). Like the newly adopted Latin letters and the European dress code, architecture was seen as a symbol of the progress of society and the achievement of technological development. Unlike in the language revolution and the dress revolution, the issues of social identity and cultural originality

were discussed in architecture from the very beginning (Franck, n.d.). Bozdoğan and Akcan argue in *“Turkey: Modern Architectures in History”*, the establishment of the Republic of Turkey, and the rise of modern architecture overlapped (Bozdoğan and Akcan, 2013). Nevertheless, architecture in Turkey, in the first period was influenced by the idea of the Ottoman architectural revival. Until around 1927, the dominant formal language was the so-called “First National Architecture Movement.” Based on the Beaux-Arts tradition and “Orientalized” with the use of Ottoman stylistic motifs and building elements, this form language was much simpler than the previous architectural styles, that is, the extremely ornamented style of the late nineteenth century (Franck, n.d.).

There are more than enough reasons for the embracing of modern architecture in Turkey, but many experts think that the most important reason was “to reach the level of contemporary civilizations” (Eyüce, 2011, p. 58-60). In those years, the young Republic of Turkey's industrialization was in progress and there was a rapid construction activity to build new state institutions. These structures could not have been realized by following the architectural movements that are mainly neo-classical, inherited from the Ottoman Empire. Moreover, for Eyüce, the structure of modern thought only looking to the future would more easily be compatible with the vision of the young Republic of Turkey (Eyüce, 2011, p. 58-60). Bernard Nicolai clarified in *“Modern ve Sürgün,”* that Kemalism expressed the modernization of public structures in two ways. On the one hand, school and university buildings were designed by Ernst Egli under the influence of Eric Mendelsohn, representing values such as progressivism, freedom, women's rights with a modernist architectural language; on the other hand, Holzmeister represented the power of the authoritarian state with the traditional language of Austrian architecture during the interwar period. In this context, Nicolai highlights the difference between the government structures (Nicolai, 2011).

An interesting event associated with the advent of modern architecture in Turkey was celebrated with a newspaper article. Bozdoğan, in *“Modernism and Nation Building,”* mentions: “The arrival of the new architecture was celebrated in 1930 in the official newspaper of the Republic, *Hakimiyet-i Milliye*, with a two-page editorial” (Bozdoğan, 2001, p. 153). Later, in her same book, she quoted the newspaper to better express the situation:

For several years, the development of the new architecture of the new century has begun all over the world. Young architects are now walking towards the truth by breaking old mentalities and traditions. Fortunately, some new construction in Ankara is one of the cheers of this architecture. The new architecture has come to us too (Bozdoğan, 2001, p. 153).

Modern architecture, rather than developing as an idea in Turkey, was seen in formal terms (Eyüce, 2011, p. 58-60). In fact, it can be said that this situation was synchronized with the time when a new style emerged in the world: The title of the exhibition at the New York Museum of Modern Art in 1932 and the book prepared by Henry-Russell Hitchcock and Philip Johnson on this occasion was “International Style” (Hitchcock and Johnson, 1966). Nicolai criticizes the reduction of modern architecture to Mies, Gropius and Le Corbusier through media such as the International Style Exhibition organized by Henry-Russell Hitchcock and Philip Johnson at the New York Museum of Modern Art (MoMA). Nicolai also emphasizes that the diversity and heterogeneous structure within modern architecture was gradually forgotten over time what Sigfried Giedion mentions in his “*Space, Time and Architecture: The Growth of a New Tradition*” book. He proposes that this is achieved especially by highlighting European architects who immigrated to the USA, whereas a more layered definition of modern architecture can be achieved with a comprehensive exile history that includes equally important architects such as Taut, Wagner, Elsaesser, and Ernst May (Nicolai, 2011 p.150-151). Nicolai also emphasized that the contribution of German-speaking architects as well as Turkish architects should not be underestimated (Nicolai, 2011).

Another aspect of designing a new life for citizens of the nation-state was changing the scene of housing and modernizing domestic life. Although Bozdoğan’s and Akcan’s criticism applies here also that rather than the essence of modernism, its formal appearances attracted more attention, through planning housing complexes and *lojmans*, the Republican governments made a significant attempt to design a modern family embracing the cultural reforms. This issue will be examined in detail in chapter 4. In the next section, following a brief discussion about the effects of modernization studies on city planning and architecture, the contributions of foreign architects and planners will be examined. Then I will give detailed information about the cultural reforms put into practice, and how they were related to the design and use of spaces within the scope of modernization. Besides, new public and domestic spaces, produced

as a result of reforms will be examined through their relationship with the concept of time management and efficiency.

3.3 Cultural Reforms and Their Spaces

According to İbrahim Zeyd Gerçik, the common meaning of the modernity in social sciences is the process it lived through in the last period of Western civilization and the world view it produced with this process. In other words, the concept of modernity expresses the last period in which a civilization came into its development process. Besides, modernity is an ideology and lifestyle produced by Western civilization through the Renaissance, Reform, Enlightenment, and Industrial Revolution social transformations (Gerçik, 2019 p. 152). Modernism, as a lifestyle entails humanism, which is the integration of secularism, liberalism, capitalism, and democracy.

The important step in the Westernization efforts in Turkey was to realize the Tanzimat Edict of the proclamation process in the early 19th century. This event has the characteristics of an important impulse in the realization of legal and administrative reforms in the transition from a traditional social structure to modernity (Zürcher, 1998, p. 58). Therefore, Turkish modernization is divided into two phases as Ottoman and Republic modernization in terms of its effects. For the Ottoman Empire, the 18th century was a century of admiration and imitation towards Western civilization; however, the 19th century was the century when Ottoman bureaucrats started the modernization process to save the Empire from breaking down. The process that started with admiration turned into a modernization and westernization movement, which was carried out by the state and primarily aimed at reforming state institutions (Gerçik, 2019).

The pioneers of the Ottoman modernization were bureaucrats nourished by the “holy state understanding” (Gerçik, 2019, p. 151). According to bureaucrats who act with a utilitarian point of view, westernization is the necessary route to follow if it will ensure the survival of the state. Ottoman elites and bureaucrats attributed the function of saving the state to modernization, therefore modernization was shaped primarily towards state institutions, and for the author, Ottoman modernization is a project not to transform society but to transform the state, and this is the most important feature that distinguishes it from the Republican modernization (Gerçik, 2019). In this case, the ideological attitude adopted by the Republican modernization initiated by the 1923

revolution differs from the Ottoman modernization with certain lines (Çetin, 2005, p. 45-50). Republican cadres did not protect the status quo at all costs; however, they aimed to build a brand-new order in which principles, norms, and principles of operation are determined by them (Kaliber, 2002, p. 110). In the modernization of the Republic, where the western style of life was modeled, the ideal of a modern society was presented as a “project”, and it was implemented as a “top-down” reformist movement, whose the main goal was to reach a cultural and political structure equivalent to contemporary nation-states (Tekeli, 1998).

Mustafa Kemal Atatürk wanted the cultural reforms to be made in the light of science and technology (Dönmez and Altıntaş, 2014, p. 2). One reason for this was that Atatürk Understood culture and civilization in the same sense. In other words, the Republican citizens of his dreams were those who would be brought up and formed through cultural reforms. They would be those who have discovered the dynamics of science and technology that embraces all humanity, and not just by living the time. Cultural reforms were carried out primarily to achieve these goals. For example, innovations such as the Alphabet Reform (Harf İnkılabı) and the Law on Unification (Tevhid-i Tedrisat Kanunu) were aimed to raise the generations that would enable the country to come out of the darkness which prevailed during the decline and collapse of the Ottoman Empire (Dönmez and Altıntaş, 2014).

Elvan Altan Ergut and Bilge İmamoğlu argue in “*Cumhuriyet'in Mekanları Zamanları İnsanları*” [*Places, Times and People of the Republic*] that the effects of the Turkism movement formulated by Ziya Gökalp continued in the first years of the Republic (Ergut and İmamoğlu, 2010). According to Gökalp, Turkism means raising the Turkish nation (Gökalp, 2007; Bars, 2017). At the same time, according to Gökalp, “the civilization of the current century is the European civilization. However, Gökalp does not mention a Westernization in all dimensions of social life” (Oğuz, 2012 p. 147). In this case, the return to classical Ottoman architecture was an ideological result of the environment that developed within the ideals of nationalism; it started from the 1910s and continued until the 1930s (Aslanoğlu, 2001 p. 30). Along with all these developments, the most important architectural movements of the period were practiced in Ankara. The rebuilding of Ankara, which initially was a small Anatolian town, as the new capital became the most important prestige project of the new Republic (Ergut and İmamoğlu, 2010). Since this date, Ankara has undertaken the task

of not only being a capital city but also being a model city of “reaching the level of contemporary civilizations.” During this period, the city was intensely at the center of both physical and cultural construction activities (Ulubay, 2020, p. 85). In the early Republican period, “modernization” was considered the basic ideal of the newly established nation-state.

As Bayraktar mentioned, in this period, when many laws were enacted and several institutions such as the Central Bank, other banks, and ministries became operational, the new culture based on secularism and the scientific approach was seen as the first condition of being a Europeanized nation-state, which, I argue, also instilled a Western concept of time and timeliness. While cities, as the spreading medium of this new culture, were shaped with many new institutional structures and public spaces, the realization of an urban behavior appropriate to these structures and spaces were the primary goal (Bayraktar, 2013, p. 24). Ankara was seen as a pioneering and exemplary city with both the architectural features and spatial uses of the institutional structures.

According to Robert Kaplan, Mustafa Kemal eliminated the effects of Islamic Law on society with the reforms which tore society away from its traditional heritage. When he moved the capital from Istanbul to Ankara, he left a city that was the symbol of the empire where Islamic values were intense and settled in a city that was a symbol of Anatolian Turkishness (Kaplan, 2007 p. 62). The Republican administration did not only plan a change in social and social terms. With the modernization project implemented, the priority was given to the reconstruction of the cities, since making visible rapid changes taking place in social and social life was aimed (Çetin, 2005). Despite the budget deficits and limited financial possibilities, the top priority of the government in Turkey was to tackle problems such as transportation, reconstruction of the neighborhoods destroyed in the war, the draining of marshlands, and the construction of the new capital city (Aslanoğlu, 2001 p. 27).

In the case of Ankara, public buildings and squares were one of the main building programs in the early Republican period, with the view that they not only accommodated the national affairs but also represented the idea of the nation. In Uluş and Kızılay, the old and new centers of the city, urban public structures and spaces were created to represent the regime's official ideology, thus creating the spatial practices of the new regime through public spaces, squares, monuments, institutions and residential architecture. From the point of view of urban design, the Quarter of the

Ministries was equipped with elements representing the Republican ideology. Güven Park was designed in the northern part of the region, which opens to the Kızılay Square, and a new urban life practice was built here by creating the park with various landscape elements that included public spaces, squares, walkways, sculptures, pool and trees, a promenade, and a gathering place for the citizens (Orhan, 2013, p. 289-290). In addition, the accessibility to new buildings were seen as an important issue that needed to be addressed (Şahin, 2016, p. 76).

In this context, the government of the period put its ideology into practice in places with the buildings constructed all over the country. Because of this change, public buildings and spaces such as new government buildings, cinemas, the People's Houses (Halkevleri), large public squares, and statues and monuments were shaped by the ideology of the Republic. "Cubic" houses, expressing a visual form of westernizing and secularizing reforms, were seen as signs of progress and modernization. These buildings became platforms showing the modern face of the new regime (Bozdoğan, 2008). Modern structures symbolized Ankara's new identity as the center of the nation-state (Altınyıldız, 2009, p. 181). Therefore, the construction of new public buildings in Ankara was the reflection of this "positivist" ideology, a formative understanding based on technique, material and geometry (Tekeli, 2011, p. 126). Besides, as Kıvanç Kılınç asserted in "Öncü Halk Sağlığı Projelerinin Kamusal Mekanı olarak Sıhhiye" [Sıhhiye as a Public Space for Leading Public Health Projects], "public buildings can also be seen as places where the traditional texture is broken, there is a desire to destroy the old, and the agenda to create a unique urban living environment is transformed into form" (Kılınç, 2002; Zeybekoğlu, 2009, p. 225). The locations of the public buildings were striking especially for the public buildings: The proximity of the institutions to each other, their location in the city center, and their connection to the Train Station made them easily accessible from inside and outside the city.

Especially after 1927, with the principle of Statism put into effect, the idea of Populism replaced Turkism, and modern architecture were officially embraced (Ergüt and İmamoğlu, 2010). In this period, foreign architects played an active role in the design of new public buildings. Major public buildings, with the mission of being the visible face of the state in daily life and representing the state were handed over to foreign architects and their intuitions were trusted in the mission of becoming the visible face of "modernization." According to Bozdoğan, foreign and Europe-educated

Turkish architects involved in construction activities during this period were not only contributors to the development of the capital, but they indirectly became the architects of the formation of the new nation-state (Bozdoğan, 2002). The concept of “new” associated with Western/European architecture was used to describe the architecture of the new administration, and thus the Republican era architecture was defined within the framework of the modernization process of the nation-state (Ergut, 2009, p. 122).

With the Kemalist social reforms carried out, westernization was not understood as the adaptation of institutions and technologies as in the Ottoman Empire, but as the incorporation of a Western world view into society, and the reforms were carried out with the understanding of “for the community, despite the community” (Deren, 2002 p. 382). The Turkish Revolution, which forms the basis of the modernization of the Republic, has been shaped primarily as a “cultural revolution” (Gerçik, 2019). Mustafa Kemal saw the future of the Turkish existence as a problem of “creating the new Turkish people.” According to Mustafa Kemal, it was necessary to transcend the congregation culture and create a secular and national culture (Güvenç, 1997, p. 12). The nationalist ideology of the state began to prepare the necessary grounds for it to gain a modern but stable Turkish identity (Uysal, 2004). As Bozdoğan points out, the Republic considered that the indigenous people's culture living in Anatolia and the culture of the Turkish tribes in Central Asia before Islam were the sources of the national spirit and identity (Bozdoğan, 2002; Uysal, 2004). To achieve this goal, the educational process was radically changed, and the language - the carrier of culture and the medium of education - was purified, and the Latin alphabet was adopted. Mustafa Kemal established the Turkish History and Turkish Language Institutions and aimed to transform the Ministry of Education into the Ministry of Culture to bring the “education-language-culture” trio into a harmonious whole. He ensured that cultural centers such as the People’s Houses were opened to facilitate the adaptation process of the people and institutions resisting cultural innovation (Güvenç, 1997 p. 34, 37). The efforts of the state to create an integrated and secular identity created interaction with the changes and developments of the surrounding structures in the early Republican era of Turkey in a sociopolitical context (Uysal, 2004, p. 36).

The People's Houses were opened to spread Atatürk's principles or, more accurately, to ensure that the new regime reached out to the masses, and to educate the people in the context of nationalization (Tankut, 1990). In the People's Houses and the

public rooms set up all over the country, the Turkish youth and middle-aged people, and artists were meeting in these cultural centers and sharing their collective art experiences (Kavcar, 1988). Here, intensive studies were carried out in the branches of literature, theater, painting, music, folklore, folk poetry, folk arts, and folk dance. People's Houses were the scene of all the arts and cultural activities (Kavcar, 1988). Atatürk aimed to bring the values of contemporary civilization to the masses through art in the shortest way possible. Thus, the talents of many children of the people emerged, many young artists were raised (Taner, 1981). People's Houses are a product of the Republic, the Republican ideology, and especially the economic and social conditions of the 1930s. For Arıkan, the works carried out by the People's Houses fulfilled a grand and historical task in transmitting national values not only today but also for tomorrow (Arıkan, 1999).

Atatürk thought that all levels of education should be fully open to girls as well as boys (Kavcar, 1988). In this direction, the education system was reorganized with the Republic, taking into account the basic needs of the Turkish nation and the country; therefore, all educational institutions from primary school to university were reconsidered. Darülfünun, which was established in 1900 in the style of European universities, was closed and Istanbul University was established in 1933. After that, this university was organized in the setting of European universities, and scientists were brought from Europe (Kavcar, 1988). Basic cultural institutions such as Istanbul City Theaters, Ankara State Conservatory, and State Theater were opened. In addition, technical education, which was neglected in the Imperial period, was given a priority. Because of the path to fast economic and urban development, Turkey's institutions were very much in need of this kind of education. Art institutes, trade schools, Girls' Institutes, evening art schools are important educational institutions established and developed for this purpose. (Kavcar, 1988).

Due to the idea that westernization and modernization can only be achieved with the establishment of modern industry, managerial decisions were soon taken. The first of these is the Industrial Promotion Law (Teşvik-i Sanayi Kanunu), which was enacted in 1927 to develop the domestic industry and was applied until 1942., It was also the first step towards realizing the building material industry (Özgüven and Cantürk, 2019). The most significant reason why industrial facilities played an essential role in the development of cities in the first years of the Republic is the thought that

modernization is related to the economic development of the country (Cengizkan, 2009). According to this thought that prevailed in the period, it was necessary to establish an economic system that was self-sufficient, produced and consumed independently of foreign capital. Similar statist approaches were seen in the world in general, and the idea that modernization required industrial advancement led to the realization of the economic development program of the new Republic of Turkey; factories were seen as symbols of liberation, on which the goal of modernization was imposed (Cengizkan, 2009). Industry-Centered Publicity and SOE Campuses - one of the architectural models that realize the modernization ideology of the rational, collective, state-centered, secular Republic was the campuses that belonged to industrial organizations called State-Owned Enterprise (SOE). These campuses primarily exhibited a rational and collective organization as well as a statist and secular structure. In the context of the development process of the campuses, it should be noted that the Republic put into effect the first Five-Year Industrial Plan between 1934-1939 (Aritan, 2008).

In this context, the state not only established factories in various points of Anatolia to stimulate the economy, interpreting this work as a part of the modernization project, but also constituted new settlements as examples of the spatial and social environments that it tried to accomplish by means of cultural revolutions (Asiliskender, 2009b, p. 161). Associated with the housing and cooperative residences built around the factories, schools, hospitals, health, culture, and sports areas were planned. These were seen as exemplary settlements that would accelerate the larger societal changes around them (İskender, 2009). Early Republican factory complexes echoed the principles laid out by Ebenezer Howard's "Garden City" and Garnier's "Industrial City" (Cengizkan, 2006). These developments were in line with the dominant discourses at the time about the modern house (such as Le Corbusier's idea of "the house as a machine for living in") and the "spirit of the age" (Zeitgeist) in general (Le Corbusier, 1927-1974, p.210, Cengizkan, 2006).

Industrialization affected the spatial and social structure of modern buildings and cities. From this point of view, industrial settlements established by the Turkish state after 1935 could also be evaluated as a spatial effect contributing to the Westernization of Anatolia (Asiliskender, 2009b, p. 157). In order to make an effective collective work-life dominant in factories, certain changes in lifestyles were necessary: learning

new patterns for enjoying cultural activities and new forms of entertainment; introducing new, open sports branches to the public agenda with facilities such as swimming pools and tennis courts; and realizing collective recreational activities in the gardens of residential areas of Industrial Campuses. While women and men working side by side in factories and benefiting from social spaces together have been an example of secularization, state-owned factories, determination of the usage patterns of all spaces by the campus administrations, and contributions to the existing cities via extending social services are also examples of the effects of the statist organization on the campuses (Aritan, 2008). With this view, the state created spatial and social environments that will help reconstruct the identities of the employees, their families, and those living in the same city; in a way these industrial campuses built as a model for ideal, “modern” cities (Asiliskender, 2009b, p. 158). Although new factories and facilities were established as part of the attempts to establish a national industry, the building materials needed by the construction activities and building production during the 1930s could not be met with domestic production only. (Özgülven and Cantürk, 2019). Therefore, İsmet İnönü, the prime minister of the period, visited various countries, especially the Soviet Union and Italy, and asked for financial and technical support. The Industrial Development Plan was prepared and implemented with the economic support guarantees and industrialization reports received from these countries. Sümerbank General Directorate was established, and accordingly, it was decided to establish industrial facilities to meet the needs of the country (Asiliskender, 2009b, p. 156). Nazilli Fabric Printing Factory, Kayseri Cloth Factory, Adana Cloth Factory and Ereğli Cotton Factory were examples of these factories (Cengizkan, 2009)

In conclusion, Kemalist modernization can be seen as the starting point of profound social and cultural transformations affecting the private sphere (Çetin, 2005). The Kemalist reformers' efforts to change the daily habits, behaviors, and lifestyle of the people could be perceived as bringing the western world view to the society (Karal, 1981). Following this discussion, in the next section I will closely look into the planning and management of time in these spaces. Both workplaces and domestic spaces will be the focus of my study in chapter 4. I will examine factory complexes as an example of public spaces, and the Girls' Institutes and workers' houses (built as part

of the factory complexes) to exemplify both domestic spaces and the extension of the logic of public spaces into the private spaces of the home.



CHAPTER 4

TIME MANAGEMENT AT WORKPLACES, VOCATIONAL SCHOOLS AND HOMES IN TURKISH MODERNIZATION

Early Republican Turkey was one of the first countries to use scientific management techniques that began in Europe (Yaşın, 2000, p. 57). In this chapter, I will discuss how these principles which were implemented with the support of the state, were reflected in businesses and domestic life in the country. Firstly, Turkey's industrialization will be discussed in tandem with the developments in Europe at the time. This includes the “First Five-Year Industrial Development Plan.” Under this light, Sümerbank factories built and run by the state will be examined. Later, based on the examples of Nazilli and Kayseri, my attention will be drawn to the effects of the buildings in the region: how time and space management informed where they were established and the relations of the settlements and their site plans to the city.

The chapter will also include the discussions about the reflections of the principles of efficiency, functionalism and standardization on the design and use of domestic spaces in the country. Atatürk's cultural reform movements played a large role in the modernization of domestic life. With the establishment of the Republic, as stated by architect Behçet Ünsal, “[l]ifestyle was changing in Turkey.” According to Ünsal, for modernism to enter our lives, changes had to begin at homes first (Bozdoğan, 2001, p. 196). So, I will also touch upon the importance given to women’s education and the practices implemented in this direction. With the opening of Girls’ Institutes, the chapter will discuss how the concepts of rationalization and efficiency entered the houses and their organization. In this regard, several examples of factory houses built within the Kayseri and Nazilli factory settlements during the 1930s will be examined, with the following questions on mind how were these settlements planned and how did they contribute to the life of the cities surrounding them.

4.1 Time Management at the Workplace

As was discussed in this thesis, the main strategies of the Republican administration at the country level included the relocation of the capital from Istanbul to Ankara; the construction of a railway network covering the country; and the selection of the locations of the factories envisaged to be built in line with the “First Five-Year

Industrial Development Plan” as small Anatolian cities lined on the railway route (Tekeli quoted in Zeybekođlu, 2009, p. 216). These factories became “model cities” within the cities and towns they were built. In this section, the factories established within the framework of this development plan and the ways in which they were connected with railways and raw material resources will be examined from the perspective of efficiency and the time management principles in spatial planning. Then, in the following section, the spatial organizations and planning studies of the factory complexes of Kayseri and Nazilli will be examined in detail.

4.1.1 Nation as Factory

As Burak Asiliskender asserts, in “*Anadolu'da Modern Bir Yaşam Kurmak: Sümerbank Kayseri Bez Fabrikası ve Lojmanları*” [*Establishing a Modern Life in Anatolia: Sümerbank Kayseri Cloth Factory and Housing*], in Turkey, the grand reflection of modernization ideology was seen in the field of the economy like dominates the West's “modernization” in the twentieth century (Asiliskender, 2009a, p. 113) The most significant reason why industrial facilities played an essential role in the development of cities in the first years of the Republic was the thought that modernization is related to the economic development of the country. According to this line of thought, which prevailed in the period, it was necessary to establish an economic system that was self-sufficiently produced and consumed independently from foreign capital (Asiliskender, 2009a, p. 114-115). The author also mentioned, in “*Cumhuriyet Sonrası Kalkınma Hareketi olarak Sanayileşme ve Mekânsal Deđişim*” [*Industrialization and Spatial Change as the Post-Republic Development Movement*] article, that economic development was regarded as a tool to achieve the desired goal of modernization (Asiliskender, 2009b, p.154). It was thought that the desired development goal would be achieved by means of agriculture, transportation, infrastructure investments, and industrialization (Asiliskender, 2009b, p. 154). A similar approach that the occurrence of modernism depends on industrialization, led to the realization of the economic development program of the new Republic of Turkey in the same direction. Therefore, factories were seen as symbols of liberation on which the goal of modernization was constructed (Asiliskender, 2009a, p. 114-115). This development was closely related to Eric Hobsbawm's view of the modernization process as the joint product of the French Revolution and the (British) Industrial Revolution (Hobsbawm, 2010, p. 113).

There was an effective increase in agricultural production between 1924-1929. Arable areas were expanded with the support of the government. In the same years, the urbanization process was tried to be triggered with investments such as the establishment of railway networks and the construction of public buildings in Anatolian cities, especially in the capital city Ankara (Asiliskender, 2009b, p.154). Burak Peri remarked in “*Cumhuriyet Dönemi Endüstri Yapıları ve Yerleşkeleri Kayseri ve Nazilli Sümerbank Fabrikaları*” [*Republic Period Industrial Buildings and Campuses Kayseri and Nazilli Sümerbank Factories*] that, in railways, the railway's network, whose center was also Ankara, was both nationalized and new ones were built all around the country. Thanks to this network that reaches from one end to the other, political and military control in the country and dynamism in the domestic market were achieved. Railways infrastructure was not just a service, but they also emerged as a political symbol in Turkey. The main issue in choosing the location of the factories to be established within the framework of the industrial plan was to benefit from the proximity of small towns with railway transportation to raw materials, as well as to improve the inner regions of Anatolia and to eliminate inequality between the regions, integrating them to the national economy (Peri, 2006, p. 24). Zeynep Kezer defined the period after the War of Independence, as the process of establishing a comprehensive railway network that was surrounding the country (Kezer, 2001). Likewise, according to Tekeli, one of the strategies that powerfully put forward the ideology regarding the integration of the country's national space was the project “knitting the country with iron nets” (Tekeli, 1998).

The motto, “knitting the country with iron nets from one end to the other” was a metaphor for the physical infrastructure required to sustain the existence of the existing nation-state of Turkey's 15 million population of the collective hope and the labor force (Zeybekoğlu, 2009, p. 218). This infrastructure included structures such as schools, public houses, post offices, government mansions, highways, bridges, as well as the "iron networks surrounding the country" (Kezer, 2001, p. 121). State railways were not profitable investments for the Republican administration. On the contrary, they were an integral part of the necessary infrastructure implemented by the state to develop the national industry (Kezer, 2001, p. 127). Private entrepreneurs were encouraged to industrialize with special regulations such as The Industrial Promotion Law (Teşvik-i Sanayi Kanunu) (1927) and the Customs Law (Gümrük Kanunu) (1929)

(Asiliskender, 2009b, p. 154). However, due to the economic contraction developing in the world at the end of 1929, the insufficiency of both the agriculture-based economy and the private entrepreneur support for the industry caused the state to change its position in the economic environment. Therefore, after 1930, the state assumed a leading role, especially in the industrialization movement. Industrial investments were approached as an indispensable modernization project by the state to achieve the goal of economic and social development with the continuity of political revolutions (Asiliskender, 2009b, p. 154).

The World Economic Crisis of 1930 affected the entrepreneurs and caused the investment to cease to a great extent (Asiliskender, 2009b, p. 155). However, the crisis was tried to be overcome with state-centered policies, and especially the pace of industrialization was accelerated. For this period, according to Burak Asiliskender, it can be said that Turkey's economic state was inward-looking and the state took the lead (Asiliskender, 2009b, p. 155). In "*Türkiye İktisat Tarihi 1908-1985*," Korkut Boratav draws attention to the "Protectionism" (Korumacılık) and "Statism" (Devletçilik) characteristics of 1930-1939 period policies. He qualified this period as "the first industrialization period" in terms of its aims and results (Korkut, 1990, p. 28-40). Although this state-centered policy was determined between 1929 and 1930, the implementation of the program was at the end of 1933 (Asiliskender, 2009, p. 155). The prime minister of the period, İsmet İnönü, visited various countries, especially the Soviet Union and Italy, and asked for their financial and technical support. With the economic support guarantees and industrialization reports received from these countries, the "First Five-Year Industrial Development Plan" (Birinci Beş Yıllık Sanayi Kalkınma Planı) was prepared and put into effect since 1933 (Asiliskender, 2009, p. 155). This plan was in the nature of a program showing which factories to be established in the said five-year period and their feasibility calculations. The Soviet Union contributed significantly to the realization of this plan (Zeybekoğlu, 2009, p. 220-221). Looking at the factories to be established under this plan, it is observed that priority would be given to the production of consumer goods (Tayanç, 1973, p. 96-99). The salient features of this plan can be listed as follows:

- Establishing production units based on local or regional agricultural production and natural resources

- Giving priority to domestic production of basic consumption goods (especially the textile industry), which are subject to import
- Locations of industrial establishments are close to being raw material and labor resources (Kepenek and Yentürk, 1994, p. 60)

The agreement with the Soviet Union is particularly striking in this period (Asiliskender, 2009b, p. 155). Establishing good relations with the Soviet Union in Turkey's industrialization (and in its economic war of independence) provided significant credit support and technical infrastructure (Peri, 2006, p. 25). The development projects consisted of 5 sectors, covered the textile, mining, cellulose, ceramic, and chemical industries and included a total of eighteen factories. The main responsible institution for the execution of this plan was the Sümerbank General Directorate, which replaced the Industrial Credit Bank and the State Industrialization Office, and was established in 1933 (Sümerbank Genel Müdürlüğü, 1973, p. 3-7; Peri, 2006, p. 25).

Tekeli interprets the location of the factories planned to be built in line with this plan that determined the economic development process of the 1930s, especially when small cities in Anatolia are considered, as an indication of the state's desire to spread the modernity project to the entire country (Tekeli, 1998). Indeed, factories were the product of a “modernizing” planning approach both in terms of layouts and the architecture of buildings. They also stood as concrete evidence of the rapid and successful implementation of the First Five-Year Industrial Plan prepared by the young Republic (Zeybekoğlu, 2009, p. 219). These factory complexes, which were tightly connected by the railway network, had features that coincided with the modern city image that the Republic was trying to establish in Ankara, with different functions such as large green areas, houses, hospitals, schools, as well as kindergartens, cinemas, social clubs, and administrative buildings (Kezer, 1999, p. 130-149; Zeybekoğlu, 2009, p. 219). It was not only textiles or paper produced in these factories: it was intended to construct national identity and ideal culture of society as a spatial model (Zeybekoğlu, 2009, p. 219).

After the proclamation of the Republic in Turkey, there was a sudden increase in the number of factories built. While there were 130 factories before 1927, this number reached 2200 in 1932. A total of 18 factories were planned to be built in the First Five-

Year Industrial Plan (Peri, 2006, p. 25). Sümerbank General Directorate, established with the credit, investment, and planning support it received from foreign countries, especially the Soviet Union, built first investments state made factories in Anatolian cities such as Kayseri (1935), Nazilli (1937), Bursa (1937), Konya Ereğli (1937) and Malatya (1939) (Asiliskender, 2009b, p. 157) (see Table 4.1).

Factory Name	Business Opening Date
1. Sümerbank Bakırköy Cotton Factory Assessment	May 1934
2. Sümerbank Kayseri Cloth Factory	May 1934 Groundbreaking / Opened September 1935
3. Sümerbank Ereğli Cloth Factory	November 1934 Groundbreaking / Opened April 1937
4. Sümerbank Nazilli Fabric Printing Factory	Groundbreaking August 1935 / Opened October 1937
5. Sümerbank Malatya Cloth Factory	Groundbreaking in May 1937 / Opened December 1939 (Purchased by Sümerbank in 1946)
6. Sümerbank Bursa Merinos Factory	Groundbreaking in November 1935 / Opened February 1938
7. İzmit Paper and Cardboard Factory (1.)	Groundbreaking August 1934 / Opened September 1936
8. İzmit Paper and Cardboard Factory (2.)	Groundbreaking in October 1936
9. İzmit Cellulose Factory	Groundbreaking in November 1936 / In July 1934 Opened
10. Sümerbank Gemlik Artificial Silk Factory	Groundbreaking in November 1935 / Opened February 1938
11. Karabük Iron and Steel Factories	Groundbreaking in April 1937 / Opened September 1939
12. Zonguldak Anthracite Factory	Ka. House 1935
13. Keçiözümlü Sulfur Factory	May 1935
14. İstanbul Glass and Bottle Factory	Ka. House 1935
15. Isparta Rose Oil Factory	May 1935

Table 4. 1. Factory Name and Opening Dates (Reorganizing and drawing by Merve Köz, original table from Zeybekoğlu, 2009, p. 221)

Another significant feature of the factories in Turkey in the above-mentioned period is that they had an economic development plan which was implemented in a very short period (Zeybekoğlu, 2009, p. 223). Therefore, when factories are examined on a country scale, it is seen that they were spread over different regions of the country and were connected and to the central regions by railway network. Feasibility factors such as proximity to the raw materials and workforce to be used, transportation, and ease of participation of produced goods in distribution were taken into consideration in the location of factories. Besides, strategic decisions such as bringing employment to the area where factories would be established and establishing them in regions with high military defense facilities were also effectively taken into account. (see Figure 4.1). Also, transportation between the factory and the railway was realized by connecting the factory unit to the railway network with a light railway. When the layouts are examined, it is apparent that the production units were separated from their surroundings by means of a green band. In contrast to the organically developed settlement patterns of small Anatolian cities, they were characterized by their orderly(grid) settlement plans. Finally, because of their function, these complexes were built in very large areas with little slope (Zeybekoğlu, 2009, p. 225).

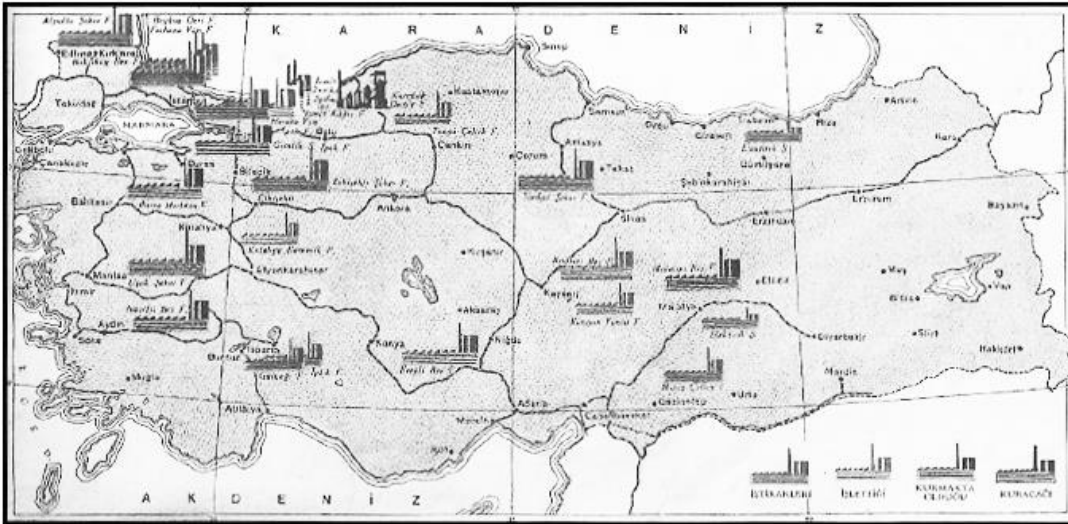


Figure 4. 1. Factories Layout Plan (Sümerbank, 1937; Zeybekoğlu, 2009, p. 222)

Soviet experts, including architect Ivan Nikolaev, came to Turkey for the actualization of factories on August 12, 1932 (Asiliskender, 2009a, p. 115). The team that stayed three to four months in Turkey, as a result of their investigations in Kayseri and Nazilli, presented a report stating the importance of establishing factories in Kayseri and Nazilli (İnönü, 1998; Asiliskender, 2009a, p. 115). The design aspects of these factory settlements indicate that management of time was an important factor in the minds of their planners. In the next section, I will examine the locations of Kayseri and Nazilli Factories in the city as well as the modern planning principles which guided the site plan.

4.1.2 Time Management in Spatial Planning of Factory Complexes

Kayseri and Nazilli show common features in terms of layout and design (Peri, 2006, p. 25). The state received a loan of 8.5 million lira from the Soviet Union for the first investment and the foundations of the Sümerbank Cloth Factory were laid in Kayseri on May 20, 1934 (Asiliskender, 2009a, p. 115). Kayseri Cloth Factory was established on an area of 345,920 sqm on the Yozgat-Kayseri railway and was put into service in 1935 Nazilli Fabric Printing Factory was established on the Aydın railway on the nearer of Büyük Menderes on an area of 213,875 square meters and was put into service in 1937. Both factories were designed and built by the Soviets who also supplied the machinery required in production. In both in Nazilli and Kayseri factories, the aim is to ensure the highest production in the least amount of space and to realize the best arrangement of the production line (Peri, 2006, p. 25).

It was not surprising that Kayseri was chosen as the first center in the industrialization movement for its goal of modernization (Asiliskender, 2002, p. 68). It is an old commercial city dating back to the 800s. The city was named Mazaka in ancient times, has been a permanent commercial center since its foundation in 800. Hence, important trade routes pass through the city. The state's initiation of the industrialization movement in the city of Kayseri was related to the location of the city and its culture that guides its environment (Asiliskender, 2009a, p. 115) In 1927, it was connected to the railway network. There was no need for additional investment to ensure the transportation of raw materials and produced products to different regions (Asiliskender, 2002, p. 68). After the declaration of the Republic, factories such as the “Airplane Factory” (Tayyare Fabrikası) (1926), “Tank Repair and Assembly Factory” (Tank Tamir ve Montaj Fabrikası) (1926) and “Bünyan Hydroelectric Power Plant” (Bünyan Hidroelektrik Santrali) (1929), which were among the first heavy industry investments in the country, were all established in the city of Kayseri for similar strategic reasons. Also, the establishment of the Sümerbank Cloth Factory in the city enabled the modernization movement initiated by the state to be further carried out. The facility cannot be considered only as an industrial structure. With its campus, the factory settlement was considered as a substantial social and spatial organization that rebuilds parts of the city of Kayseri in line with the modernizing goals of the Turkish state (Asiliskender, 2009a, p. 115).

With the opening of the Sümerbank Cloth Factory, which was established on the northern wall of the city in 1935, workers were employed from different districts, neighboring settlements, and even from all around the country (Asiliskender, 2009a, p. 126). A great majority of this population, coming from outside the city, stayed in Kayseri after their working period expired (Asiliskender, 2009a, p. 126). Hence, as Asiliskender argued, the Sümerbank Settlement can be considered the most important state investment effective in the development of the city when it was put into service.

The factory campus was within walking distance to the city center (approximately 2 km away). Transportation to the work area located in the northwest of the city was provided through Station Street and there were many transportation routes reaching to the region. The railway line extending in the east-west direction passed from the south of the area (Tırnakçı, 2020, p. 85). (See Figure 4.2).

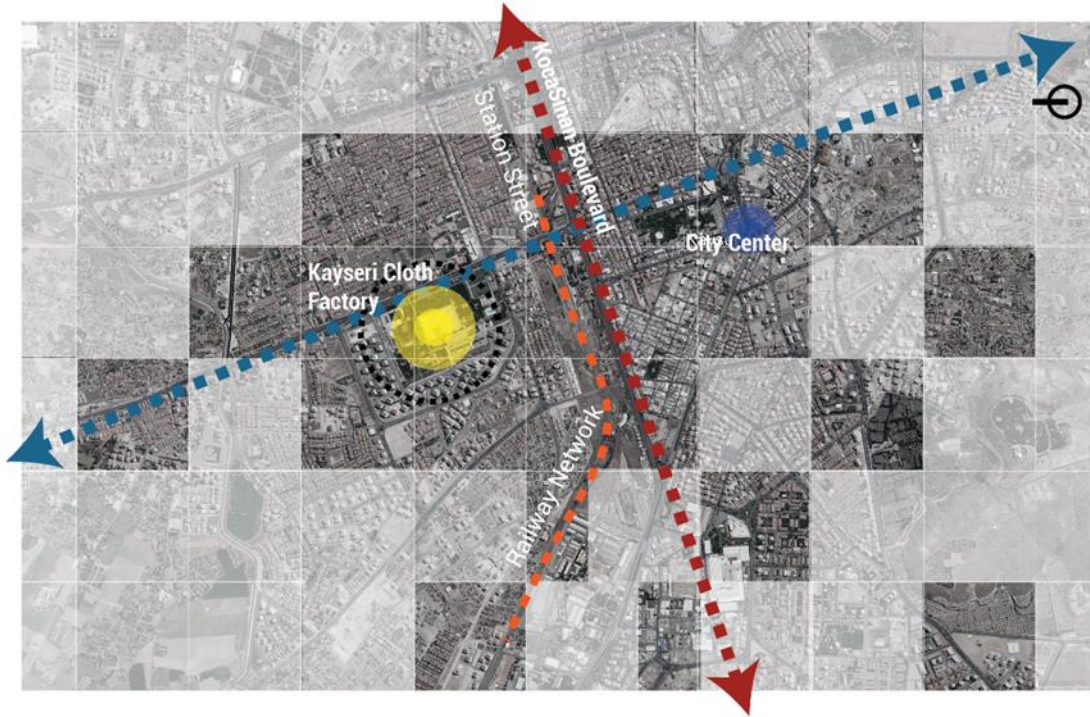


Figure 4. 2. Kayseri Cloth Factory Location (Illustration by Merve K z, drawn after the original Google Earth map)

S merbank Kayseri Cloth Factory, which started its industrialization movement in Turkey and also the first facility of its kind made by the state, can be considered as a great revolution for the period (See Figure 4.3). The purpose of construction, economic and social function were directly related to the nation-building effort of the Republic of Turkey. Hence the factory, allow us making a general assessment about how “Modern Turkey” was imagined (Semiz and Toplu, 2019, p. 51). S merbank Kayseri Cloth Factory was the largest factory facility in the Balkans from its establishment until the end of the 1960s. The factory alone met a large part of the country's needs, especially for the government works, with cloth production (Asiliskender, 2002, p. 68). It supported the use of local manufactures with many S merbank organizations, especially the Nazilli Fabric Printing Factory established after it. S merbank Kayseri Cloth Factory, according to Beĝen  (1950), was an establishment that educated the public what industrial production was, like a “headteacher” (Asiliskender, 2002, p. 69).



Figure 4. 3. Kayseri Cloth Factory (Baturayođlu Yöney and Asiliskender, 2018)

The criteria for the location selection of newly established state factories could be examined as part of the socio-spatial strategy of nation-state formation (Şengül, 2001). Nazilli is the largest district in the west of Turkey's Aydın province. It is on the railway network covering the same route as the E24 highway, which connects Afyon, Denizli, Aydın, and İzmir (Eldeş, 2019, p. 44-45). Çağatay Emre Doğan argues that in the process of territorialization of the nation-state, there is a parallel between Ankara's decision to become the capital and the choice of location for factories (Doğan, 2009, p. 79). It was particularly noteworthy that because Mustafa Kemal chose Ankara as the capital, the people of Ankara had a special devotion to him and to the “Turkish War of Independence” (Doğan, 2009, p. 79). Similarly, considering the presence of troops established against the occupation in Nazilli before and during the War of Independence and the city hosting one of the first local congresses, it can be thought that the “loyalty to the regime” of the people of Nazilli was effective in the choice of location. In addition, it was known that the prominent figures of the city met with some ministers in Ankara and invited the delegation privately in order for the Soviet delegation to visit their city during the preparation of the plan (Doğan, 2009, p. 80). The “Nazilli Combine” was built in the light of the 1933 report prepared by the Soviet experts, covering the country and starting with the evaluations in terms of suitability for industrial production (İnan, 1972). Nazilli Fabric Printing Factory was opened Turkey's first fabric printing factory (Eldeş, 2019, p. 44-45) (See Figure 4.4).



Figure 4. 4. Nazilli Fabric Printing Factory (Alkaya, 2020)

The railway and Sümerbank factory have been vital for the economic development of the city for many years. Railway transportation, which connects Nazilli to the port city of Izmir and the foreign market, has increased the agricultural production in the region. As for the effects of industrial production, the most important of all was that the Nazilli Fabric Printing Factory produced here is identified with the name of the city and transformed into an important part of the urban identity (Doğan, 2009, p. 82). As Dikmen wrote about the factory: “The fabric printing of the Sümerbank Fabric Printing Industry Organization is directly the property of Nazilli” (Dikmen, 1952 p. 45).

The factory was built in the south of Nazilli where no built environment existed at the time. For the factory, the land in the south of the city between the railway and the Menderes river was selected (Doğan, 2009, p. 83). It was built on the Bozdoğan road coming from the city center (Eldeş, 2019, p. 46) (See Figure 4.5). There were also public buildings in the city center connected with Atatürk Boulevard. For the construction of the factory, the former swamp area was drained. Although a 4 km connection to the railway would significantly increase construction costs, the reports indicated that this was the most suitable option (Doğan, 2009, p. 83).

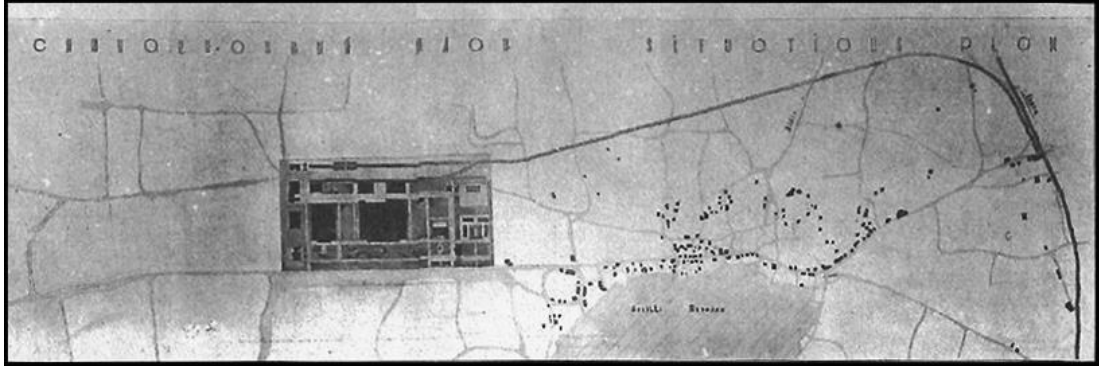


Figure 4. 5. Site Plan of Nazilli Fabric Printing Factory (Zeybekoğlu,2009, p. 221)

The construction site, chosen by the group of experts, was located 1825 meters from the railway station and 2250 meters from the Menderes River. The area is a rectangle that measures 350 x 600 meters in the north-south direction and is located on the west side of the Bozdoğan road. Its relationship with the railway and the river was essential in terms of transport and waterway connections. The factory campus was connected to the city by a railway line consisting of a single 2 km rail, built by Sümerbank and connected to the Aydın-İzmir railway (Doğan, 2009, p. 83) (See Figure 4.6).

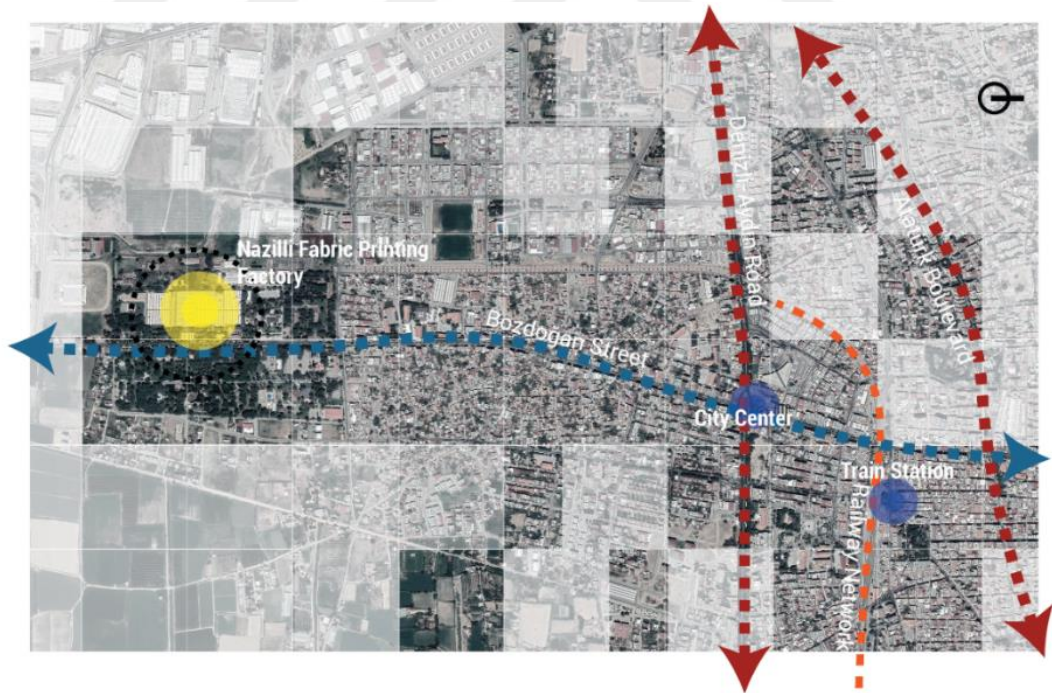


Figure 4. 6. Nazilli Fabric Printing Factory Location (Illustration by Merve Köz, drawn after the original Google Earth map)

Apart from the trains that carry raw materials, finished goods, and coal, there was a train called “Gıdı Gıdı” that regularly services from the factory to Yukarı Nazilli for the employees’ commute to work (See Figure 4.7). After 1942, a station and stops

were built in the factory area on the train route and brought a solution to the transportation problem of workers living in the upper parts of the city (Doğan, 2009, p. 86). The construction of the monorail line, two-meter area on both sides, and the stops built on this line belonged to Sümerbank (Doğan, 2009, p. 86).

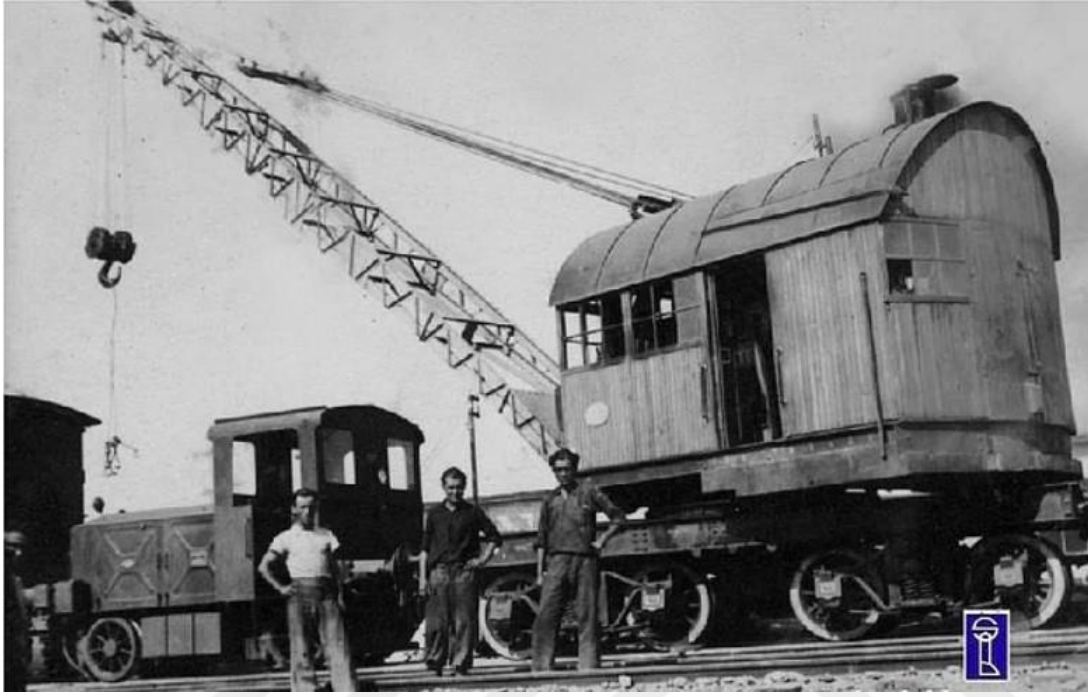


Figure 4. 7. “Gıdı Gıdı” (Sümerbank Archives)

The Factory Campus has also affected the development of Nazilli's urban fabric. With the development of the Subsidiary Industry, the south of the city has functioned as an industrial zone. Accordingly, the factory area has become the new city and industrial center of Nazilli (Eldeş, 2019, p. 46).

The design and construction of these factory premises were carried out by the Soviets. In this case, Turkey imported the experience of the Soviet Union in industrial development. With the training of technical personnel, a new way of life was taught in these factories, aiming to modernize the entire Anatolian landscapes. Besides, thanks to industrialization, efforts were made to make the state's power and authority felt, as well as closing the gap between more developed and underdeveloped places in Anatolia (Peri, 2006, p. 27). According to Margaret Crawford, industrial settlements formed physical reflections of the requirements of industrial production methods (Crawford quoted in Zeybekoğlu, 2009, p. 225). While the Ottoman Empire was largely an agricultural society, which produced raw materials and sold them to the

industrialized countries at underpriced rates, the new Republic established factories to reverse this order (Zeybekoğlu, 2009, p. 225).

At this point, the functional planning principles of industrial settlements exactly coincided with the modernizing discourses of the Republic, based on creating a brand-new country and modern cities by breaking away from the traces of the past (Zeybekoğlu, 2009, p. 225). In this case, it shows us that the location and planning of the factories had been carefully decided upon in order to increase the production in the factories as well as their efficiency. The following section will examine how time management and the rationalization of spaces were reflected in the private sphere the home, and how public institutions contributed to its redefinition.

4.2 Practicing Time Management in Domestic Places

Another factor to be considered in cities where the modern industry became effective is housing. The “Republican Discourse” first drew attention to the approach of the modern house through the concepts of the family and especially motherhood. Across the country, Girls’ Institutes were opened so that young modern women who received education would become ideal wives and mothers in their homes (Bozdogan, 2001, p. 197). It was believed that housework would be handled like factory work thanks to women well versed in “domestic arts”, and in this sense, the Girls’ Institutes were seen as an “extension of the houses” (Kılınç, 2013, p. 109). In order to understand this approach to domestic places, it is necessary to examine the establishment aims, educational programs and ideologies behind the Girls’ Institutes.

To this end, the following section examines the ways in which Girls’ Institutes, as technical and vocational schools for women, applied the concepts of “scientific housework” and “time management” in the context of the home. This education included the rationalized and efficient use of the kitchen, which was seen as the center of “home economics”. Then, the section touches upon on the contribution of workers' housing to the ongoing debates on domesticity at the time and it discusses the planning of factories as well as their residential quarters. The discussion also includes the layouts and plans of workers’ housing and their location in factory premises and how the concepts of efficiency and time management were applied to these examples.

4.2.1 Girls' Institutes: The Training of Time Management and the Rationalized Kitchens

Education is a social phenomenon that shapes modern societies and also helps to create an efficient labor force. Therefore, vocational and academic education has enabled the development of people and industries (Toktaş and Cindoğlu, 2006, p. 737). With the increase in industrialization, the duties of men and women at home were differentiated, and the economic needs of the house met by men and women became more dependent on the house. In “*Modernization and Gender: A History of Girls' Technical Education in Turkey since 1927*”, Şule Toktaş and Dilek Cindoğlu mentioned that education was initially used to provide a better workforce for men. The same authors remarked that even if women were given any training for jobs, these were for jobs with lower wages and provided lower status than men (Toktaş and Cindoğlu, 2006, p. 738).

In countries where industrialization and the economy are generally controlled and initiated by the state, it has been observed that education was generally done with gender discrimination (Toktaş and Cindoğlu, 2006, p. 738). This situation had not started that way in Turkey; Mustafa Kemal carried out education reforms not only to ensure the economy and labor force, but he used education also for ideological purposes. Thanks to the reforms, the importance was given to women increased. With the education given to the women, it was thought that women would make a great contribution to the formation of a modern family at home following the ideals of the state.

However, the role of women was envisaged to not only work in the home but also in public spaces (Toktaş and Cindoğlu, 2006, p. 738). According to Aynur Soydan, it was possible to observe the basic principles of the education understanding of the Republic from the speeches Atatürk made on various occasions starting from the period of the independence war (Soydan, 2002, p. 270). In his İzmir speech in 1923, Mustafa Kemal stated that one of the requirements of the contemporary age was to solve the problem of women's education. He also stated that “Our women will also become scholars and scientists and will pass all degrees of education that men pass,” expressing that women should be educated based on equality with men. He saw the issue of women's education as one of the conditions for the success of the revolution (Soydan, 2002, p. 270).

As Leyla Alpagut remarked in “*Erken Cumhuriyet Döneminde Kızların Eğitimi için Ankara’da İki Önemli Yapı: İsmet Paşa Kız Enstitüsü ve Kız Lisesi*” [*Two Important Buildings in Ankara for the Education of Girls in the Early Republican Period: İsmet Paşa Girls’ Institute and Girls’ High School*], in the early Republican era, women were redefined as the representation of the concepts of “modernity/modernism (asrılık)” (Alpagut, 2010). To contribute to this image, Atatürk wanted to set an example for society by marrying a modern woman who could accompany him on his trips around the country. For that matter, he raised his adopted daughters in such fields such as aviation and history of science, which were mostly dominated by men in this period (Alpagut, 2010).

The Republic was trying to create a Western and secular system that is completely detached from the Ottoman tradition (Alpagut, 2010). In the first years of the Republic, coeducation was introduced so that girls could benefit from educational opportunities like boys (Toktaş and Cindoğlu, 2006, p. 748; Alpagut, 2010). Women worked to make up for the reduced male labor force during the Balkan Wars and World War I. With the establishment of the new Republic, modern, secular, and mixed education systems were opened (Toktaş and Cindoğlu, 2006, p. 748).

Kılınç summarized the vision of women in the Republican era in his article, the “*Homemaker or professional? Girls’ schools designed by Ernst Egli and Margarete Schütte-Lihotzky in Ankara, 1930-1938*”, referring to the booklet of the Turkish Ministry of Education published in 1945:

[F]irst, “by the great Turkish Revolution, a Turkish woman is first a citizen who, in every aspect of society, has rights equal to those of men”; second, “before all else and in a broader sense, she takes her place in an advanced order of family and society as a skillful and intelligent housewife and mother”; and third, “she is a human being who has both the courage and initiative to survive freely and in financial independence if and when necessary and to give her family a comfortable life by practicing one of the domestic arts” (İstanbul: Milli Eğitim Basımevi, 1945; Kılınç, 2013, p. 102).

Kılınç writes that thinking that the new regulations in education did not give enough importance to women's duties at home, a separate school system was proposed within the education system. (Kılınç, 2013, p. 102). The fact that these schools do not provide coeducation was one of the reasons for the preference for the conservative middle-class families. In this process, Girls’ Institutes were established as a medium

of finding a middle ground between the state and the people who were hesitant to send their daughters to coed schools (Toktaş and Cindođlu,2006, p. 748)

In 1927, Western education experts such as John Dewey had been invited to Turkey to examine and prepare a report for the existing training (Yaşın, 2000, p. 58). As a result of these trials, the first Girls' Institute was opened in Ankara in 1928 (Toktaş and Cindođlu, 2006, p. 738, Soydan, 2002, p. 270). Jacques H. Lambert, a French architect and urban planner, praised the "*İsmet Paşa Girls' Institute in Bayındırlık İşleri*": "Here, the Turkish woman connects with the peculiarities of household economics, which will constitute the basis of her home, and with the intellectual culture that will make her more attractive" (Lambert, 1936, p. 82). The program of the Institute for Girls was designed as institutions aiming to raise Turkish girls as modern wives and mothers who know about home management. Girls were trained in Western-style dressing, manners, home management, and culinary culture (Alpagut, 2010).

In "*Educating the Daughters of the Republic*", Zehra F. Arat stated that at the time the role of women primarily belonged to home life and motherhood, and emphasized that not all conditions were fulfilled for women to take part in social and economic life to contribute to the development of the country (Arat, 1998, p. 175; Kılınç, 2013, p. 102). Furthermote, as Ayşe Durakbaşa argued in "*Kemalism as Identity Politics in Turkey*", the "Kemalist woman image" consisted of women who provided all the responsibilities of being a housewife in a family and also had an active social life (Kılınç, 2013, p. 102). The necessary organization for raising women as mothers or individuals who can work in the public sphere to raise the children of the Republic and thus prepare for social transformation was provided by the girls' schools (Alpagut, 2010). These types of schools, which were opened after the Tanzimat, were institutions that aim to "teach enough jobs for the home life of city women who had not yet been able to leave their caged house" (Alpagut, 2010). Afterwards, in the early 19th century, the first girls' schools were opened and trained for orphan girls to learn to dowry for marriage or to sew military clothing (Toktaş and Cindođlu, 2006, p. 738). In the Republican era, Girls' Institutes provided training on home management, which aimed to use modern and rational methods to ensure efficiency in the home (Alpagut, 2010).

According to Kılınç, Girls' Institutes included two different educational programs. They were first opened to raise "modern housewives" (educated mothers who master housework) and secondly to contributed to the formation of "modern

professional women” (Kılınç, 2013, p. 103). According to these explanations, the primary aim of the Girls Institutes was to raise a modern housewife with a high level of general knowledge, while the other aim was to ensure that women participate in the production process with the skills defined as “women's arts” at that time (Soydan, 2002, p. 276). Also, they contributed to the introduction of concepts such as “order”, “discipline” and “rationality” into middle-income Turkish homes. While educating women following “scientific” methods, attention was paid not to break away from “national culture”. In 1927, Evening Girls Art Schools were opened to support the Girls’ Institutes in city centers whose aim was to “teach our adult women the methods and knowledge of an advanced home and community life”. In addition to these, such principles were carried to the provinces with the “progressive” household management seminars organized by 150 Village Women Traveling Courses (Yaşın, 2000, p. 57-58).

Besides, another aim of the programs created for Girls’ Institutes is to “make women have a profession and earn their lives as “businesswomen”” (Soydan, 2002, p. 276). When the curriculum of the Girls’ Institutes was examined, it was observed that general courses on society and culture were included at the secondary school level. In this case, it was ensured that women would gain awareness of their role and duties as citizens before they became housewives or took part in the production process. According to the Soydan, “... development in this direction was tried to be achieved with the courses such as History, Geography, Turkish, and Citizenship in the programs of Girls’ Institutes” (Soydan, 2002, p. 276).

In the Republican period, the representation of modern women and modern buildings overlapped. Both were the common object of comparisons between before and after the Republic. Modern buildings and modern women were significant tools which the Republican governments used in defining and positioning itself (Alpagut, 2010). In the Republican era, women were given essential responsibilities in social transformation; for this reason, the necessity of preparing women for social transformation became a priority. To this end girls’ schools were established across Turkey (Alpagut, 2010). According to Leyla Alpagut, educational buildings designed and realized for women were among the most prestigious representations of the modern architectural style in parallel with the modernizing identity of women (Alpagut, 2010). Schools should be seen as the product of an understanding that puts women at

the center of the city instead of pushing them away from the center and hiding them behind walls, and thus a modernizing force (Alpagut, 2010).

4.2.2 Housing the Modern Women: The Idea of Rationalized Kitchen and Home Management

At the beginning of the 20th century, there were discussions that the operation of factories and houses was quite the same (Yaşın, 2000, p. 56). American women then started working on the issue of “home economics”. In “*Perfection Salad: Women and Cooking at the Turn of the Century*”, Laura Shapiro discussed the old methods of housework as follows: “Traditional housework methods have become ever-increasingly disturbing and haphazard” (Shapiro, 1986, p. 4; Yaşın, 2000, p. 56). As Yael NavaroYaşın mentioned in ““*Taylorism at Home*”: *The Rationalization of Housework in Early Republican Turkey (1928-40)*”, there had to be a way of rationally dealing with the housework and applying the “one way best” principle as in factories (Yaşın, 2000, p. 56). Esra Akcan stated, in “*Architecture in Translation: Germany, Turkey, and the Modern House*”, that some dilemmas emerged with the emergence of modern houses and the rationalization and standardization of the concept of housing. For the same author, it was possible to evaluate this dilemma together with the concept of the rational; when the word “rational” was used together with housing, it was associated with efficiency, reproducibility, and economy (Akcan, 2012, p. 175).

Nicholas Bullock, in “*First the Kitchen: Then the Façade*”, drew attention to the importance of the kitchen by writing that the architecture began changing first from inside the house and first this place was the kitchen. Because of the increasing population, the housing structure had to be revamped; for this reason, the spaces were redesigned to meet the minimum requirements of the modern age. As a result, two important decisions were made. The first of these decisions was to consider the role of women in the home, and the second was the application of “scientific management and rationalization techniques” (Bullock, 2009, p. 177). For instance, Lillian Gilbreth, one of the first female engineers in the US, began to adapt the “time and movement” methods used in her family's factory to the home (Yaşın, 2000, p. 56). In scientific management adapted to the home, first, just like Taylor did in factories, she would “carefully review the current work of the home founder, examine every part of the work and thus decide which stages could be eliminated and save time” (Bureau of

Publications of the Teacher's College at Columbia University, *Homemaking as a Center for Research*, 1927; Yaşın, p. 56).

In the 1920s, articles were published in Germany in magazines such as "*Fürs Haus*" and "*Die Frau*" containing suggestions on how housewives could carry out housework without having a maid. According to Bullock, it was thought that the work of women at home should be re-evaluated, and economists argued that the principles of "scientific management" that women in America generally started to use in their homes should be spread for the management of the housework (Bullock, 1988, p. 178).

Christine Frederick, who took the "Twelve Principles of Scientific Management" principles that Gilbreth created as a result of her experiments as a reference and applied these on household chores, working on how to manage household chores without any attendant assistance (Bullock, 1988, p. 180). The rationalization and discussion of spaces in housing started with the kitchen (Akcan, 2012, p. 182). For Christine Frederick and Mary Pattison, the kitchen is the most significant place where the principles of "scientific management" can be actualized in housing (Bullock, 1988, p. 180). In her studies, Frederick first examined the movements of the housewife in the kitchen and arranged the places where the works were done to minimize the time spent. Frederick then listed the movements and obtained "scientific" results on how to save time (see Figure 4.8). As a result of the list, she continued to work on the kitchen plan and arranged the places of kitchen utensils according to human movements (see Figure 4.9). Besides, she positioned the equipment frequently used in the kitchen in the same place and optimized the height of the work areas. She also studied the proportions of openings for adequate ventilation and lighting of the kitchen to improve working comfort. For Frederick, the kitchen should only be used as food preparation and cooking space, other household activities such as cleaning and laundry should be done outside the kitchen (Bullock, 1988, p. 180).

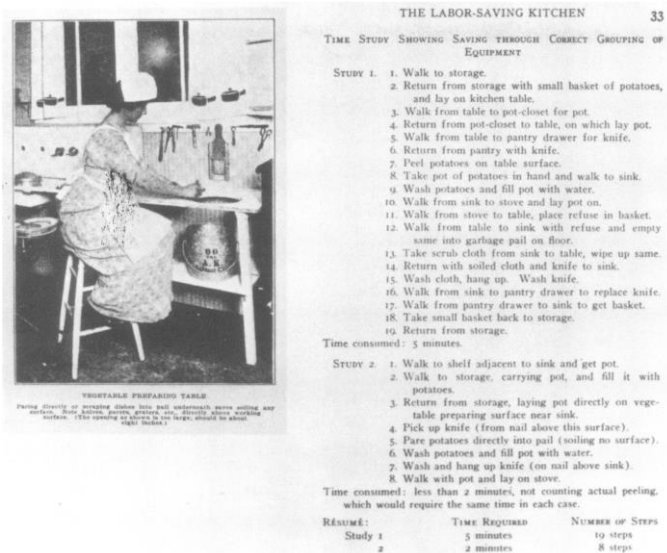


Figure 4. 8. Pages from Christine Frederick, *Scientific Management in the Home, Layout in the Kitchen Movement* (Bullock, 2009, p. 179)

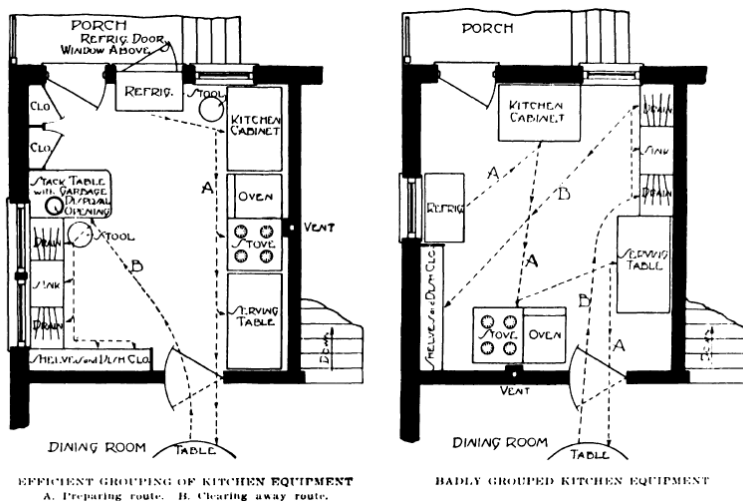


Figure 4. 9. “Good” and “bad” grouping of kitchen equipment (Bullock, 2009, p. 180)

The importance of rationally designed kitchens in homes in terms of time management and energy-saving was one of the main elements at the beginning of modern architecture in Europe (Bozdoğan, 2001, p. 200). The efficient, industrial-style “Frankfurter Küche” (Frankfurt Kitchen) model, designed by Margarete Schütte-Lihotzky in 1929 and adapted to social housing settlements in Berlin and Frankfurt by the German architect Ernst May, pioneered the concept of “modern kitchen” (Bozdoğan, 2001, p. 200) (see Figure 4.10). Lihotzky summarized the principles that form the basis of design in “*Rationalisierung im Haushalt*” as follows:

Every thinking woman must have experienced the backwardness of the present ways of running a home and must recognize in this the principal barriers to her

own development, and thus to that of the family as a whole. The problem of organizing the daily work of the housewife in a more systematic manner is equally important to all classes of society. To achieve this, the arrangement of the kitchen and its relationship to the other rooms in the dwelling must be considered first (Lihotzky, 1926, p. 120; Bullock, 1988, p. 187).



Figure 4. 10. “Frankfurt Kitchen” (Bullock, 2009, p. 187)

Bruno Taut devoted “*Die Neue Wohnung: Die Frau Als Schöpferin*” to women and wrote on rational home planning in the book in 1924. He worked to minimize the time women spend for cleaning, cooking, and washing at home (Bozdoğan, 2001, p. 200). Taut wrote that “the architect thinks, the housewife guides” (Der Architekt Ekit, die Hausfrau lenka); therefore, he believed that the housewife would play a leading role in creating the new type of housing (Bullock, 2009, p. 177). Taut continued to work on the rationalization of the kitchen, using the principles that Christine Frederick prepared for the home and composed of Taylorism principles. In addition, the kitchen design for Taut was inspired by the “Frankfurt kitchen” created by Schütte-Lihotzky (Akcan, 2012, p. 182). The reflections of the industry to domestic life (house) caused the concept of “mass production” to be handled together with the concept of “serial construction” all over the world. With the “standardization”, the plans were designed in ideal dimensions (Akcan, 2012, p. 182) (see Figure 4.11).

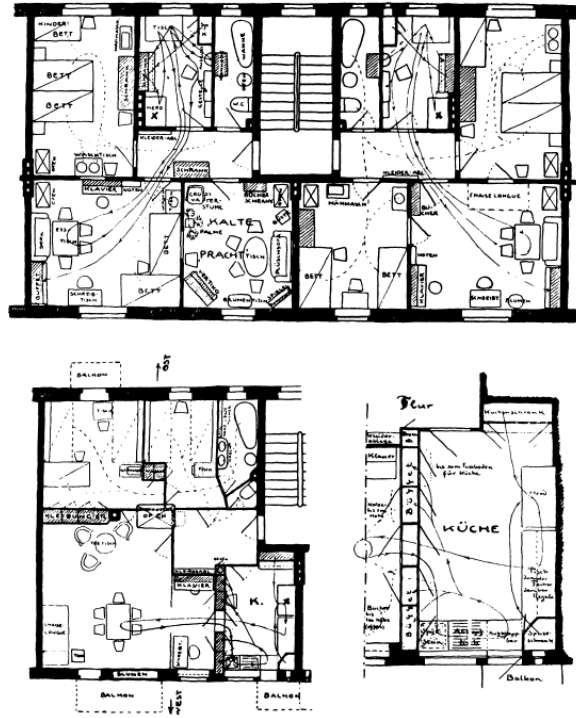


Figure 4. 11. Diagrams from Bruno Taut for the new dwelling (Bullock, 2009, p. 184)

In the 1920 and 1930s, the idea of a “rationalized home” which spread to all nations, was understood concurrently with the idea of an “efficient” home in Turkey. In the early Republican period, both foreign and Turkish architects such as Ernst Egli, Schütte-Lihotzky, and Burhan Arif wrote articles on efficient, mass-produced, and standardized housing and organized conferences (Akcan, 2012, p. 183). In addition, these architects combined their knowledge with the reformist ideas of the Republic by serving for various state institutions. Lihotzky who applied Taylorism principles to the education of Girls’ Institutes was especially an important connection. She worked at the Ministry of Education between 1938-1940 and designed primary schools that could be prototypes for villages and designed an unbuilt extension to the Girls’ Institute in Ankara. Bruno Taut, a well-known avant-garde architect also took an active role in the Ministry of Education and played a role in the invitation of Lihotzky to Turkey (Akcan, 2012, p. 191).

Despite all this, the Lihotzky's kitchen design ideas began to spread before she come to Turkey (Akcan, 2012, p. 191). Kitchen designs, similar to the Frankfurt kitchen, were seen in home life magazines. Girls’ Institutes aimed to make housework more “efficient”, and it was one of the most important institutions that contribute to the rationalization of housework in Turkey (Yaşın, 2000, p. 71). The places, where the

kitchen rationalization and modern cooking training given in the Girls' Institutes, were designed similar to the approach Lihotzky had followed (Akcan, 2009, p. 200) (see Figure 4.12).



Figure 4. 12. Cooking classes in Turkish Girl' Institutes (Akcan, 2009, p. 200)

As Yaşın examined in the case of the Girls' Institutes and students, Turkish women frequently referred to Taylorism principles to ensure efficiency in housework in the interviews they gave and articles they wrote (Yaşın, 2000, p. 71). For instance, Süheyla Arel and Süheyla Altunç, two of the teachers working at the Girls' Institute, wrote books on home rationalization. Arel, began her work on the domestic economy in Turkey, published it as "*Taylorisme*" in 1936. The piece was about how to relate Taylor's "scientific management" principles to housework. In her book, Arel frequently cited Christine Frederick's principles and Catherine Beecher (one of the important sources for Frederick's principles) for the rationalization of housework. Likewise, Süheyla Altunç commented in *Ev İdaresi [Organization of the Household]* that:

A housewife is a woman with qualities of womanhood who knows how to organize the house. The household is the type of knowledge that shows the methods of organizing a house according to the principles of health, order, and economy (Akcan, 2009, p. 200).

Besides, Altunç, in her book handled issues such as household and personal hygiene works (such as sewing, embroidery, ironing, laundry, transportation, cleaning, heating and general maintenance of lighting and heating products, cooking and dishwashing)

together with scientific management principles and the concept of modernity. One of the most addressed topics was the rational use of the kitchen (Akcan, 2009, p. 202).

Also, İnci Yar, who studied at İzmir Republic Girls' Institute in 1935, wrote the following in “*Modern Hane Yönetimi: Evde Taylorizm*” [*Modern Household Management: Taylorism at Home*] published in the institute's yearbook in 1936:

Taylorism principles occupy an essential place in household management, which has become a science today. I hope these principles will be used in our country. And I hope that our housewives will not be surprised by their work and they will succeed by working their minds (Yar, 1935-36: 40,42; Yaşın, 2000, p. 59).

The home economics lessons given at Girls' Institutes aimed to enable women understand housework not only as a physical activity (Yaşın, 2000, p. 59). Yar further stated that the efficiency term taught at the institute should be provided by the woman at home by using her intelligence (Yar, 1935-36, p. 41; Yaşın, 2000, p. 59). In another article published by the Girls' Institute, it was stated that girls studying at the institute should not learn housework from their mothers in the old ways, even that homework such as embroidery, sewing and laundry should be discussed more scientifically and be standardized (Kız Enstitüleri ve Sanat Okulları Sergisi: 32; Yaşın, 2000, p. 59). Yar, referring to Lillian Gilbreth's “time-motion” work in industrial work, thought that these studies could also be done in housework. She stated that with the changes made in the places of the furniture at home, convenience can be provided in house works, and thus productivity can be increased (Yar, 1935, p. 36-40; Yaşın, 2000, p. 59). As a result of these studies, it was concluded that the concepts of time and space should be handled together with scientific management principles to ensure efficiency in housework (Yaşın, 2000, p. 61).

For Turkish women, Girls' Institutes have been a significant factor in terms of productivity and housework management, and at the same time, institutes have been an intermediate factor in women's transition to modern life by educating women. The rationalization movements were supported by architectural movements, and the efforts of women to change their roles in the house along with the rationalization of the houses progressed simultaneously. In the next section, I will explain how such principles were applied in the design of the workers' houses. The relationship between factories and residences will be evaluated together with their contributions to time management and the efficiency of production by studying the campuses of the factory complexes examined in Section 4.1.1.

4.2.3 Spatial Planning of the Workers' Houses

As Ali Cengizkan points out in "*Fabrikada Barınmak*", "workers' housing" has not been studied sufficiently in Turkey, but it also appears as a subject area that promises rich and new knowledge (Cengizkan, 2009, p. 15). When the subject to terms of typology in housing and housing culture in the Ottoman Turkey, according to the Tanyeli, it was observed that there were marginal style housing types in the Ottoman metropolis compared to the period. The debates on workers housing in Turkey has its precedents in the Ottoman Empire. Until barracks were built in the 18th century, "single rooms", which were produced to accommodate single men, were generally at the shipyards and were built for the navy. In his writings, Evliya Çelebi states that such "single rooms" were numerous and very common, indicating that they had different locations and types, and usage (Tanyeli, 1996, p. 65; Cengizkan, 2009, p. 15). "Inns" located around Mahmud Pasha and in the north of the Grand Bazaar as both working and sheltering places; "Hücerat" in Feshane on the Golden Horn or in the outer garden of the Topkapı Palace; "worker nest" (amele yuvası) and "workers nest" (ameleler yuvası) type of shelter types seen in Istanbul and Ankara at the beginning of the 20th century, were the developments that heralded the formation of "workers' housing" (Cengizkan, 2009, p. 15).

As a part of a conceived ideal, a "utopia", workers' housing were an architectural culture product that can ideally enlighten the employer's point of view of the worker and workers life during that period (Cengizkan, 2009, p. 16). In this respect, the workers' housing on the factory site reveals small but significant details about the physical environment and living conditions of the workers. For Cengizkan, when looking at the environment that constitutes the basis of the idea of workers' housing from an ideological perspective, in brief, the following two features stand out:

- To protect and look after the health of the worker in the capitalist mode of production and protect the future and productivity of the worker. Since this means increasing the future of the factory as an investment, its productivity and therefore the profitability of the enterprise, it was considered essential in every period.
- Workers' housing - imagined and built extensively by architects from the first half of the 20th century, especially since Tony Garnier (1898, 1917) who proposed

housing at his “Industrial City” (Cité Industrielle) - were a product of “egalitarian” ideals (Cengizkan, 2000, p. 30).

Overall, industrialization is considered one of the main factors affecting the development of urban space. Although it was aimed primarily to ensure economic development, industrialization had an effect that would accelerate the transformation in the restructuring of Anatolian cities in the first years of the Republic.

The state was not only built factories in various points of Anatolia to stimulate the economy but also established new settlements as examples of the spatial and social environments (Asiliskender, 2009b, p. 154). From this point of view, it can be said that institutions such as Sümerbank and Etibank, factories built in Anatolian cities, and residences built for their employees, established within the scope of the First Five-Year Industrialization Plan, played an active role in defining a “modern identity” for Turkish cities. In this context, until the end of the 1930s, many industrial facilities were established throughout the country. Each factory established was an organization at an urban scale which included not only an industrial facility but also a “home” for its employees, a market, and various venues where many cultural events from cinema to theater shows and swimming championships took place (Himam and Pasin, 2011, p. 161). Although industrialization through industrial production led to new social and spatial revolutions in the Turkish context it aimed at the continuity of the political revolutions started in 1923 (Asiliskender, 2009a, p. 114).

When compared with the existing spatial and social structure of Anatolia in the first years of the Republic, it is striking that the services provided in the industrial campuses produced by the state differ from the social environments of the cities where they were located. Therefore, it can be said that the social and cultural spaces within the enterprises were planned to serve not only the employees and their families but also the citizens at large. The state has put forward a model for the change it desires, with the spatial environment and services it offers within these enterprises (Asiliskender, 2009b, p. 161). Exemplary city models that would accelerate the change that includes housing and cooperative residences built around the factories and social spaces such as schools, hospitals, health, culture, and sports areas were also produced (Asiliskender, 2009b, p. 154).

Industrial settlements established by the state after 1935 should also be considered as a spatial effect that contributed to the Westernization of Anatolia (Asiliskender, 2009b, p. 154). Factories built housing (lojman) to meet the housing needs of their employees (Zeybekoğlu, 2009, p. 227). In the settlement plan of the complexes, a hierarchy is observed in which a factory building was placed in the center, whereas an administration building inside or right next to the factory building. Also, areas for general use such as a dining hall, clubhouse, hospital, and sports areas were spread around them. All buildings were single or double stories and were located in a dense green texture that could also be used for recreational purposes (Zeybekoğlu, 2002, p. 225).

These houses were usually built adjacent to the factory land and following a grid settlement system (Zeybekoğlu, 2009, p. 227). In general, they were single-story, built with a masonry structural system. The types were influenced by the European originated “Garden City” movement (see section 2.2.1 for details) idea (Zeybekoğlu, 2009, p. 227). As Alan Colquhoun (2002) pointed out, workers' settlements emerged in line with the idea of creating a small self-sufficient neighborhood or town in the peripheries of cities, one of the ideals of Garden City. Besides, these substantial buildings, which can be called “workers' houses”, emerged primarily from a practical need, and secondly as a part of the targeted social change (Peri, 2006, p. 26). The sizes and locations of the lodgings built in different sizes and shapes according to the size of the complex represented a hierarchy among the habitats as well (Zeybekoğlu, 2009, p. 227). Although the original plans of the factories were designed with the understanding of creating a space where managers and workers live side by side and eat together under the same roof, in real life, this was not been the case (Alexander, 2002, p. 143). This distinction was most simply expressed in spatial terms by the separation of manager housing and workers’ housing (Zeybekoğlu, 2009, p. 227). Furthermore, factory workers’ houses, with their rationalized plans and minimalist dimensions, expressed a break from the architectural styles dominating the examples form the early 20th century.

State-led industrialization triggered housing production and urbanization. Therefore, they were among the most important issues in the architectural agenda of the period (Asiliskender, 2009b, p. 159). Yıldız Sey describes the years between 1930-1940 as follows: “The regime determined its principles in urban and village planning,

realized industrial investments; towns were planned according to the rules of modernism; parks, green areas are organized, workers' and civil servant residences are built", and, it is a period in which "discussions on rationality in building production" were continued (Sey, 1998).

According to Asiliskender, the effects of the industrial settlements established by the state on the spatial change experienced in Anatolian cities could be grouped under three headings. Primarily, the buildings in the factory settlements produced with the economic and planning support of countries such as the Soviet Union, Germany, and England have different characteristics from the local architectural environment of the period with their forms, construction methods, functions, and settlements. Secondly, the development of urban space was procured with the industrial settlements established on the periphery of traditional city centers. Thirdly, the houses built especially within the enterprises led to changes in the culture and form of accommodation and the understanding of comfort (Asiliskender, 2009b, p. 159).

According to Ali Asgar Eren (2018), it is possible to say that factories were considered as a means of providing workers with the welfare and social opportunities they deserve within the Republic's ideal of development and modernization. Besides, thanks to workers' housing, the low productivity caused by the workers commuting long distances and starting to work tired were prevented (Öktem, 2009, p. 161). Apart from these, it is mentioned that these settlements have influenced the development of the city in which they are located (Sümerbank İnşaat ve Fen Heyeti, 1944; Öktem, 2009, p. 161).

Sümerbank Kayseri Cloth Factory, whose aim was to produce popular type, cheap cotton fabric, not only substantially helped the development of the cotton textile industry and the country's economy but also contributed to the urban modernization of Kayseri. It can be said that the buildings that make up the campus were a reflection of the "modern" architectural understanding and life of Western countries at that time. The adoption of "modern architecture" with life patterns aimed to integrate the citizen, new national identity, administration, and the process of nationalization (Asiliskender, 2009a, p. 116). During its foundation years, in Kayseri Sümerbank Cloth Factory, residences were built for civil servants and craftsmen, as well as an infirmary, nursery, worker and civil servant clubs, units to meet basic needs such as market and bakery and social facilities such as cinema, football field with tribune, and there was a semi-

Olympic swimming pool around which jazz entertainment was organized. These types of places are a first for the city of Kayseri, and for Asiliskender, it can be said that the factory then began to shape the city and its surroundings according to the targeted “modern” urban identity with the help of its social facilities. Aiming to integrate the traditional with the modern, the facility is an indicator of how contemporary production and trade will be to the society, and the houses could be considered as an example of a “modern city” consisting of contemporary housing and social spaces (Asiliskender, 2009a, p. 116-117).

It can be said that Sümerbank Kayseri Campus was built as a completely socialist system product, with both spatial and operational features, due to the Soviet support it received (Asiliskender, 2009a, p. 118). The facility itself was a city-like settlement where all kinds of needs from housing to education and entertainment as well as production are met. However, all functions were directed and controlled by the state. These buildings were original reflections of Soviet Constructivism with their formal features, as well as being the embodiments of “modern” Western architecture's emulation to machines (Asiliskender, 2009a, p. 118). Houses were produced with the main idea of social housing and can be seen as Turkey's first collective housing application (Asiliskender, 2009a, p. 119) (See Figure 4.13).



Figure 4. 13. Kayseri Cloth Factory Housing, General View (Asiliskender, 2009a, p. 127)

In 1935, firstly, reinforced concrete apartment buildings consisting of five-room duplex residences and 16 houses with two floors and three rooms were built inside the factory’s site for civil servants. The 64 residences with two rooms built for workers outside the factory were arranged in four blocks, each with two floors. Besides, in 1937,

a 350-bed reinforced concrete single pavilion was built. Due to the insufficiency of these houses built for employees over time, 24 more blocks, each consisting of four houses, were added in 1942. Sümerbank Kayseri Lodging Houses were built in six different types between 1935-45, and spaces only had the size required by the work to be carried out (Asiliskender, 2009a, p. 120).

Production and housing areas are separated as in other factories. In the production area, entrance (1), factory (2), administration building (3), guest house (4), cinema (5), pool (6), Supply Warehouse (7), fire brigade (9), garage (10), warehouse (11, 12, 13, 14 and 15), entrance (16), power plant (17) and power and steam power plant (19) administrative's houses (20) were built (See Figure 4.14). These buildings were placed in a grid system in line with the manufacturing scheme. The distances between the buildings were designed so that the raw material could be processed from the factory and easily reach the warehouse, and from there to the train station. The factory was located in the center of production and the campus both in terms of space and function. The housing used by the administrators were located within the facility's land, while the residences (21) used by the officers and workers were built still inside the facility area, but in an external location by passing a road.

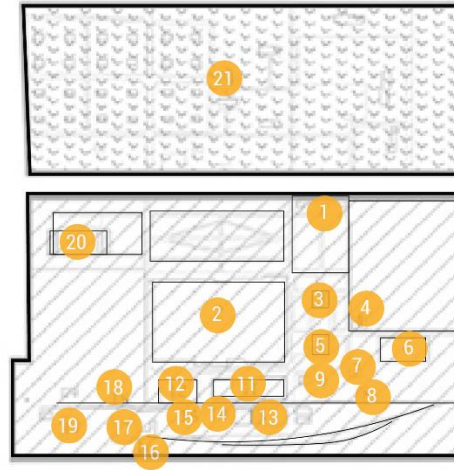


Figure 4. 14. Kayseri Cloth Factory Layout Plan (Drawing by Merve Köz, original plan from Eldeş, 2019, p. 37)

Sümerbank Kayseri Cloth Factory Houses were designed together with the factory buildings and at certain time intervals. Firstly, in 1935, reinforced concrete apartments containing 8 duplex apartments with five rooms for civil servants and 16 apartments with three rooms on two floors were built in the factory. Apart from the factory, the apartments for master were arranged in four blocks with two floors, 64

flats with two rooms. Besides, in 1937, a reinforced concrete single pavilion was built a 350-bed (Anon, 1973; Cumhuriyet'in 50. Yılında Sümerbank 1923-1973; Asiliskender, 2002, p. 76). Although the buildings are generally constructed with reinforced concrete technique, the local material stone was prominent in the facades. A total of six different types of houses were built between 1935 and 1950. Type 1A Inner Duty House, which is used only as of the general manager houses, was a different arrangement affiliated with Type 1 Inner Duty Houses. Type 2 Inner Duty Houses built in the same center also included in this grouping. Type 1, Type 1A, and Type 2 were grouped around a rectangular center. Type 3, built in the same years, consists of four buildings in two rows that follow each other linearly. Type 4, built-in 1942, consists of 24 blocks arranged in the form of 6 rows and 4 columns in a grid order (Asiliskender, 2002, p. 76) (see Figure 4.15).

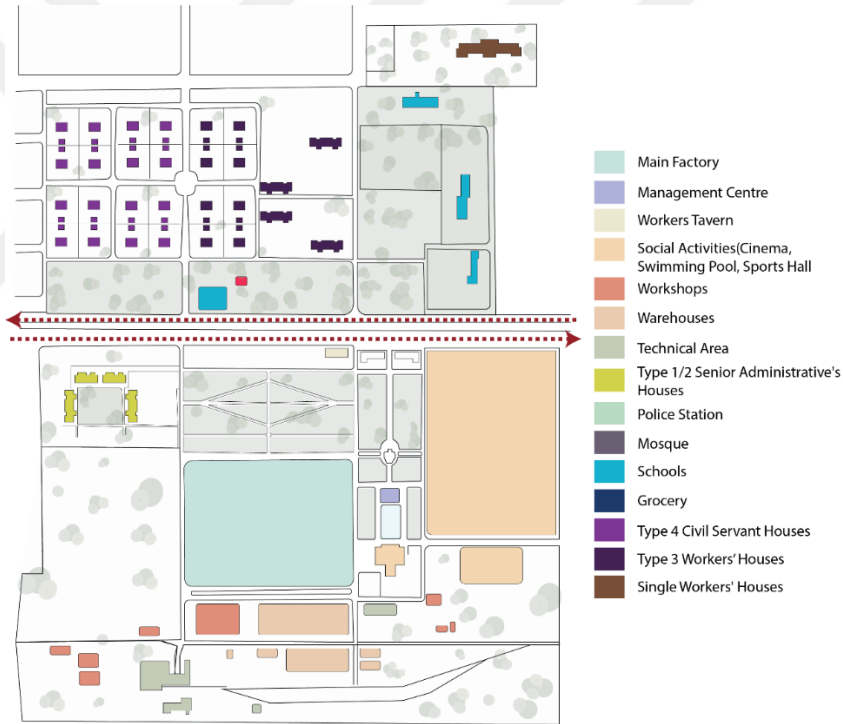


Figure 4. 15. Kayseri Cloth Factory Site Plan (Drawing by Merve Köz, original plan from Asiliskender, 2002, p. 78)

A total of 235 houses were built between 1935 and 1945. The projects of houses and buildings belonging to the factory were prepared in Moscow depending on the loan conditions for the factory. The factories and houses built by the contractors Rasih and İhsan Beyler were the first urban planning projects prepared and implemented for Kayseri following an organic development process. Sümer Houses were planned according to the status of employees. For those working in senior administrative

services, Type1, Type1A, and Type2; Type3 for workers; Type4 for civil servants and Type5 for single workers were built (Asiliskender, 2002, p. 78). This showed that the houses of high-status employees were located closer to the factory, while the houses for single workers were located at the farthest point. Also, I would argue that the fact that the management center and manager's houses were within the close vicinity of production areas made it easier for managers to overview production; therefore, it ensured the controlling process to take place in a shorter time. It was thought that the proximity of these units to production and the managers' mastery of the works would increase production and efficiency.

If we closely look at the plans of the houses, we can collect the following information. The type 3 residences used by factory workers were 67.5 sqm. Each residence consisted of 2 rooms, a living room of 20.2 sqm, a bedroom of 12.5 sqm, a bathroom, and a kitchen (Asiliskender, 2002, p. 86). It was built in 4 two-story blocks with a total of 64 residences (see Figure 4.27). In the years when it was first used, every residence did not have a private bathroom and toilet. In those years, the basement was used as a shared bathroom. With the renovation projects prepared at the end of the 1940s, the kitchens of the residences were divided, and a toilet and shower were added (see Figure 4.28). This shows us that ideas about the efficient use of home space were continued in the house renovations. The blocks were positioned linearly on the east-west axis parallel to each other. The part consisting of the kitchen, wet areas, and stairs was pulled back on the facade and the facade was broken into pieces (Asiliskender, 2009a, p. 123).

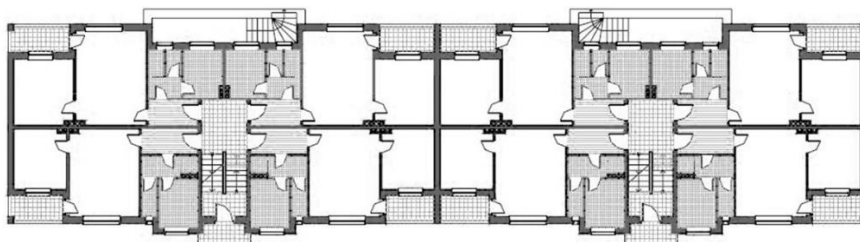


Figure 4. 16. Type 3 Plan Layout (Recoloring by Merve Köz, original plans from Asiliskender, 2002, p. 85).

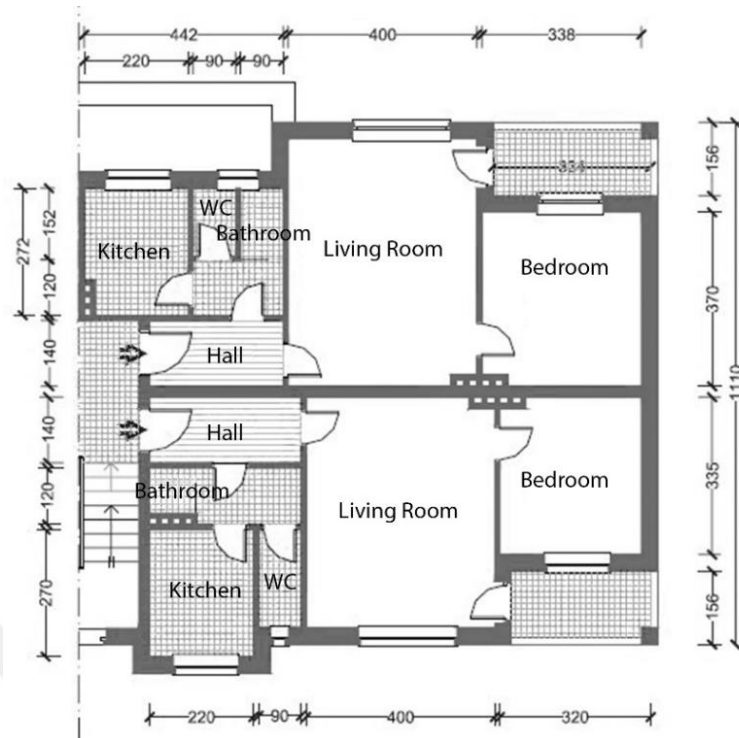


Figure 4.17. Type 3 Floor Plan (Redrawn with additional information by Merve Köz, original plans from Asiliskender, 2002, p. 85).

The Type 4 was built for the civil servants working in the factory and it consisted of 24 separate blocks with a total of 3 floors and a total of 96 residences of 62 sqm on each floor. Houses consisted of 2 rooms, a living room of 15.4 sqm and a bedroom of 13.2 sqm, a bathroom and a kitchen (Asiliskender, 2002, p. 88) (see Figure 4.29). As we can see from the site plan, the houses were located in 16 separate blocks on 4 separate streets parallel to each other. Between each of the four blocks, there were four single-story buildings, each used as warehouses. Each warehouse also had a common use area that was used as a laundry. Besides, the facade layout was enlivened by reinforced concrete beams between the floors (Asiliskender, 2009a, p. 124). It was seen that, there was an order in the layout of the plans of the houses. In the use of warehouses, it can be said that common usage areas were combined in a single space to ensure efficiency.

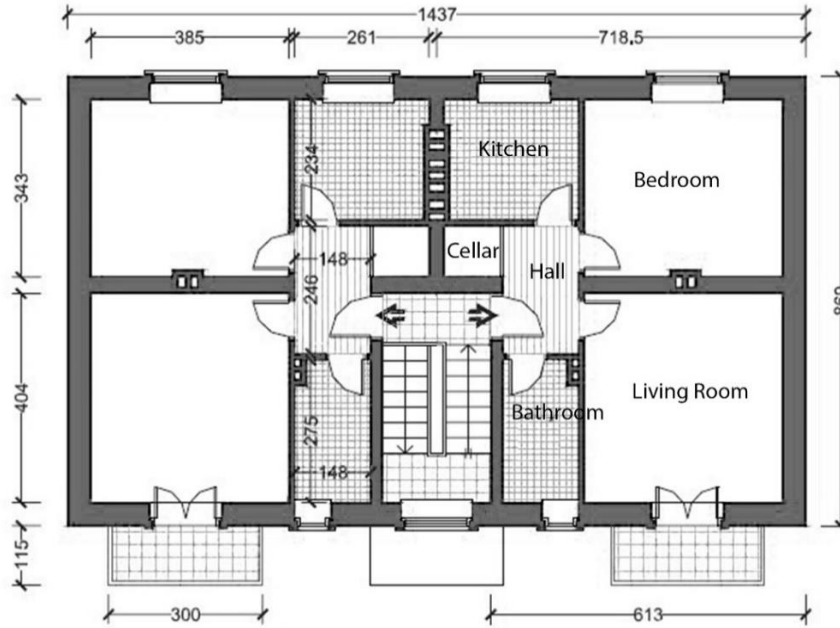


Figure 4. 18. Type 4 Floor Plan (Redrawn with additional information by Merve Köz, original plans from Asiliskender, 2002, p. 87).

The Single Apartment was built in 1937 as a dormitory for single workers working in the factory. After a while, the rooms for the workers were not sufficient, and a second block was added (Asiliskender, 2002, p. 90). The fact that the rooms were in dormitory arrangement in Single Apartment and needs such places as; kitchen, bathroom, and laundry were provided from common areas and it shows that the space efficiency was desired to be used at maximum level in single apartments. Therefore, the efficiency of the working time of the workers was considered through this spatialization. Because it was ensured that workers did not spend much time for their other needs outside of work. In addition, in respect to this settlement, the worker capacity has been maximized in the Single Apartment. Besides, the courtyard between the blocks was designed as a social space that workers used together with their families. This situation can be considered as a transition in the adjustment of many worker families from their life in villages to a more urban context and “modern” life at that time (Asiliskender, 2009a, p. 125).

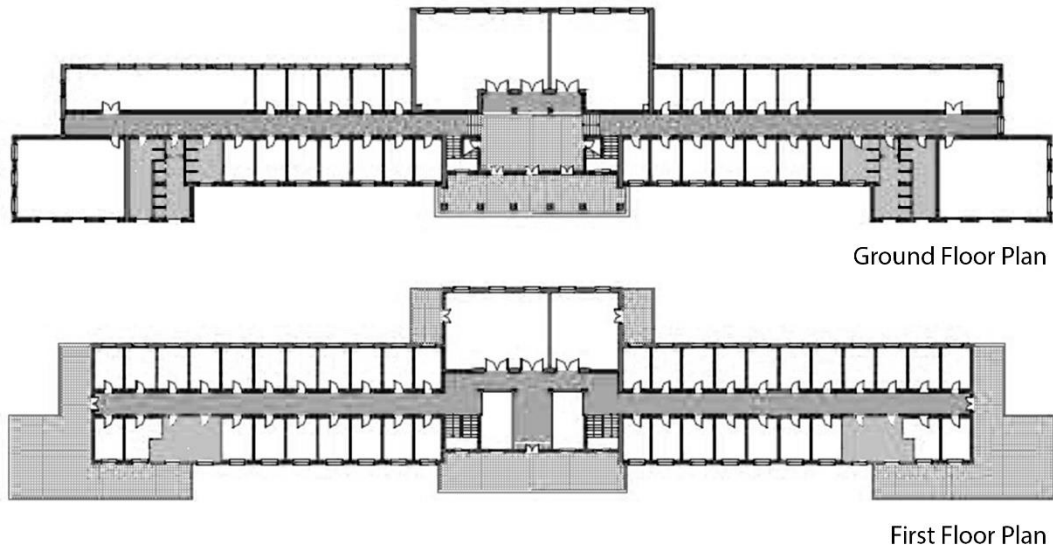


Figure 4. 19. Single Apartment Plan Layout (Recoloring by Merve Köz, original plans from Asiliskender, 2002, p. 89).

Since Kayseri Cloth Factory was an industrial facility, the modernist principles guided the design, reflecting the “universal” architectural identity of the period. (Asiliskender, 2002, p. 93). The domestic spaces were shaped according to function and the need for an efficient movement of the workers, reaching from their homes to the workplace (Asiliskender, 2009a, p. 125). The fact that the houses were arranged in an order, the common areas were solved together, and the interventions made in the plans following the minimum requirements. Therefore, it can be seen that the concept of efficiency was also applied in the design of the houses.

Sümerbank Kayseri Cloth Factory is the result of a great transformation in terms of the period and the location it was built. The campus was an organization that aimed to gather its employees and their families under their own “single” identity. In other words, the Kayseri Factory, together with its housing program was an urban scale arrangement behind which the “modernization” movement was triggered. The state established a new campus in the Kayseri of the 1930s, with a modern content independent of the social life of the city at the time (Asiliskender, 2009a, p. 128).

The second major example examined in this part of the chapter is Nazilli Printed Cloth Factory whose construction started on September 9, 1935 and it was opened on October 9, 1937 (Doğan, 2009, p. 85). In the factory area, a canteen other than the main buildings, two warehouses, a garage, a directorate, an administration building, four officers' apartments, three master apartments with two rooms each, sixteen flats, a thirty-two-room single pension, and two labor pavilions large enough to

accommodate seven hundred and twenty operatives were built (Doğan, 2009, p. 85; Peri, 2006, p. 26). The factory was located in the center of the campus as a production space. In the production area, a power plant (1), warehouses (2, 3, 6, 7, 10, and 11), repair shop (5), train station (9), sports field (12), cotton shed (13), officers' club (17), management and hospital building (18), interior apartments (20), cooling pool (14), yarn and weaving factory (15) and printing factory (16) were located. Bozdoğan road separates the housing (22) and production area of the campus from each other (Eldeş, 2019, p. 47) (See Figure 4.20).

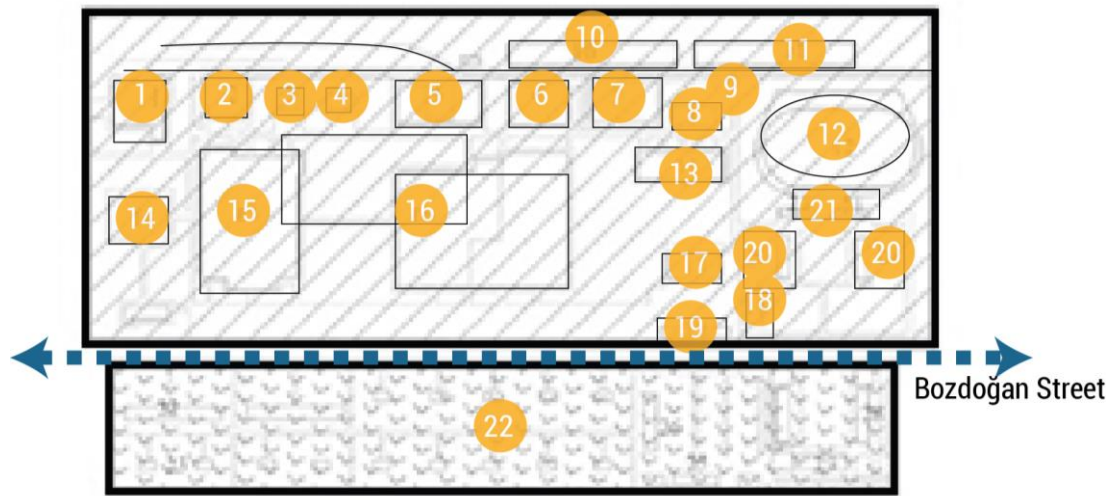


Figure 4. 20. Nazilli Fabric Printing Factory Layout Plan (Drawing by Merve Köz, original plan from Eldeş, 2019, p. 46)

The first buildings built in the residential area to the east of Bozdoğan road were U Type Officer Apartments, Single Officer Apartments, and Single Pavilions (Doğan, 2009, p. 87). In the construction of the residential area on the other side of the road, there was an intention to keep the houses away from noise and air pollution that may be caused by industrial production (Doğan, 2009, p. 87).

When examining the factory management building itself and the function it served on the campus, it should be noted that the management of the factory is not limited to the production process. The directorate building was one of the buildings constructed in the first phase of development and played a significant role in the opening ceremony in 1937. The location of this structure in the center of the campus shows that the management function was not only directed to the factory and production stage but also the whole settlement, thus the entire factory community. The Directorate structure, which was centrally located in the residential district, the

Nizamiye, and other program elements, creates control and surveillance focus on both the factory and the residential area (Doğan, 2009, p. 90).

The housing units to the east of the factory were built as single-story units in a green landscape. These buildings, which differ from traditional housing typology and with the simplicity of their plan schemes, were parallel with the "modernist" architectural discourses of the era (Zeybekoğlu, 2009, p. 232). Civil Servant Houses consisted of three homogeneous blocks arranged in a U form with the open end facing the Bozdoğan road to the west and the factory area. Each block had two entrances to reach eight flats. On two floors, the entrance hall of the flats was passed through the stairwell. Each apartment had a living room and a bedroom that led through the living room (see Figure 4.21). Since these buildings were documented after they were demolished, it was observed that the bedrooms of some apartments in this structure were divided into two and made more useful for families with children (Doğan, 2009, p. 94). It was believed that this building was built “by the Russians according to the Russian family and its needs”, since the bedroom was opening directly to the living room, unlike the plan scheme of the houses that we came across after the 1940s.

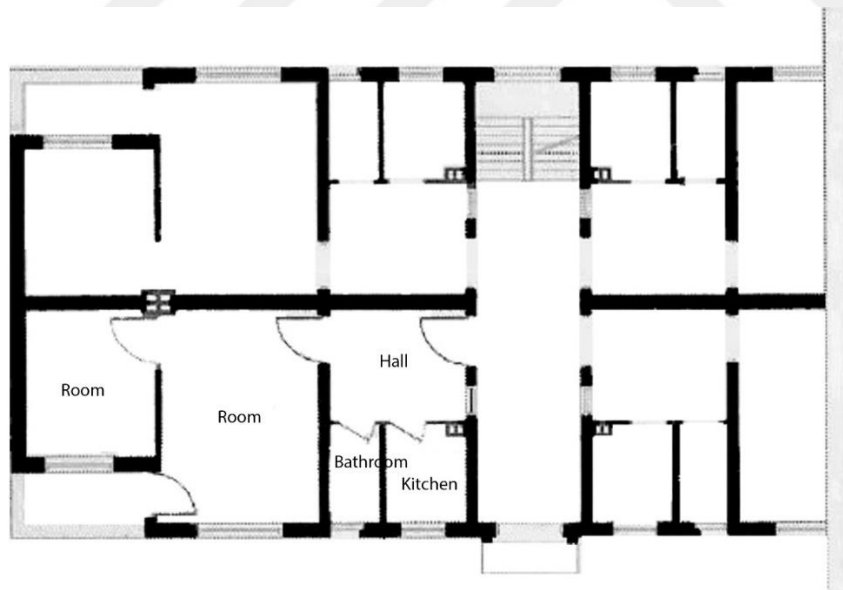


Figure 4. 21. Civil Servant Houses Plan (Reordering by Merve Köz, original plans from Doğan, 2009, p. 94).

At the south end of the residential area were houses known as “Single Houses” or “Workers Houses”. They were originally built according to the ward system, later divided into small housing units. According to the ward system, nineteen flats in total were obtained from the symmetrical structure consisting of 12 dormitories. According

to the proposed renovation project, a total of 19 apartments of eleven 50 m², four 40 m², two 78 m², one 70 m² and one 88 m² were obtained (see Figure 4.22).

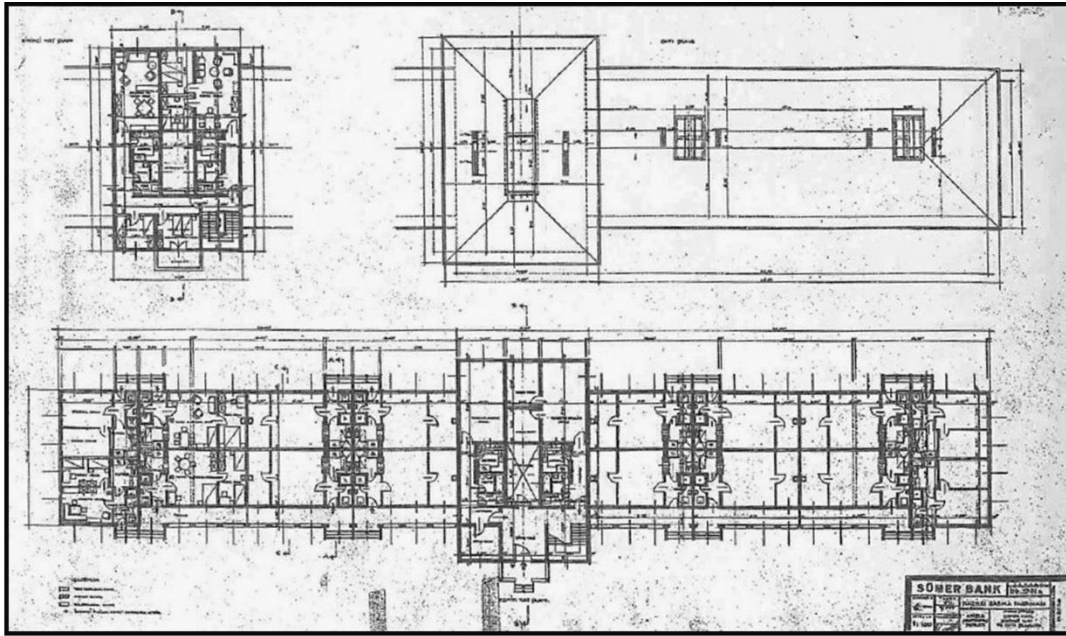


Figure 4. 22. Workers Houses Plan (Reordering by Merve Köz, original plans from Doğan, 2009, p. 95).

The buildings, which were arranged according to a symmetrical layout around a courtyard, stand out as plain structures reflecting the rational and functional architectural attitude of the period, with windows with jambs from the outside, stairs that provide access to the entrances, plain metal railings and horizontal lines (Zeybekoğlu, 2009, p. 231) The traces of the rational-functionalist attitude of the period in plans and views can be read in the geometric plan scheme and facade understanding (see Figure 4.23). For instance, since the ground floor was reserved for common use areas in workers' houses, no openings were left on the ground floor facades, and it was also intended to provide benefit for entrance-exit controls by giving a single entrance to the building (Doğan, 2009, p. 95). In this way, ensuring time control of workers during their working hours was facilitated by design. In reference to the Kayseri settlement, in Nazilli workers' houses were also built according to a certain order, and standardization was provided on the facades as in the plans, and the houses were built to be uniform according to the use of the workers.

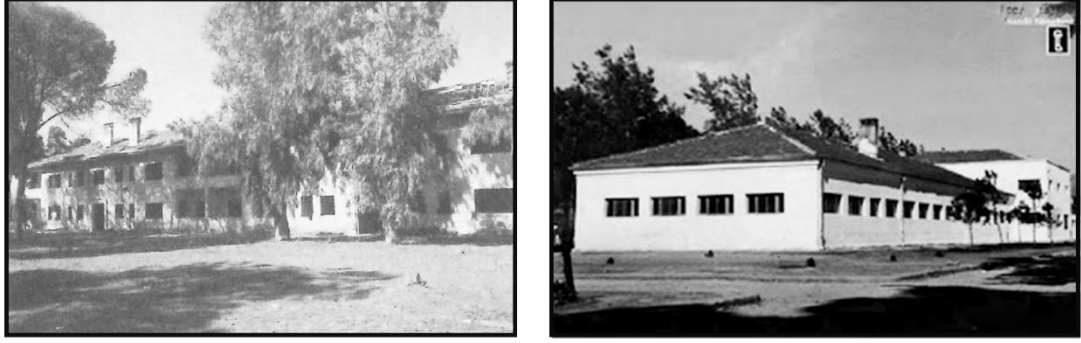


Figure 4. 23. Civil Servant Houses and Workers Houses (Dođan, 2009, p. 95 and Sümerbankblogspot.com, 2017).

As Himam and Pasin asserted in “*Designing a National Uniform (ity): The Culture of Sümerbank within the Context of the Turkish Nation-State Project*” concepts of rationality, rhythm/repetition, standardization, and symmetry have been observed in the plan layouts and building facades as well as in products (Himam and Pasin, 2011, p. 162-166). Besides, Himam and Pasin summarized the relation between these concepts and architectural features of factories as follows:

The architecture of factories, residences and social amenities at Sümerbank facilities reflects a unique identity peculiar to a regional socio-economic context within Turkish modernity: modular, functional, adaptable, standardized plan layouts and façade treatments; durable, local and accessible construction materials and unisex public spaces promoting a secular and rational life style Himam and Pasin, 2011, p. 158).

In fact, it can be said that everything was designed with the continuity of production in mind and the need to accommodate employees in minimum spaces at maximum capacity. Although the involvement of Russian architects in the design may have created problems in adaptation to local lifestyles, the needs were met with the arrangements made by the state. It can be observed today that functionality was at the forefront in the plans and it was aimed to provide life in as minimum an area as possible. In addition to the standardization of the clothes and even hair of the workers (Dođan, 2009, p. 96), it was not surprising that the places, where the workers lived, were standardized too.

The article, “*Sümerbank Amele Evleri ve Mahalleleri*” [Sümer Bank Workhouses and Neighborhoods], published in “*Arkitekt*” magazine in 1944, mentions the positive effects of the comfortable and healthy environment provided to factory workers. According to this article, first, proximity to the factory was an important factor in increasing productivity as it saves the time spent on transportation. Second, the

appropriate infrastructure system and quality construction materials ensured that the hygienic environmental conditions for the workers. Moreover, it was argued that this clean environment led workers to furnish their homes using clean and new furniture, which means an increase in their social status. Also, it was mentioned that having a garden in every worker's home would make workers deal with the land outside of work, which would have positive effects on both their bodies and family budgets. Finally, the positive effects of recreation areas such as local, cinema, and sports fields on the social life of workers' families were emphasized (Arkitekt, 1944, p. 9).

Unlike in the 19th century, labor had become an important variable in engineering discourse with the factory management models created by 20th century industrial engineering (Doğan, 2009, p. 106). With the rationalization of production extending beyond the workplace and factory walls, the understanding that the factory is more than the union of workers and machines became widespread (Biggs, 1996, p. 3). In this respect, management ideologies aimed to handle and manage the factory as a holistic social formation rather than a mere production unit. Maier explains the dominant view of the twentieth century in the following words: “Managers had to dominate the production division first, then win the hearts and minds of the workers, and finally shape economic and social priorities” (Maier, 1944, p.147; Doğan, 2009, p. 106) In order to create talented and qualified workers, to prevent moral collapse and political mobility, and to increase productivity, workers are directed to in-company sports activities, cultural and other leisure activities.

As Özlem Arıtan asserts in “*Sümerbank Yerleşkeleri: Cumhuriyet Modernleşmesi'nin İdeolojik Varyasyonlarına İlişkin Mekansal Bir Okuma*” [*Sümerbank Campuses: A Spatial Reading of the Ideological Variations of Republican Modernization*], these factories displayed secular, rational, industry-centered, universal, progressive, and homogenizing features that adopt the economy of surplus-value when viewed from the axis of modernization. It can be said that all these preferences of the modernization discourses are read clearly at the site plan or at the building scale in all of the premises (Arıtan, 2009, p. 211). For instance, social structures could be easily reached by the citizens and employees. Factory buildings were a little behind the main road due to noise/pollution factors, and prime residential areas were relatively far from production, but still suitable for walking and inspection needs. Placement of a right-angled rational circulation and organization system; the

dominance of rational lines in the plan and in the 3rd dimension in all the buildings; and making the sequential, linear assembly line production spatial dominance especially in factories help realize the concept of rationality. The dual structuring (production and housing area) and main settlement decisions in all of the campuses have a common language that could be called almost “universal” (Aritan, 2009, p. 211).

Although a hierarchical layout was made in factories, it was important for workers, technicians, and managers to live on the same campus in terms of instilling a sense of solidarity. All of these were seen very valuable in terms of increasing the welfare of the workers and thus boosting productivity by making sure of peace in the working environment. This shows us that scientific management principles are largely applied in factory campuses. Time management was taken into account to shorten the distance between the workers’ home-work and establish a social and comfortable life and good relations between the manager and the workers. Also, the fact that the designed residences are designed in minimal dimensions to meet the needs of the workers, following modern design principles, reveals the concept of efficiency brought by both modernization and industrialization.

CHAPTER 5

CONCLUSION

The aim of this thesis is to demonstrate the ways in which the idea of time management influenced the design of workplaces and domestic places in public institutions built up by the State in the early Republican period. In the study, which emerged with the problem definition of how time management was reflected in spaces, the workplaces and domestic places tailored by the state were put into focus, and the effects of these spaces on the modernization process of the cities were discussed. Furthermore; whilst examining the reforms of Turkish Modernization, the scientific management principles of the process were emphasized and the study was supported with various examples of public buildings, industrial complexes, and domestic places through the technical and vocational education of women and the idea of the rationalized kitchen.

Time is a phenomenon that entails continuous and infinite motion. With modernity, time has become one of the most important resources for production that requires well management. With the widespread use of clock in the 18th century, time management emerged with a need to organize the time of managers who had a busy working life, thus searches on the ways of using time “efficiently” began. As a result of the increase in industrial production processes along with the technological developments, the problems related to production initiated more studies on time management. Acquiring an adequate number of workers who were masters at their work became as equally important as the machines for the business owners.

While time management works accelerated in the 20th century, Frederick W. Taylor, the inventor of the idea of scientific management, advocated that by observing workers' movements, production and productivity would be increased. Taylor started to work on “time-movement” after failing in a few methods that were implemented for workers. In his studies, he minimized the time spent by the workers on the job, increased production, and contributed to the development of mass production. Besides, Taylor used biomechanical analysis in his experiments, resulting in a 3-fold increase in “productivity,” which he adopted as the basic principle. Improving his work with the stopwatch, Taylor argued that workers could work “like a machine.” Taylor published the Scientific Management Principles in 1911, which was based on optimizing the work and reaching the maximum level of production and efficiency.

Taylor thought that another notable way to increase production was to ensure “standardization” by systematizing the production. Despite the criticism on Taylorism, Taylor defined the principles of scientific management as “one best way”. The analysis of Taylor's work in this thesis provided a better understanding of the relationship between “efficiency” and “time management.”

The need for ideal cities and neighborhoods increased with the growth of population in cities, as another result of industrialization. Some urban planning approaches like “Garden City” or “Industrial City” were meant to “rationalize” and organize the use of spaces in the city. The grid system in rapidly industrialized cities, for instance, was to speed up the transportation of raw materials and workers to the factories. The main factor in the planning process of such industrialized cities was the placement of factories and railways. Planning studies were based on the idea of managing not only spaces but also time scientifically. With the effects of the renewal of cities and the industrial revolution, new approaches for design and construction have been formed, so the phrase “form follows function” by Louis H. Sullivan became the motto of modern architecture. With the increase in the variety of products produced in factories, scientific management principles reflected on architecture, as can be seen in the example of Bauhaus, the spaces were designed with simple geometric forms, not only to ensure functionality but also to speed up the construction process. Besides, these reflections started to appear in the form of “standardized” mass housing units in Europe. With the design of the “Franfurkt Kitchen”, scientific methods were applied in the layout of the kitchen, thus, efficiency was achieved in the time spent in the kitchen.

Examining the early Republican period in Turkey within the scope of time management principles showed that they were applied intensively by the state by means of public institutions of which some specifically were established to spread these principles to the country. In this thesis, studies were made, in terms of scientific method principles such as modernization, efficiency, rationalization, standardization, and accessibility, on factory campuses and public buildings for workplaces, and for the domestic places, Girls’ Institutes for its contribution to rationalization in homes, and workers’ houses, a new type of buildings. From the very beginning onwards, the state regarded architecture as an element supporting all reforms. Therefore, social identity and cultural specificities were supported by architectural works. Modernization, which

was directly carried out by the state, reflected primarily on public spaces in every province with an architectural perspective. Transformations have occurred in spaces as a result of industrialization and modernism, and foreign planners, architects, and engineers were brought to the country with the aim of introducing Industrial Promotion Law. At the same time, successful and promising students were sent abroad to study, so the Western culture and education system can easily be transferred to Turkey. Fundamental changes were made in education too, and the “education-language-culture” was brought together for the spread of the Republican ideology. In this process, Girls’ Institutes have been a major factor in the modernization of women and the reflection of modern life into home. With the introduction of the principle of statism, the idea that modernization would come with economic development was advocated and, in this context, factories were seen as the symbol of liberation of modernization. Factories established in various locations in Anatolia became one of the most effective places to establish a spatial and social environment in cities. Factory campuses, which also included modern housing, were the micro examples of the “Garden City” and/or “Industrial City” design principles in Turkey. Also, these campuses were rational structures in harmony with Le Corbusier's idea of “the house as a machine for living in”.

With the idea of declaring a new modern capital would be an example to create a modern city for the whole country, the development and planning of Ankara were important in the early Republican period. Besides, the desire to show the physical, cultural, and social reflections of the reform movements and the establishment of the nation-state ideal accelerated the planning studies in the city. In Ankara, which was the center point of the railways planned to spread to Anatolia, the railway played an essential role in the design of the city, and the city developed around the station. However, Şehremâneti, the first map prepared for the city, determined the public spaces axis to be created in the future. Within the framework of this plan, Ulus became the new center with the opening of the Turkish Grand National Assembly (now Liberation Museum) and the accumulation of public spaces in this environment. Although the Lörcher plan, the first example of modern planning for the city, was not implemented, it constituted a pioneer for future planning studies. The Jansen plan, which was the greatest contribution to the development of the city, was focusing on Atatürk Boulevard where the public axis would be formed. However, after the

implementation of Jansen's plan, the construction was accelerated in Ulus and its surroundings. Atatürk Boulevard and Anafartalar Street were connected; thus, a connection was established between Ulus and Kızılay, the connection increased the accessibility between the public spaces of the two city centers.

Public buildings, squares and institutional structures constructed between and around Ulus and Kızılay represented the Republic ideology, and plans were made with the idea of “easy access” between the buildings. The effects of the modernization process were also observed in the design approach of buildings, and support was especially taken from foreign architects for the design of public buildings, like in the planning studies. In Ankara, the first city where urban life was modernized, the proximity of the institutions to each other was important, and the railway station facilitated this proximity with the connections to other cities. Thus, in the context of time management, it was aimed to accelerate the transportation of people, raw materials, and products from other cities to Ankara.

The idea that modernization process would only have been successful with the economic development of the country was dominant in the early Republican period. In line with this idea, Sümerbank factories were established in 1933 as a result of the “First Five-Year Industrial Development Plan” prepared with the support of the Soviet Union and Italy. The factories to be established within the scope of this plan were located in different regions of Anatolia, close to railway networks and city centers. For factories that didn't have direct connections to the railway, transportation between factories and railways was provided by light rail systems. These decisions were taken for the rapid distribution of raw materials and manufactured products, proximity to the workforce, and fast shipping, and it was also observed that these decisions contributed to the quick construction of factories. All these factors were directly related to the maximum efficiency desired to be achieved in production. In addition to these, the planning of these complexes, which were connected by railways and had a grid system planning, was quite remarkable. Factory campuses, which include spaces for socialization, green areas, schools, and hospitals, were examples of small-scale self-sufficient modern cities. The settlement plans in Kayseri and Nazilli factories, which were examined as case studies in the previous chapter, had common settlement and production purposes. They were designed to obtain the highest efficiency in a small area. As evidence for these statements, when the settlement in the production area was

examined, it was observed that the units were designed following the production order. This situation concluded that factory complexes, the pioneers in industrial production, coincide with the modernization movements of the Republic. At the same time, these complexes were based on efficiency and production within the scope of scientific management principles.

In the early Republic ideology, it was thought that if women received adequate education, they would contribute to modern family formation. The education of women was seen as one of the most important achievements of the revolution, therefore, it was argued for men and women to receive education at the same level and together. Besides, women were expected to work in public spaces as well as at home. Girls' Institutes were opened with the idea that middle-class families did not yet favor coeducation and that the necessary attention had not been given to women's duties at home. In the institutes, women were trained to be modern wives and modern mothers who were familiar with home management. While women were trained in the institutes with the principles of scientific methods, care was taken to make them not to lose their national values.

In the 20th century, studies were conducted on home economics, with the idea that houses have the same functioning as factories. With the rationalization movements in house plans, the concept of efficiency in spaces came to the forefront. Under the conditions brought by the increasing population and modern architecture, the areas were designed to meet the needs in minimum. Time-movement methods were used in the rationalization of the house, so scientific management principles began to be applied to the planning of the home environments. These studies primarily focused on rationalizing the kitchen by examining the movements of women at home, and the kitchen was arranged in a way that it would provide only the basic eating, washing, and cooking facilities. The movement studies were striking in terms of time management principles for kitchens. Studies were carried out with Taylor's chronometer technique that he used in the factories. Therefore, the furniture layout was arranged according to the results of "time-motion" studies. These movements started from the kitchen and spread through the whole house layout. Concepts of scientific management principles, such as mass production and standardization that started in industrial places, were integrated into home planning and women's life.

In this study, the examination of the rationalization of houses in Turkey enabled us to come up with different findings. It was noteworthy that Lihotzky's rational housework ideas have been given as a lecture at the Institute for Girls. In addition to that, after Lihotzky arrived in Turkey, she gave support to improve the education of the Girls' Institute, and even she took part in the architectural design of the new institutes. Besides, a lot of studies were done on the association of Taylorism principles with housework in Girls' Institutes, and women were expected to reflect their education at the institutes to their home life. The Girls' Institutes supported the founding goals of the new Republic, and women became an intermediate factor in the transition to modern life.

Workers' houses, increased efficiency in Tony Garnier's Industrial City, had a significant place in order to contribute to industrialization and economic development in Turkey. Workers' houses were constructed to shorten the commute time of workers on all Sümerbank campuses. Besides, the welfare environment was provided which was needed for them. Hence, the state aimed to increase efficiency, through the worker' houses. Another purpose of these settlements in here was to keep workers perpetually intertwined with production. Also, the existence of social areas on these campuses was not only an example of modern life but also assisted with the formation of good relations between the managers and the workers, which was one of the principles of scientific management. The fact that these campuses were important social and spatial organizations where the women worked together with men, that contributed to the formation of modern women figure. As we can see in the examples of Kayseri and Nazilli, the factory campus plans were designed following the Grid System and Garden city concept. Besides, rational planning in workers' houses indicated time management in the housing. The houses were designed in minimal dimensions to meet the needs of employees, and it revealed the "efficiency" that brought by both modernization and industrialization concepts. Houses were built with the continuity of production in mind and the need to accommodate workers in minimum spaces at full capacity. Workers' houses were also designed according to a certain order, and standardization was provided on the facades as in the plans, and according to the use of the workers. These campuses became an exemplary modern city that would be reflected on the rest of the city. Finally, the campuses showed that rationalization was not only in the layout and production of the factory but also considered as a holistic social formation.

This thesis aimed to provide an insight into the application of time management principles in the early Republic period by the State in workplaces, vocational schools, and domestic spaces. In future studies, the role and perception of women in the house could be analyzed with the principles of time management in today's housing planning for different social classes, starting with the kitchen plans. Besides, Studies with similar perspective could be undertaken to see the reflection of time management principles on mass housing projects implemented in different periods in Turkey.



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