

A Study on The Effect of Transportation Systems to The Evolution of The City Image – The Case of Istanbul

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Abstract

Transportation is one of the most significant dynamics that effect the urban sprawl and the image of Istanbul. From a perspective that focuses on the transformation of transportation phenomenon in Istanbul, it is possible to interpret the formal change and sprawl of the city. In this regard, the urban sprawl of the city which was parallel to the seashore first, expanded through the railway and highway axes. Later on, with the rapid, illegal and unplanned urban sprawl process, the city started to grow disorderly and has lost its identity as a seashore settlement and started to grow in fringes. So that the city had an organic character in the shape of an “oil stain” as Mübeccel Kıray stated.¹

Having analyzed the thresholds/breaking points in terms of the transformation in Istanbul the first part of the inquiry will aim at describing the variations of different transportation

systems in time that the people of Istanbul use in their daily lifes. In this manner, how the transformation systems effect, feed and support each other in a city that enables an extensive range of transportation alternatives will be investigated. The transformation/transition of the city image will also be discussed in the context of the evolution of the transportation systems.

The methodology of the paper is visualising/mapping the transportation system network which is one of the most major triggers of the transformation of Istanbul. Using these maps, the paper also intends to make synchronous/asynchronous readings about the economical and political breaking points that effect the transportation decisions which transform the morphology of Istanbul.

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Introduction

The phenomenon of transportation is a significant dynamic that has an effect on the macro development, configuration, and urban image of Istanbul. Transformations within time have sometimes been in accordance with the morphological structure; sometimes they have made it fit themselves. As indicated by Bilgin and Karaören, when urban sprawl is examined, it is seen that in the beginning, it developed parallel to the sea but in the following periods, it developed in strips with the improvement of railways and highways, centering on their axes (Bilgin, Karaören, 1993, 36). However, after 1970's, the city started to expand in every direction together with the boom of fast and unplanned urbanization, drifting apart from its identity as a city of waterfronts that it preserved for years and taking the identity of a city inland (Yenen and etc., 1993). With the unplanned sprawl of urban macroform, there occurred an organic character which Mübeccel Kiray likened to "oil stains" (Kiray, 1998). Thus, transportation infrastructure and new transportation vehicles which are produced to facilitate the transportation of inhabitants in these routes supported and empowered each other. As a result, an extremely chaotic and concurrent web of transportation and an urban morphology in connection with this emerged. Therefore, it can be said that these systems (infrastructure and means of transportation) and urban form have mutually evolved.

In this study, transformations experienced within different transportation systems that inhabitants of Istanbul use in their daily lives are examined through socio-economic and political thresholds; how types of transportation affect and support one another is searched; and the alteration/transformation of urban image in terms of transportation is discussed. As the method of this study, webs of transportation which are one of the most important enhancers of Istanbul's transformation are mapped; moreover, data gathered from these maps are studied synchronically/diachronically on the changes/transformations of the morphological structure of the city.

Within the scope of the study, first of all, a table based on the momentous alterations about transportation and urban macroform of Istanbul was formed. Then, the local and universal thresholds that caused these alterations were searched. In this respect, after the Industrial Revolution, which transformed the world in the technological and urban sense, changes caused by the Edict of Gülhane (Tanzimat Fermanı), that can be regarded as a significant step in the modernization of the Ottoman Empire, are the first; proclamation of

the Republic and the reflections of Ankara's becoming the capital on Istanbul are the second; passing on to multi-party period after World War II and its effects on the city are the third threshold to be considered. As the fourth one, the changes within liberalization politics associated with the Prime Minister Turgut Özal in 1980's are discussed; having been the mayor of Istanbul in 1990's and then becoming the prime minister in the following years, Recep Tayyip Erdoğan's alterations made in the city in 2000's with neo-liberal politics are determined as the final threshold. Having five main axes, this study focuses on certain urban politics, socio-cultural and economic relations, examines the developments in transportation technology and criticizes the alterations/transformations in the urban image (Table 1).

Threshold: The Effects of Imperial Edict of Gulhane and Modernism Under the Thumb of Industrial Revolution on the City

Being signed in 1839, the modernizing effect of the Edict of Gulhane on the individual and the city is important for both Istanbul and its inhabitants. The years between the Edict of Gulhane and the official disintegration of the Ottoman Empire in 1923 can be considered as a passing period with several socio-political transformations (Faroqhi, 2008, 296). Together with the edict, concepts of equality, liberty, and human rights gained importance for the first time in the empire. Furthermore, until this time the Western science had been benefited from only in technology, science, education, and especially military forces. However, with the Tanzimat reforms, intellectual structure was imported and therefore, major changes started (Çelik, 1998, p. 28). The idea of making Istanbul a modern capital and a universal city that suits itself to new conditions is one of the most remarkable features of the Tanzimat Reform era (Batur, 2006, 57). Most of the reforms realized by the edict of Gulhane were effective on the pattern of the city and therefore the image of Ottoman/Islamic city was broken by European effects, coming to a more cosmopolitan state (Çelik, 1998, 41).

From the 19th century on to the proclamation of the Second Constitutionalist Period (1908), three major urban design projects had been improved for the purpose of modernizing the web of transportation built by foreign architects and engineers and supporting the image of the city with the fundamentals of Western technology and culture. These are the projects which were suggested by Helmuth von Moltke, F. Arnodin and Joseph Antoine Bouvard. As Arnodin's and Bouvard's projects were not applied, Von Moltke's some works were implemented. The significance of Von Moltke's

Table 1. Table of the evolution process of transportation systems in Istanbul and affecting thresholds

Evolution of the Transportation Systems			
Rail Transportation	Highway System	Sea Transportation	Thresholds
	Horseback	Boat	Industrial Revolution Affects
	Horse Cart (Only Sultans)		French Revolution
			1789 1800
	Hayretiye Bridge	Ship in Bosphorus	Edict of Gülhane
	Horse Carts (Commonplace)		1839
	Eski Bridge	Şirket-i Hayriye	Helmut Von Moltke Applications Arnodin and Bouvard
	Yahudi Bridge		1850
Dersaet Tram Horsecar Railways Local Railways Taksim Tunnel		İdare-i Mahmsusa	1860
			1870
			1880 1900
Electrification of the trams	Car	Haliç Vapur Şirketi	
			World War 1
			1914 1918
			Proclamation of Republic
			1923
			Great Depression
			1929 1930
	Bus Car Ownership Start to increase Rapidly		1936 1939
		Merge of the Companies Public Ferry Motor	Prost's Planning World War 2
			1945
	Dolmuş (Col. Taxi) Shuttle		1950
Elimination of the railways	Minibus		Adnan Menderes (Prime Minister) Period
		Ferryboat	1960
Electrification of the local railways	MinibBoğaziçi Bridgeus		
			1973 1983
	FSM Bridge	Seabus	Turgut Özal (Prime Minister) + B Dalan (Mayor)
İstanbul Ulaşım A.Ş. Railways in the system again Light Metro Nostalgic Tram Taksim Cablecar Tram Moda Tram Funicular System Modern TRam Taksim-4 Levent Metro Kabataş Tram Marmaray Project Kadıköy Metro Project			1988 1989 1990
			2000
	7 Tunnels for 7 Hills Metrobus System Taksim as a Pedestrian Zone Project Canal Project Eurasia Tunnel Project	Canal Project	R. Tayyip Erdoğan (Prime Minister) + K. Topbaş (Mayor) Period
			2003 2005
			2012

projects is the idea of thinking the city as a whole which had been considered in partial sections before. He worked to solve urban problems, relieve transportation and transform the image of the city to a European one. Accordingly, he designed streets, docks, and coasts aiming to establish a modern image on the city with solutions like forming new squares and removing cul de sacs. Studies done by basically three planners summarize the urban planning approach of the Ottoman capital in the 19th century: connecting the

disjointed sections of the city with bridges and transportation projects and presenting a unitary and major urban image (Çelik, 1998, 99) (Fig. 1).

When the forms of transportation before the Industrial Revolution are considered in Istanbul, which holds the character of the only unrivalled metropolis of the Ottoman Empire, it is observed that most of the urban travel was on foot, with boats, or horse carts until the second half of the 19th century (Tekeli, 2010a, 22).



Figure 1. Von Moltke Plan of Istanbul (Çelik, Z., 1993, p.85).

Sea access was the most preferred form of transportation in that period because it was faster than road transportation system, it was more easily provided, and most of the occupancy districts were on the coast sides (Çelik, 1998, 68; Aybet, 1993, 132) (Fig. 2).

When the improvements in transportation forms and vehicles are considered in the Tanzimat era, it is seen that the systems are modernized also by the impact of Industrial revolution. With the increase of set-

tlements on the Bosphorus, ferries started service and then, Şirketi-i Hayriye was established as the first urban public transportation system. With the operation of its ferries, in 1854, the settlements on the Bosphorus were sprawled to coastal lines (Tekeli, 2010a, 23). İdare-i Mahsusa (1870s) and Haliç Vapur Şirketi (1913)



Figure 2. Boats as a major form of transportation in Ottoman Era (Işın, E., 2006, p. 40).



Figure 3. Galata Bridge and its vicinity, 1913 (Çelik, Z., 1993, p. 98).

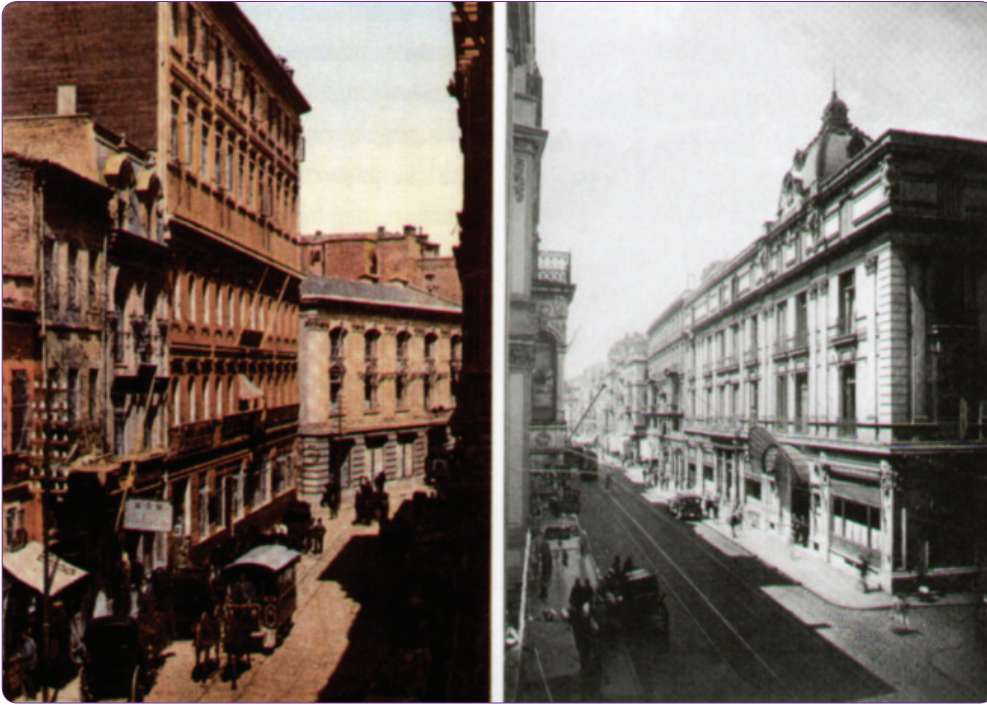


Figure 4. Horsecars and horse carts in the city transportation system (Işın, E., 2006, p. 95).

are the other two enterprises founded to provide sea transportation. Developments in urban ferry routes not only facilitated transportation but also promoted the sprawl of the city along coastal lines (Tekeli, 2010a, 26). Owing to these improvements in sea transportation, communication between the two continents enhanced, relations among urban areas were facilitated and also the ferries got their position in the image of the Bosphorus with sandals and other transportation vehicles (Fig. 3).

As the second form of public transportation of the Ottoman Empire, horsecar systems (trams pulled by horses) were developed in order to eliminate the shortcomings of land transportation and to provide connection between settlements from the land. In this respect, Dersaadet Tramvay Şirketi was established and horsecars made a modernizing impression, adding a European image to the streets of the city (Çelik, 1998, 74; Türel, 1998, 165) (Fig. 4).

In the district of Galata, since commercial activities gradually increased and the district's having better transportation conditions gained importance, the Istanbul Tunnel was opened as the second public rail transportation system of the city (Çelik, 1998, 79). On the other hand, the third rail system in the urban transportation, railways were built in 1870's and suburban trains started to operate. With this system that affected the formation of the city, suburbs developed

among the railway line (Tekeli, 2010a, 30) (Fig. 5).

Horse carts which started to be produced after 1860's in the Ottoman Empire had an impact on the urban structure and image as an important part of the westernization movement. Since the streets which were shaped according to pedestrian movements were not suitable for horse carts to pass through, the streets were widened within the renovations in the city after the frequent large-scale fires (Tekeli, 2010a, 20). Having been formed according to pedestrian scale until the mid-19th century, the city started to be reformed with the effect of transportation vehicles and to gain a new image. With ports, tram stations, parks roamed with horse carts, and widened roads, ferries in sea access, horsecars in rail transport and horse carts completely changed the image of the city, leading to a more modern look with a Western approach.

Threshold: The Period of Transformation Starting with the Proclamation of the Republic

As a consequence of the Great Depression, economic crisis, brought by the First World War, urban sources degraded and the increasing population of Istanbul decreased (Tekeli, 2009, 193). In addition, the city had to face significant problems followed by the economic crisis (1929). After the proclamation of the Republic in 1923 and Ankara being the capital, substantial changes occurred in Istanbul, which had had dominance coun-



Figure 5. Tram and tunnel routes (1864-1869-1881-1907 applications) (Çelik, Z., 1993, p. 78).

trywide until that time (Bilsel, 2010a, 101). For the first time, a status deprivation started in the city as a center of modernism against Ankara and the ongoing pretentious period ended (Tanyeli, 2004, 21).

In these years, despite the decrease in its population, Istanbul continued to grow in fringes, central business areas and residential areas enlarged towards periphery areas and this situation caused significant transportation problems (Bilsel, 2010b, 55). The phenomenon of automobile, which began to become a common issue at the beginning of the 20th century, increased in the years that followed the First World War and started to be frequently used in urban transportation. As busses were involved in the urban transportation system and became widespread, horse carts lost their importance in time. That the urban transportation, mostly realized by rail systems and sea transportation, provided urban development to take place on the coast and through the railways (Tekeli, 2010a, 23; Türel, 1998, 165). Under these circumstances, the image of the city was transformed by the effects of the developments of the period.

Henri Prost's Planning of Istanbul

As a continuation of the tradition that demanded the help of Western experts to modernize Istanbul in the period after the Tanzimat reforms, in 1930s, pro-

posals of planners such as Alfred Agache, Herman Elgötz, H. Lamber and Martin Wagner were received. However, Henri Prost, who was one of the leading urban planners of the period, was then commissioned to form the structural plan of the city (Çelik, 1998, 129). In his studies, Prost generally aimed to protect the unique texture of the city and its architectural monuments together with building the modern infrastructure, relieving transportation, and planning recreation areas (Tanman, Bilsel, 2010, 9). Remaining in office between 1936 and 1950, Prost worked on the Istanbul European Side Master Plan (Avrupa Ciheti Nazım Planı) (1937), Master Plan of the Asian Side (Anadolu Ciheti Nazım Planı) (1939), the planning of the two coasts of the Bosphorus (Boğaziçi Kıyıları Planlaması) (1939-1948) and 1943-1953 Ten-Year-Plan (Fig. 6).

Other than these plans, Prost made several detailed urban projects such as parks, promenades, squares, ports and construction of new avenues. His works had a significant role in the spatial transformation of the city. By offering solutions to strategic locations, Prost also aimed to build a modern highway system which would enable the city center to reach from one end to the other without any stops (Bilsel, 2010a). Although the French planner indicated that the silhouette of the historical city needed to be protected, he maintained that in terms of transportation, *building roads*



Figure 6. Examples of Prost's applications (Tanman, M.B., Bilsel, C., 2010).



Figure 7. Uskudar Square in 1940s (<http://www.eskiistanbul.net/cumhuriyet/cumhuriyet3/uskudariskelemeydani.jpg>).

was an economic and social necessity. According to Bilsel, while urban density in Prost's works, geometrical planning in land subdivision, street design and the operating of transportation plans showed the desire to transform the city into a modern European city; his interfering approach is in accordance with *the ideal of the Republican government to create a contemporary city to support the modern life of the society* (Bilsel,

2010b, 61). Prost conducted the planning operations of Istanbul for fifteen years in the single-party period of CHP. However, problems arose between him and the government in 1946 since the political equilibrium changed in the country due to the new multi-party system (Bilsel, 2010a, 148); and his projects were postponed after İsmet İnönü was overthrown (Tanman, Bilsel, 2010, 9). In this context, the works of Prost could

be read as a major dynamic which influenced the characteristics of the urban development and also the image of the city critically (Fig. 7).

Threshold: Menderes' City Developments After World War II

The end of World War II, like in many other countries outside the center of the war, was a crossroad in Turkey as well. After the war, a fast migration movement started in the country with the modernization of agriculture and highways. Becoming an important migration focus, Istanbul experienced a fast urbanization movement in this period (Yücesoy, Güvenç, 2010, 12). With the overvoting of the 1950 elections, the Democratic Party (DP) government implemented more liberal economic and populist politics nationwide. Moreover, with the Prime Ministry of Adnan Menderes, Istanbul entered a fast phase of transformation. Due to migration, areas of squatter settlements called *gecekondu* areas were formed; in addition, with the shortcoming of public transportation systems to provide urban travel, the concept of *dolmuş* (collective taxi) emerged. They became an important vehicle to connect rural settlements to cities and a means to meet the deficiency in public (Tekeli, Okyay, 1980, 23). As Yücesoy and Güvenç indicate, *losing almost all its green areas, the city was disguised to the character of an "oversized industrial city" with gecekondu, dolmuş, and handseller (işporta) phenomena, all of which form a texture without any empty spaces in this period* (Yücesoy, Güvenç, 2010, 13).

With the impact of the automobile sector which is a significant element of fordism experienced after World War II, the rapid increase in the number of motor vehicles caused a shift from railway transportation to motor vehicles; *thus, life styles and consumption patterns shaped by the American hegemony started to dominate the city*. With the impact of rapid urbanization, many new roads were built and this road construction was useful for *gecekondu* districts as well (Tekeli, 2010a, 50; Keyder, 2006, 209). Due to the effects of problems in public transport and unplanned urbanization, minibuses emerged in transportation, becoming powerful together with *dolmuş* by connecting business areas to *gecekondu* and outskirts. Coming to 1960's, motor vehicle traffic overtook sea transportation and the demand of vehicles to pass the Bosphorus increased with the addition of inequality in the distribution of offices and residences. Hence, a bridge project to connect continents appeared on the agenda (Tekeli, 2010a).

Change of the city image during Menderes Period (1956-1960)

The city development agenda of Prime Minister Adnan Menderes, which *himself conducted as a political legitimacy and public relations project between the years 1956 and 1960, consists of major urban interventions*. This operation process is one of the significant thresholds in the urban development/transformation of Istanbul (Bozdoğan, 2010, 143). In this period when dense urban texture grew in the shape of an oil stain, major traffic problems started to rise because private car ownership increased in the country. With the Haussmann-wise reconstructions of Menderes, who wanted to use this as a political investment during a democratic period, the destructive power of modernism appeared for the first time (Tekeli, 2010b, 169).

Leaving his mark on the city with his antipathy towards public transport and his interest in automobiles and wide avenues, Menderes realized major destructions in historical districts. *By cancelling the tram which had been the symbol of neighborhood life and habitable urban scale, he accelerated the integration of the city with automobiles* (Keyder, 2006, 208). Menderes conducted a huge construction movement by discourses as presenting a new countenance to the city and making it a modern city. With the desire to modernize rapidly the discourse of "Traffic flowing like water" became a repeating issue. For this reason, new road webs were constructed. In that period unplanned transformations were experienced because of the reconstruction movements starting in every corner of the city all at once. While Prost tried to create a generally Western city image, the Menderes government tried to emphasize Ottoman works (Akpınar, 2010) (Fig. 8).

Many important axes such as Sahil Yolu, Vatan and Millet Streets and Barbaros Boulevard were opened in this period. With Londra Asfaltı and roads opening in the direction of Haydarpaşa-Pendik, the city expanded in eastern and western directions; with Barbaros Boulevard and Büyükdere Street, it expanded through the north. Meanwhile, irregular parceling of the land outside the borders of the municipality gained speed (Boysan, 2010, 91). Menderes's reconstruction operation had to solidly slow down with the military intervention in 1960 (Tapan, 1998, 82).

Menderes's works of reconstruction had a great impact on the countenance change of Istanbul in that period. The urban image that changed with the modernization attempts in the axis of public transport in the previous periods was constructed again over automobiles and highways this time (Fig. 9).



Figure 8. Barbaros Boulevard and its affects on the changing image of the city (<http://www.degisti.com/index.php/archives/278>).



Figure 9. Galata Bridge in 1960s (<http://www.eskiistanbul.net/cumhuriyet/cumhuriyet4/kopru7.jpg>).

The Boğaziçi Bridge

Both the traffic caused by the increase in the number of motor vehicles and the disequilibria in the office-residence distribution on the two sides of the city caused an increase in the demand to pass the Bosphorus; hence, the topic of constructing the Boğaziçi Bridge gained importance (Türel, 1998, 159; Tekeli, 2010a, 65). Despite the debates in public opinion, it was opened in 1973, *changing the time-distance matrix in Istanbul and determining the development dynamics of the metropolitan area* as stated by Mete Tapan (Tapan, 1998, 85) (Fig. 10).

Due to the opening of the bridge, 1. Bypass became important in urban transport and the spatial structure of the city started to change accordingly. Parallel to these, new residential and industrial areas started to grow in eastern and western directions, causing a rapid change in the population balance between the two sides. Therefore, the travelling time of the distances between different points of the city was altered and new inclinations emerged in terms of urban growth and spatial formation. With the Bridge and bypasses, the city started to widen on the European side in the direction of the highways (Murat, Şahin, 2010, 218).

Accordingly being one of the remarkable focuses that affect the formation of the city and having a pivotal role in the presentation of Istanbul, the Boğaziçi Bridge has had an impact on the urban silhouette and the image of the city both with its own existence and the alterations it caused on the urban macroform since 1973.

Threshold: Politics of Liberalisation and Turgut Özal (Prime Ministry) Period (1983-1989)

Türkiye started to adopt an outward-oriented politics after the 1980's. A development was aimed that would be executed by integrating and competing with the West instead of avoiding the West (Tekeli, 2010b, 171). A rapid transformation started in Turkey, which opened herself to universal affluxes; Istanbul was the spot that the density of the human, finance, merchandise, and symbol affluxes were mostly felt (Keyder, 2006, 220). The concept of planning in the studies related to Istanbul was ignored due to a fluctuating liberalization period in the country. In this period, the city became a rent-creating mechanism with major rights entitled to local authorities in decisions regarding public improvements (Tapan, 1998, 87). New areas of prestige were formed with skyscrapers and with the founding of Mass Housing Administration (TOKİ), the formation process of the urban form differed (Tekeli,



Figure 10. Boğaziçi Bridge opening day, 1973 (<http://wowturkey.com/forum/viewtopic.php?t=12604>).

2009, 132). During the years with Özal, there was a construction boom that suddenly changed the image of the city. Supermarkets and huge shopping malls started to replace small-scale enterprises; five-star hotels, business centers, and high-rise office blocks increased; many skyscrapers and high-rise blocks started to emerge within the silhouette of the city (Bozdoğan, 2010, 149). As central business areas reached Maslak, skyscrapers arose along both sides of this axe. During the ANAP government, the silhouette of the Bosphorus changed with the construction of villa sites, the big green areas rapidly turned in to a full concrete look (Sönmez, 2010, 98). After 1980's, there was a rapid increase in mass housing production. While these house settlements consisting of homogeneous, multi-storey apartment blocks mostly produced along highways were spreading to the peripheries, gated communities designed for high class started to be produced in this period. These homogeneous images received a significant place in the urban macroform (Enlil, 2011, 18).

Bedrettin Dalan as the Mayor of Istanbul (1984-1989)

In the Prime Ministry period of Turgut Özal, the projects of the İstanbul mayor Bedrettin Dalan also had significant impacts on the formation and transportation of the city. Under the direction of Dalan, very significant parts of the city metamorphosed by his projects.

Tarlabası Boulevard, the Causeway on the Bosphorus, and Kadıköy- Maltepe Coastline are among his outstanding urban projects (Haber3Group, 2007). Moreover, the basis of Taksim Pedestrianization Project, which has been causing controversy these days, also dates back to this period (Aksu, F., 2012). The most important project held by Dalan is the redevelop-

ments of the Golden Horn, which had been a major industrial area during 1950's and 1960's, under the name of "cleaning". Within the scope of the project, a significant section of the industrial heritage of the city was destroyed (Enlil, 2011, 17). Dalan, portrayed as "Supermayor" in the press, made headlines when he declared after his election in 1984 that the color of the waters of the Golden Horn "will be as blue as my eyes". Consequently, he razed hundreds of warehouses, factories, slums and shipyards along the 4,5-mile waterway and created a green belt with playgrounds and parks. He also planned an underwater tunnel linking Europe to Asia and initiated a land fill project along the Sea of Marmara for parks and sports grounds for children. To ease transportation problems in the sprawling city, Dalan reached an agreement to built a 14-mile tram system with a daily capacity of half a million passengers. As the major of Istanbul, he initiated many other projects to turn the city into a touristic, cultural and trade center. He moved tanneries out of the city center and relocated more than 50.000 manufacturers and factories (Erdamar, 1986). In some instances he ignored or circumvented the court orders against his cleaning projects to restore the past glory and beauty of the Golden Horn that flows into the Bosphorus Strait dividing Europe and Asia and gave a face lift to the Bosphorus

Strait. Dalan's effort has drawn praise from many, but also criticism too (Erdamar, 1985) (Fig. 11).

With the mass housing applications, urban infrastructure operations, investments on communication and transportation services, a new urban district started to grow around the metropolitan area of the city in this period. It rapidly expanded to the north with connections of the Fatih Sultan Mehmet Bridge, TEM and E-5; as a consequence, the social topography of the coasts of the Golden Horn, Bosphorus and Marmara completely changed (Yücesoy, Güvenç, 2010, 13). In this period, Dalan worked in accordance with Özal; however, as their relations deteriorated, Dalan's political dominance disappeared.

In the city which continued its development along highways during 1980's, despite all the debates, feasibility studies started for the second bridge. According to Murat and Şahin, in the period after 1985, the reality that the city's current transportation problems could not be solved with policies that increased private car use was revealed; the rail systems that had been cancelled were operated again by making them faster and more effective; and the transportation problems of the city were tried to be solved (Murat, Şahin, 2010, 218). Due to the transportation problem



Figure 11. Regeneration of Golden Horn (<http://ars.els-cdn.com/content/image/1-s2.0-S0264275111001090-gr4.jpg>).

becoming critical in a city that became gradually complex and faced decentralization, the Municipality of İstanbul turned to railways as a solution. In this respect, İstanbul Ulaşım A.Ş. was founded in 1988 to operate metro, light metro, street tram, funicular system and cable car. First, the light metro line which currently serves between Aksaray and Havalimanı (Atatürk Airport) was activated. Then, Zeytinburnu-Kabataş tram line was constructed. While Maçka-Taşkişla cable car line was put into service in 1993 to reduce the difficulties of road and pedestrian transportation in this area (Murat, Şahin, 2010, 220) the nostalgic tram between Taksim and Tünel started to operate again in the end of 1990 (<http://www.iETT.gov.tr/metin.php?no=45>).

The Fatih Sultan Mehmet Bridge

New industrial and residential areas were defined in the city that expanded through the north with the effect of the Fatih Sultan Mehmet Bridge opened in 1988. The outskirts of the city also expanded with the increase of unplanned urbanization and automobile ownership. In that respect, the 3rd Bridge project, which is another project related to Bosphorus passing, was first pronounced also by Bedrettin Dalan in the end of 1980's (Uysal, 2006, 77) (Fig. 12, 13).

Constructions of roads, crossings, and bridges that present short-term solutions to urban transportation problems promoted private car ownership in the long term. Furthermore, with the opening of the bridge, significant changes occurred in the urban structure; urban sprawl on the north of the city accelerated and new business centers such as Maslak and sub-centers were formed on bypass connections. Mass housing areas

such as Ataşehir, Halkalı, and Bahçeşehir were formed in the north of E-5 Highway. Besides, apartmanlaşma (building apartment blocks) period in unofficial zoning was enhanced with zoning remissions. Mid-high and high income groups started to settle on gated community areas that started to form before 1980. On the other hand, industrial enterprises decentralized in the directions of Kocaeli, Adapazarı, and Trachea (Murat, Şahin, 2010, 220).

With the constant increase of private car ownership, daily life of the city and the settlement structure changed. Gradually moving away from urban life, people became more individualistic and a social system emerged where social differences increased. As car ownership increased, a settlement structure enabling the exploitation of this situation emerged. While the housing areas were spread around the city, shopping malls, industrial parks, research areas were also founded. Since space was now organized according to car ownership, automobiles became a functional need (Tekeli, 2010a, 110). So, as the first bridge this bridge also had an outstanding impact on both the urban macroform and the transportation practices of the city.

Threshold: Recep Tayyip Erdoğan (Prime Ministry) Period (2003-...) and Neo-Liberal Politics

After the 2001 crisis, which was one of the most critical crises of the Republican history, Turkey ran into a fast and radical economic-political transformation phase, with AKP becoming to power alone in the elections held one year after the crisis. The rights of local authorities were enhanced with many laws that were quickly approved in the Parliament; being recon-



Figure 12. FSM Bridge (http://img01.imgfotokritik.com/fk_new/lowres/4/0/7/407954/2634393-fatih-sultan-mehmet-koprusu.jpg).



Figure 13. FSM Bridge and the European Side of İstanbul (<http://www.flickr.com/photos/58317219@N00/6838290586/lightbox/>, Photo taken by: Can Gürel).

structed, TOKİ was connected to the Prime Ministry and became an actor that took important decisions country-wide. In many areas of the city, mass housing projects, shopping malls, hotels were continued to be built, forest areas were zoned for construction and the plans of the third bridge project were set out (Kuyucu, 2010, 122). In the direction of the concept of making Istanbul “a global city”, which started in mid-1980’s and accelerated in 1990’s, real estate investments continued to intensify and the concretion of the city tended to continue in 2000’s. The city has expanded to the west of Büyük Çekmece on the European Side and to the east of Sabiha Gökçen Airport on the Anatolian Side. These places include new centers of attraction and areas of development, which lead to a significant spatial transformation. Several transportation projects have been planned to support and complement this transformation (Sönmez, 2010, 98) (Fig. 14).

With studies to privatize public land and “urban transformation projects” (KDP), the government adopted a policy that ignored infrastructural, socio-economic, and environmental effects. Renewal projects which also included “protection areas” started with urban transformation projects actualized in several historical surroundings of Istanbul. Moreover, “mega projects” are planned in several districts of the city and new areas of investment are formed for major construction companies with projects related to areas

that were considered to have lost their forest status, known as 2-B areas (Kuyucu, 2010, 122). Another project of the government is the transformation of areas that carry natural disaster risk. In this respect, if the law draft is approved, thousands of buildings will be demolished and replaced by new ones in a 20-year time span.

These projects not only created differences in urban image but also affected the concept of transportation. Due to traffic jam which is experienced almost every hour of the day and long traveling hours, new methods have been searched in public transportation and



Figure 15. Picture 15: People waiting in the metrobus stops, Metrobus and traffic. http://www.haberler.com/haber-resimleri/808/fsm-ye-metrobus-geliyor-3343907_o.jpg.



Figure 16. Metrobus System in city traffic. <http://www.enguzelresimler.net/resim-proje-resimleri-6-istanbul-metrobus-projesi-62.htm>.



Figure 14. Canal Project as the “Crazy Project” (<http://www.turkishny.com/english-news/5-english-news/53144-turkish-pm-unveils-his-qcrazy-projectq-canal-istanbul>).

attempts have been taken to provide the integration of different transportation vehicles.

As a significant improvement in road transport, Metrobus system has been established. In order to reduce the traffic in the main arteries of Istanbul, to provide fast and comfortable transport, and decrease traveling time, the system first started to operate on the European side in 2007 and then reached to Söğütlüçeşme, connecting the two sides of Istanbul in the shortest possible way. Being integrated with different transportation systems like the suburban lines, light metro, tram and metro, the system became popular in a short time.^[1] Due to metrobus roads which were formed by taking lanes from highways, the number of lanes used by other vehicles reduced, which had a negative effect on the traffic. Metrobus stops and overpasses made the image of the city even more complex and planning could not prevent passengers from waiting in crowded groups (Figs. 15, 16).

Taksim-Kabataş funicular system; modern tram; Taksim-4.Levent metro, which was opened in 2009; Kadıköy-Kartal metro, that is planned to fill the void in transportation on the Anatolian side and to release the increasing traffic problem; and light metro planned to be completed in a couple of years are the important developments of this period in rail transportation systems (Murat, Şahin, 2010, 223).

Furthermore, Marmaray Rail Tube Tunnel Project, which has been developed to connect the two continents underground, and Eurasia Tunnel Project are also among the outstanding projects of the AKP government. With the Marmaray Project that started in 2004, the existing railways between the two continents will be connected by a tube tunnel under the Bosphorus. Thus, high capacity mass transportation, reduced travel time, and reduced traffic on the bridges are targeted (Murat, Şahin, 2010, 229). With the Eurasia Tunnel (Istanbul Strait Railroad Passing Project),



Figure 17. Marmaray Constructions in Üsküdar. (<http://i.emlak-tasovdakika.com/Files/NewsImages/900/466x255/4d9dc1ad-7bf6-42e9-a888-717169eb068a.jpg>).

a tunnel/tube is being constructed only for motor vehicles (Uysal, 2006, 78). As Erdoğan proudly highlights these projects in his speeches frequently, there are lots of criticism about the disposition and traffic problem affects that will be caused (Figs. 17-19).

In this context we may signify that one of the different approaches of AKP government from others is that they noticed the vote potential of transportation projects and exploit this more than others. For instance, Prime Minister Erdoğan mentioned the Channel Istanbul Project, which was put forward in 2011 for the election, to be “the crazy project” and transportation projects practiced during AKP government were brought forward to the public in the electoral period. Since the developments of this period are also planned on the main axes like the previous ones, they are considered to be unsuccessful in solving the current traffic problem. Today, unless the reduction of automobile use is encouraged, solutions offered to relieve traffic will be temporary. In this respect, public transportation not only should serve through the main axes but also should reach the side streets in order to avoid the users make too many transfers for reaching one destination to other.

Both urban transformation projects and transportation-centered projects that the government ambitiously and speedily launched are changing the urban image of Istanbul within years in the direction of the government’s understanding. The most frantic work ever done in the city until now is being constructed in this period and worksites continue in several different districts of the city. That these large-scale projects prized by the government, especially carried out in Istanbul, may be approached as a part of the visual image of the city. Plus according to the Istanbul’s statue of being the leading city of the country they may also serve as one of the fundamental elements of the country image worldwide.

We should also put an emphasis on the concordant relations between the mayor of Istanbul, Kadir Topbaş, who is from the same party, and Prime Minister Erdoğan. This point may give us a perspective to understand the development and the application process of the projects which are being rapidly carried out.

Epilogue

The urban transformation and change that Istanbul went through along history can be considered from many political, socio-cultural or economic axes. Changes are observed in urban image by means of the threshold points on these axes. Since changes in urban



Figure 18. Presentation of Marmaray as a solution to traffic. (http://medya.zaman.com.tr/2007/03/24/marmaray-info_b.jpg).



Figure 19. Map showing the routes of Marmaray and Eurasia Tunnel Project. (http://i.milliyet.com.tr/YeniAnaResim/2011/02/26/fft99_mf1170035.Jpeg).

spaces and concepts of transportation have the quality to complement one another, developments in transportation systems and vehicles have been a significant part of urban image throughout history.

With the significant developments in technology experienced in line with the Industrial Revolution, starting from the 19th century, developments in transportation vehicles and forms both connected the disjoint centers of cities and created a tendency to form along transportation axes in time. In this period, transportation vehicles that affected the formation of the city as a symbol of modernization are overrated as a sign of westernization. With the sprawling of the city towards the peripheries, at the points where public transport could not reach the urban development, new transportation vehicles and forms became enrolled. After these took their place in the system, urban form continued to take shape in different axes. With the proliferation of automobiles in transportation, traffic problems arose as urban borders expanded, continuing to urban sprawl uncontrollably with the bridges that were opened respectively. Everything started to change much more speedily with the automobile and overhauling other forms of transportation, highway system started to dominate the city.

When the public transportation system in Istanbul is compared to metropolises with similar dimensions, as Gerçek, who indicates that the network is insufficient; approaches suggested for transportation problems have a micro and partial structure. Lack of an integrated and central approach triggers the problem. The integration of types of transportation and facilitation of public transportation transfers with suitable transfer stations (Gerçek, 2006, 64) can be a step towards facilitating the daily life of the inhabitants. Thereby, in the recent periods there has been an attempt to integrate the systems by offering different transportation systems and vehicles to provide comfortable transport between two points by using public transport in the city. In this respect, political decisions have generally been under the exploitation of elections and populist discourses have pivoted on transportation mechanism. While the government and local authorities having the same political approach enhanced the mutually suggested projects, the lack of a critical and questioning mechanism occasionally may lead to false decisions taken.

According to the inquiry, we may point out that applications of the transportation systems have a significant effect on the evolution of the city image in the case of Istanbul besides its affects on the urban development and transformation. Consequently, the trans-

portation decisions should be considered not only as a solution for the traffic or as a service for the urban problems but also as a part of the city image.

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