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Connecting uskudar and sarayburnu with tubular passage way from abdulhamit II. Period

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ABSTRACT

The idea of passing the bosphorus under the sea with a tubular structure is evaluated for the period in question. The evidence of the process of drilling ground between Üsküdar and the side across is analysed in detail as a proof indicating that this Project was thought to be realized. Main questions of the research is as follows. What is the current situation of these projects. Why was there a need for a tubular passage way? Who were the contactors? What are the Project alternatives? What was the details of design proposals? Why were these cancelled? What kind of a perspective do these projects supply for today and tomorrow? The initial hypothesis before the study is that these projects were a part of governmental renewal program, these were developed as a solution for the problems of the city and cancelled due to war or financial reasons, method is genetic and pragmatic historical research. Up to now, the subject has not been explained in such detail with the agreement text analysed and sources used.

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Introduction

Why was the idea of constructing a tunnel under bosphorus, considered during Abdulhamit II. period? What was main purpose of this project, how would this structure be erected? In order to answer these questions correctly; first of all, long term emperor of the Empire's last period, Abdulhamit II. was taken as a base for draw an explanation frame.

Like all other empires, Ottoman Empire was founded, developed and ended. After the second Vien siege, the empire has begun to shrink, then several wars against Europe was lost, the government was shaken political, social and economically.

Europe where industry, trade, transportation facilities were developed due to the progress in science and technology; had begun to suck ottoman empire like a leech

As result of trade with europe and liberalisation, releasing customs to the european products domestic industry related trade in anotolia could not compete with these and majorly harmed

Ottoman country had become a raw material supplying farm and an open market where the products of eropian industry sold. Ottoman economy which had fed by old trade roads got additional hit by the change of this roads

The communities of ottoman government ;part of christian and muslims ,involved independence wars with help and provocation of external forces find looked for ways of departing the empaire

Empaire had entered the proces of departing and breaking down .As an oposition to this state of affairs the attempt of Selim IIIs 'Nizam ı Cedit',Mahmut IIs'Vaka-i Hayriye'Adulmecits'Tanzimat'and Abdulhamits'Meşrutiyet' failed.

General over look of abdulhamit II. period

Abdülmeçit's son Abdülhamit II. (1842-1918) who raised the throne in the breaking down period of Ottoman Empire was announced to be the emperor on August 1876 [2].

Abdülhamit II. declared "Kanun-ı Esasi" in 1876 and "Meşrutiyet I." Period had begun. According to this law, working principles of management organization, independence of law institutions and basic human rights were assured while leaving emperor as the only source of liberty. First Ottoman Parliamentary was gathered for two periods between 1877-78. Parliaments from all over the country came and criticised emperor and government.

Ottoman-Russian war started in 1877. Army of the tsar, Romanians, Bulgarians, Serbians and Montenegrins gathered, passed Danube and approached to İstanbul periphery. Abdülhamit II. demanded peace, permanently closed the parliament where was stated to be the main reason of this incident, started to manage the government alone.

Ayastefanos Treaty was signed in 1878. According to this, new governments were founded in Balkan region, privilege and autonomy rights were given, North east of Anatolia was left to Russia. Some of the regions of Balkan returned to Ottoman with the objection of England who invaded Cyprus. Then, France occupied Tunis, England invaded Egypt and Bulgaria took eastern Thrace. Empire became a semi colony by the sanctions which drop shadow on political independence.

In order to revitalize the government, Abdülhamit stayed away from wars by conceding. He tried to weaken the effect of England by developing positive relationships with Russia against England and Germany against France.

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Abdülhamit set ending foreign debts as a priority. When he was raised the throne, between 1854-74, payments of the foreign debts capital and interest was over the half of governments regular income. In 1881 foreign creditor governments were given the privilege of founding "Duyun-ı Umumiye" in order to collect certain income of the government. Although 30% of the government income was allocated for repayment of debts and interests, debts was not finished. Under and above ground resources processing rights were given to English, French, German company and banks as debt provision. Ottoman Bank was given extended authority, government economy was enabled to be controlled by foreign experts.

New investments were run with the method of bidding a certain Project in return of a period monopoly right. During 1900's agricultural production inflated, limited share of government in bids created an exchange of privilege. Big networks of bribery and defraudation was built. The gathering concessions in certain regions attempt of the companies from same countries resulted in sharing Ottoman Empire by foreign governments with economic clout areas. During the same years, the war between German Monopoly and English-French capital spread to railway construction bussiness and Deutsche Bank won [2].

Abdülhamit who has set, strenghtening the relations with Islamic World, as a main goal; tried to extend Haydarpaşa-İzmit railway to Ankara with the economic support gained from Germany in 1888. He gave great privilege to a German Monopoly for constructing a line connecting Ankara to Baghdat (Image 1) [2].



Image 1. Map of İstanbul Basra Railway, [14].

The most effective opposition against Abdülhamit's absolutist management was from the students and graduates of the schools which he had founded. There occurred reactions among young officers and soldiers who had directly influenced by the errors of governmental processes. Abdülhamit prevented Ali Suavi Incident which was an attempt to replace him by Murad V. and he increased his stress [2].

During 1900's economic precautions had begun to produce their fruits however these were utilized mostly by Western Forces and their business partners. With the stress of İttihat ve Terakki Cemiyeti, Abdülhamit reconstituted Kanun-ı Esasi on July 1908, Meşrutiyet II. was announced. In 1909 an uprising occurred, the army organized in Selanik entered İstanbul and stopped the uprising. Abdülhamit was deposed due to the justification of his relation with the event, he was sent to Selanik. In 1912 he was brought back and died in 1918 (Image 2) [2].



Image 2. Portrait of Abdülhamit II. and Illustration of His Selanik Arrival Moment as an Exile, [2].

Emperor established a proper filing system for official text messages. He was interested in Carpentry, European music and got piano lessons. He turned death sentencings into for life, invested heavily on intelligence organization and made decisions by reading journals [3].

Privilege Struggle of France and Germany on Ottomans and Railways

France and Germany competed with each other on the bussinesses ran within the territory of Ottoman Government. Germany has approached to France who has long term trade history with Ottomans and this period is when Wilhelm II. and Abdülhamit developed friendship which resulted in trade advantages for Germany (Image 3). The newspaper Temps informs about this subject on October 15th in 1906. In a time when English wanted to remove Turkish from Europe, Wilhelm II. and Ausria-Hungary Union owned more than half of the privilege of Ottoman railways. These railway lines are proofs of connecting attempt of the whole empire beginnig with İstanbul. When a bridge over the bosphorus or an underwater tunnel connected Europe and Asia (two shores of bosphorus), without getting out of the carriers It would be possible to travel from Üsküp, where was the northest land under Emperor's authority, to southeast city Basra. This railway line was important for developing the trade with Europe and soldier transportation to India [4].

Aim of the Germans was to establish only one railway line which would both provide the backbone of great Germany Austria-Hungary Empire and connect Vienn, Belgrad, Sofia, Filibe, İstanbul, Konya, Musul, Baghdat from Hambourg to the gulf of Basra. There was an ittifak agreement among Germany Ausria-Hungary Empire and Italy. Some of the articles were kept secret however It was offered that these there governments would act together. Rumeli Railway Company which owned six working line in European Turkey out of eight; was ran officially by Hungary capital. Government of Berlin achieved to involve Germany Banks in this capital. Austria had became the economic owner of 1345 km of Turkish railways in Europe.

Austria- Germany Union owned and dominated half of the Ottoman Railways alone [4].

England and France invested in İzmir however dissemination of these railway networks through Anatolia is prevented. German company had taken precautions against connecting Its and competitor railways that leads to the same stations which will be used by both German and competitor companies. For example two rival companies railway line and trains reached Afyonkarahisar but terminal station buildings completely differed, any precaution was taken in order to prevent connecting rails technically. Emperor refused the objections of French and English ambassadors about İzmir by recalling the main aim which was to integrate the railways in İstanbul not in İzmir [4].

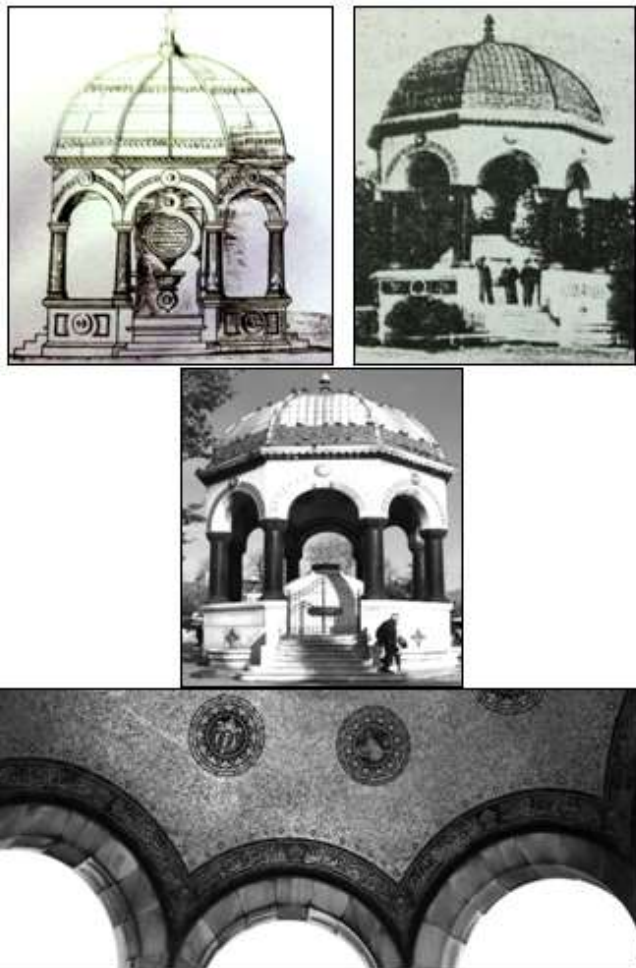


Image 3. The Fountain Which Built By The Order of Wilhelm II. [14].

The relative important position of France on Turkish Railways at that time was due to Its financial power ranking the first country in the worlds economy. France has lended two thirds of Its investment as a debt for government; a fast intruder, Germany has lended half and invested in industry and railways with the other half. Germans invested in banks, industry facilities and other segments, 280 million while Frenchs who had worked in Turkey for several centuries could only achieve the amount of 400 million. French activity in İstanbul was described as low level but French domintaion was explained. 5.000 schools over 7.000 was educating in French language and 90.000 student of 120.000 was using French langage which was explained as a strength [4].

Ottoman trade fleet ranked the 5th. in İstanbul and the 4th. in other Turkish harbours, Its overall share was around 10%, while

England ranked the first in each harbour groups. According to the official statistics of 1905; annual trade quantity of the first five countrty with Turkey is as follows; England 315, France 168, Germany 145, Austria 135 and Italy 110 million Francs. It was stated that situation of France got worse year by year. France was the country which had exported Its own products in least amount compared to other European countries. Export of Ottomans were increasing to Germany, Italy and France. It was an undeniable fact that Turkish public got poorer in real life because these people were not able to increase their sales in the amount of their purchases [4].

It was stated that aim of Germany was to plunder wealth of Turkey. These lands were thought to be unified with Deutschland by pangermanists first economically then politically. Germany acted according to the methodology of “peaceful dissemination”. Economist List was the first to discover importance of eastern countries for Germany. In 1856 another economist Roscher suggested to immigrate east rather than America. He stated that by peacefull victories, new Germany would be created and a block would be formed against Russia and panslavism [4].

Nine years after establishment of German Empire, Economic dissemination attempts to Turkey began in 1880’s with Ayastefanos Treaty, two years after Berlin Treaty which limited the progress of Russia on east. Bismarck stopped Russia on the way to İstanbul, gave Bosnia to his ally Austria-Hungary, ended the protests of France by condoning their invasion of Tunis. According to the german published newspaper in Turkey, Handelsblatt, during 1880-1904 Germany’s export to Turkey increased from 6,4 to 75 million. Turkish exports to Germany increased from 1,9 to 43 million [4].

Within Germany exports, Giraud emphasized the importance of the procured Krupp Company war equipment which was guaranteed to be bought from Berlin and Frankfurt markets in return to the debts of Ottoman. He stated that Germans should be considered as a good example as they increased the credit rates in order to reach higher trade numbers [4].

Anatolia and Baghdad Railway is an important aspect of Ottoman-German relationship. Germany regarded the railways as a tool to subordinate Ottoman Government economic and politically. Railways were explained as a “peaceful dissemination tool” in the documents of German Foreign Affairs. Anatolia Baghdad Railway may be assumed as a locomotive of Ottoman-German relations and the year 1888 when Deusche Bank got Its first railway privilege in Anatolia may be accepted as the motion date of this locomotive. During the privilege struggle of Baghdad Railway, government presidents, prime minister, ministers and diplomats act together with their citizens who applied to be the contractors of this job. This action is a sign of importance assigned to railway [5].

Railway privileges gained from Ottomans mean that privileged country transforms the region in question into a domination zone. Likewise functions of the railways costructed by British and French were known. Germans would use the priviliges fort the same purpose too. Railways would lead from İstanbul through the gulf of Basra. Throught this line demands of the consumers and raw materials of the regions such as cotton of Adana and Konya, petroleum of Mesopotamia increased the value of the business. Baghdad Railway’s detecting companies being able to control the road of India was important [5].

With the new possibilities provided, railways caused to radical transformations in social relations and accelaration of

industrial development. Imperial countries' construction railway lines in worlds under developed countries resulted in these under developed countries' being effected from this transformation. Closed loop rural economies connected to the market and had integrated with the World economy under control of the West [5].

Railways As An Action With The Transportation And City Planning Aspects

Three assertive and comprehensive city planning projects were prepared for İstanbul during seventy years from Tanzimat Fermanı (1839) to the announcement of Meşrutiyet II. (1809). Aims of these projects were modernisation of transportation network and developing a city image based on Western technology and culture. Each of these three designs were contracted to foreign architects and engineers. These were also unrealized and assertive designs, It was aimed to reveal power of empire in the past and symbolically convey this power with new construction projects of capital city. In addition aim behind these projects was to make money. Technologically underdeveloped empire was supplying unique profit possibilities to the Western investors who were marketing "Progress" and "Civilization". Most of these projects were rejected by Ottoman Government. Aim of most of these unrealized projects were enabling easy transportation among unordered regions of the city and creating a huge İstanbul by tying İstanbul, Galata, Üsküdar and the villages of Asian and European side of bosphorus [6].

First development plan of İstanbul was prepared by a German named Moltke who was brought by Selim III. This 1839 dated very first plan of Helmuth von Moltke was completed in the time of Abdülmecid. The city was considered as a whole in the plan which was a result of Tanzimat development [6]. Erinç mistakenly states the name "Moltke" as "Molteke" [9, 10].

Last period emperors, tried to connect this governments lands with railways lines from East to West and North to South by placing İstanbul to the center. Within this purpose railway constructions began and during 1870-90's Rumelian Railway constructions were completed, İstanbul was tied to Paris, Vien and Berlin. Another railway line is between İslamic countries and İstanbul named İstanbul- Basra railway. These studies were started with Haydarpaşa-İzmit line in 1871. 1983 km.'s railway in Europe and 1947 km.'s in Asia were constructed [7].

First railway line to connect İstanbul and Sofia was put into practice in 1874. The route of the railway was a controversial subject in İstanbul. According to the projects of the company owned by Belgian Banker Baron Hirsch, railway route would pass through Marmara shore and from the garden of Topkapı Palace. Projects caused heated debates among the officers of palace. Emperor Abdülmecid fully supported new technology and necessity of railways reaching İstanbul "even It passed through his back". Moving the palace to Dolmabahçe in 1856 played an important role on making this decision. In 1875 there were six stations; Sirkeci, Kumkapı, Yedikule, Bakırköy, Yeşilköy and Küçükçekmece [6].

First railway to reach Ottoman Capital city was completed in Asian Side of the Bosphorus, 1873. 100 km.'s long line tied up Haydarpaşa and İzmit, while İstanbul Edirne line was finished in 1875. During Adülhamit period, especially after 1800's, railway constructions increased very much in number by integrating foreign privilege owners and companies. In 1888, İstanbul Vien line was completed and "conquest of the city by

foreign mentality and entrepreneurs" came true. It was still possible to taste defects and pleasantness of easter city in neglected İstanbul region however European entrepreneurs controlled nearly all of the economic life in both sides of Haliç. Direct connection with the heart of Europe, increased current westernization tendency by enabling communication. Two terminal station building designed by Germans was erected in both Asian and European sides of İstanbul. According to the map in 1896, stations out of the city walls, Bakırköy and Yeşilköy were tied to center of the city [6].

Adülhamit gave importance to Hicaz Railway studies, the order written on September 1st 1900 states that the railway should completely be constructed by Muslim engineers and money needed would be supplied by the donation of Muslims. As a starter, Emperor donated fifty thousand liras, officials of the government, Muslim public donated, there were also aids from India, Morocco, China, Afghanistan, USA, Tunis, Algeria, Ümit Cape and Cava Muslims. Railway line was from Damascus to Medine and Mecca, the line with 1464 km. length reached Medine on August 1908. Hicaz Railway was opened officially on September 1st 1908 when was the throne ascending anniversary of Abdulhamit. The railway was constructed by the efforts of lots of Turkish engineers graduated from engineering school [7].

Adülhamit carried out lots of acts, he ordered two bridge projects to connect Anatolia and Rumeli sides in Sarayburnu, Üsküdar and Rumeli Fortress, Kandilli. The projects named "Cisr-i Hamidi" had features which could not be surpassed even today. For instance these bridges were added railway lines on and under the structure, by these bridges a passanger to get on a train in any location of Asia would be able to go to anywhere in Europe [8]. These bridges would be connected to Baghdad Railway Line at the same time. Hamidiye bridges and tubular passage way projects are a part of Abdülhamit's development activities and were interrupted due to Abdülhamit's deposition. Bridge and Tunel projects connecting two sides of the bosphorus to each other, were not placed out of agenda because transportation was done on the side of Haliç by ridges and ships with low cost however this was not easy in the case of bosphorus. Bosphorus transportation was made easy to ascertain degree by steamers, increase in the number of trains and vehicles led to a need for a bridge [7].

Çelik approaches the subject on the perspective of planning the city by foreigners. It is explained that İstanbul city was connected among its regions by the development of transportation facilities, and during these activities purpose of forigners were to profit by marketing development and civilization. Yılmaz presents European and Asian Railway connections construction by placing İstanbul in the center. Abdülhamit's valuing Hicaz Railway is told, and his having Turkish engineers finish the Project is told. Although It is stated that these projects remained unfinished due to disposition of the emperor, this is not the case [6, 7].

Time of Abdülhamit can be defined as a period where there was dense economic and politic mobility. On one hand form of government had been reshaped, the empire went to war with other nations lost Its lands on the other. Contrarily, reforms, development projects and lots of acts were performed too. Balaced political attitude is used against foreign governments, official safe is given under the authority of enemy nations, lots of privileges were supplied to foreigners via railway projects. France and Germany competed with each other to get these

privileges and Germany won the struggle. Abdülhamit prevented an internal rebellion in İstanbul, and as a result disposed by military forces. Within this period, It was attempted to connect the lands of the empire placing İstanbul in the center, therefore a sum of 5772 km. railway is constructed. These lines which should connect Europe and Asia; were technologically, militarily, economically and politically important then. How would this be considered is explained detailly in the following section.

Connecting Üsküdar and Sarayburnu, tubular passage way

Up to this section, German French competition, development and city planning projects, attempt of Ottomans to bring railways into the country as a transportation act is explained. İstanbul, Anatolia, Hicaz and Basra railways are connected to each other. On European side Paris, Berlin, Vien was tied to İstanbul, but Europe Asia connection was still missing. The tubular passage way projects to enable this connection is presented in this section. As stated in the introduction part, Sarayburnu Üsküdar (Image 4.) connection is emphasized.

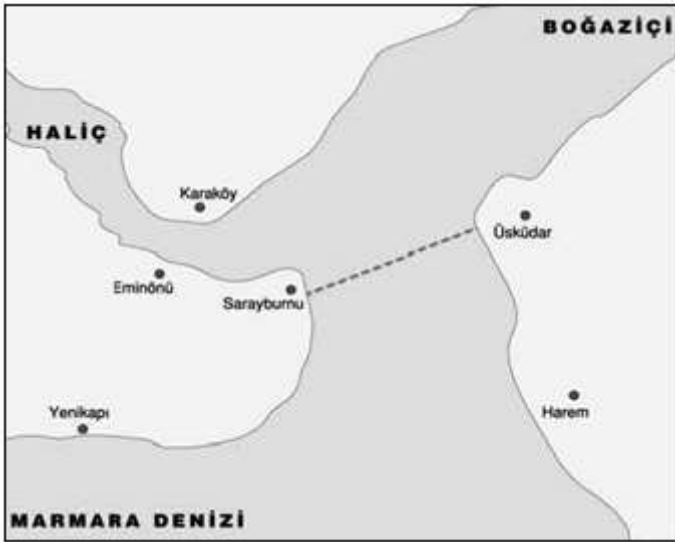


Image 4. Tubular Passage Way Projects Connecting Sarayburnu and Üsküdar, [7].

First Under Sea Tunnel Proposal of Gavand

Eugene- Henry Gavand proposed a development plan of İstanbul named "New City Project" to Ottoman Government in 1876. Two stil up to date problem was tried to be solved; one was İstanbul subway system and the other was the harbour between Yedikule and Sarayburnu [7, 8, 9, 10]. Firstly, Gavand had constructed the tunnel of İstanbul and then offered this project. Emperor Adülaziz had awarded him the third degree medal of Nişan-ı Al-i Osmani for his efforts on constructing the tunnel [11]. The succes of Gavand's İstanbul Tunnel Project resulted in several tunnel Project one of which is the new city Project. These Projects were not put into practice however these are significant because of throwing light to the İstanbul planners design projects during late 19th century and beginning of 20th century [6].

Gavand's subway plan proposed 4300m. long tunnel, harbour Project provisioned to fill some of the parts of the shore between Yedikule and Sarayburnu. The Project budget was 300 million Franks and 450 million Franks income was estimated. New city, harbours and dock would be tied to the West by the railway from Europe, East would be reached by a tunnel that would be constructed in the location of bosphorus opening to Marmara sea, and the North would be travelled by a railway

extending along right path of the bosphorus shore. Bosphorus tunnel was also offered in the proposal however exact location of It was not stated. It was considered that Gavand offered this in order to make his Project more attractive because the meaning of the expression "zone where bosphorus meets Marmara sea" was unclear [9, 10].

Consequently, success of Gavand's tunnel Project caused tubular passage way of bosphorus to be offered.

Preault's Tubular Passage Way Proposal

Sarayburnu-Üsküdar arasının tüp geçitle bağlanması için ilk proje Fransız S. Preault Demiryolu Şirketi tarafından hazırlanmıştır. 1891'de Preault tarafından, devrin padişahı Sultan Abdülhamid Han'a "Deniz Altı Çelik Tüneli" başlığı altında bir proje sunuldu. Denizin altından geçecek bu tüp geçit ile raylı ulaşım hedeflenmekteydi. "Deniz Altında Boru Köprü'nün Ön Projesi" adıyla ve dört binde bir ölçeğine göre hazırlanan proje, bu iş için çok büyük bir inşaat teknolojisi gerektiğini göstermektedir [7, 8].

First Project to connect Sarayburnu and Üsküdar with a tubular tunnel was prepared by French Railway Company S. Preault. This project is presented to Emperor Abdülhamit Khan with the name " Undersea Steel Tunnel" by Preault in 1891. Railway transportation was aimed with this tubular passage under sea. The projects full title was " Preliminary Project of Under Sea Tunel Bridge", Its scale was 1/4000, a great deal of construction technology was needed.

Talay presents this subject superficially and myhtologically. The scale was stated to be 1/4 which is wrong. The reason of not putting the Project into practice is explained as "evil forces which are moving in every direction did not give opportunity, unfortunately" [12].

According to the Project paper of Preault (Image 6.) the tunnel to pass under sea reaches the ground after a certain length of underground way in both Anatolia and Europe sides. The paper contains an official stamp and signature of Preault. Tunel was drawn on two lines section dimension of which is 5,2m.X4,3m. streaming above carrier foots. According to the paper on the right, 3,3 km. long line is considered from beginning to the end; locations of the terminal stations in Üsküdar and Sarayurnu was defined, tunel is 14 m. below the sea level in Üsküdar side and 13,2 m. in Sarayburnu. Two buildings are designed in each side of the bosphorus where the sea ends (Image 5.).

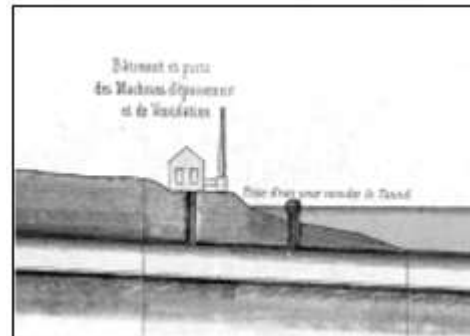


Image 5. Building For Air Conditioning And Machines, [7] The Project of Arnodin

Arnodin from the Corporation named Compagnie Internationale du Chemin de Fer de Bosphore, proposed a beltway all around the city and to tie European and Asian shores with two bridges. French engineer Arnodin presented the Project to the emperor with a written statement on March 1900. The project contained a map that shows bridges and routes,

additionally drawings of the bridges. Main purpose of the Project was to supply railway connection between Europe and Asia. Moreover, pedestrian and vehicle traffic was also organized. Thus, this Project became city or nearly region design moving beyond a new railway Project [6, 13].

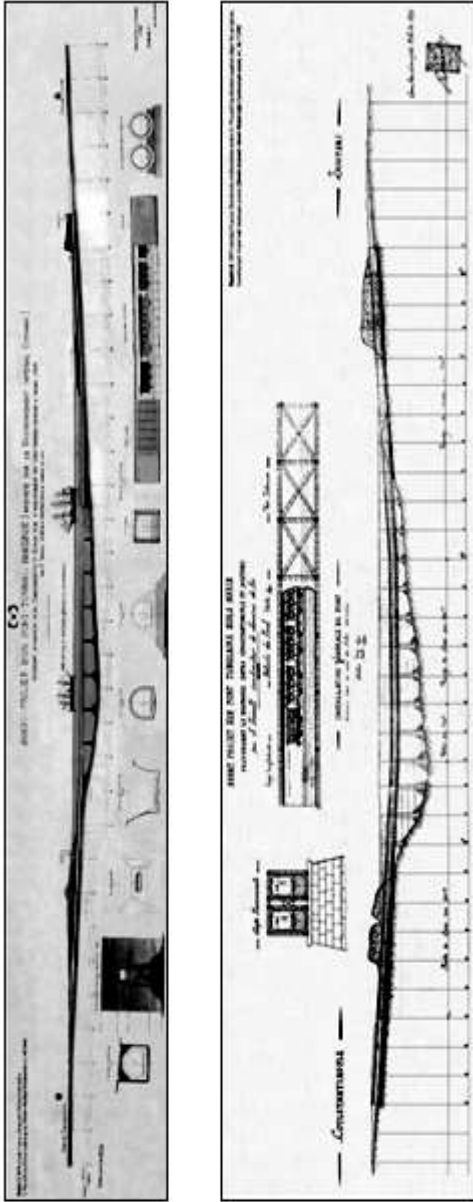


Image 6. Presentation Paper of Preault's Tubular Passage Way Project, [7]

First bridge of Arnodin would unite Üsküdar and Sarayburnu. The railway ending in Haydarpaşa, would be extended to Üsküdar and from this point It would be connected to İstanbul- Edirne line. Beltway of Arnodin was connecting important suburbans of Bakırköy and Haydarpaşa İzmit line with a bridge between Kandilli and Rumelihisarı. Thus, main city zone were formed other than dense civilization regions such as İstanbul peninsula, Galata, Üsküdar and Bosphorus villages. It must be considered that future growth of the city would be within these borders however in fifty years time the estimates were proved to e wrong [6].

According to this Project bosphorus is passed by a railway bridge around Rumelihisarı region and a rope railway between Sarayburnu and Üsküdar. Next stios of Railway passing through Rumelihisarı region would Bakırköy and Bostancı. Rope railway which was designed to be on the route of the

underwater tunnel would be seen as a tremendous gate in the entrance of İstanbul. This bridges' bearing feet tops was designed like the conic roof of minarets. Similar constructions like Arnodins rope railway bridge between Salacak and Sarayburnu was built before and this structure was not for train transportation, ships were planned to supply logistics throuh the same route [14]. Using İslamic themes in the Project was not related with function of the Project on the other hand these may be the signs of how foreign designers perceived Ottomans and attempts in order to get the projects approved. Within this Project, a rope railway system was designed in the route of tubular passage. Project plan (Image 7.), a bridge around Rumelihisarı and across (Image 9.); rope railway bridge between Sarayburnu and Üsküdar (Image 8.) is presented.



Image 7. Project Plan of Arnodin, [14].

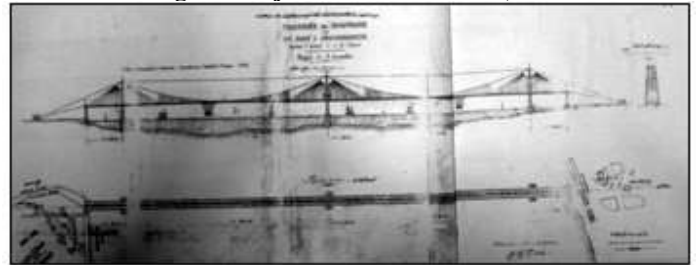


Image 8. Rope Railway Bridge Offered Between Sarayburnu and Üsküdar, [14]

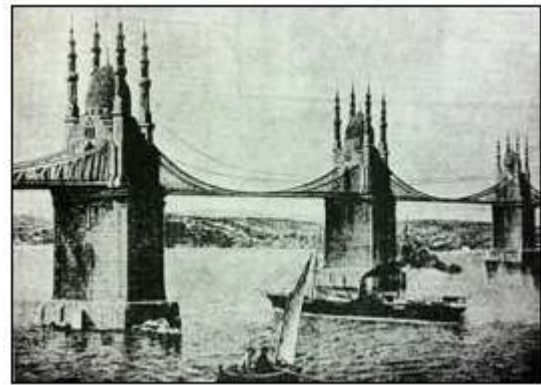


Image 9. Bridge Considered Around Rumeli Hisarı Castle and Across, [14].

The Proposal of Strom, Lindman and Hilliker

In 1902 three American engineers Frederic E. Strom, Frank T. Lindman and John A. Hilliker, proposed a subway train Project to run in a tubular passage between Sarayburnu and Salacak, by repeating a part of Gavand's Project (Image 10.). According to the Project presented to the palace; tuular passage way would e under water between Sarayurnu or Yenikapı and Harem, and would connected to Haydarpaşa via the railway from Harem to Haydarpaşa [11]. This three engineers were given an official approval document from the Emperor [7, 15].

Main aim of the Project was through railway connection of two shores of İstanbul or two continents (Europe- Asia), so that a passenger to take a train from Paris would pass through the bosphorus and be able to go Baghdat without any interruption. This design was also supporting Europe Asia railway connection which was presented by French engineer Arnodin on March 1900. It was proposed to tie Rumeli and Anatolia Baghdat Railways [11].

Tubular passage would be located under water on 17 feet which were called supports rather than the bottom of sea. Several trains serving passenger or raw material transportation purposes were designed. A monumental terminal station in Asian side, two focus areas on on boths ends of the tunnel were defined however exact coordinates of were not set [6, 11]. 1902 dated Project offered steel construction technology [8].

Kaysirilioğlu narrates this Project to e the first study details of which is known; on the contrary depending our current knowledge, It may be counter argued that before this Preault had presented a Project and twenty three pages of agreement text has survived providing comprehensive information. According to Kaysirilioğlu one part of Gavand was repeated, yet this statement is not true either. Çelik, Yılmaz, Kaysirilioğlu and İşmen who explained Strom et al.'s Project, describe the number of bearing feet as sixteen which is obviously seventeen [6, 8, 11, 15].

The ship drawn as a detail in the Project is like a steamer (Image 11.). A military base was designed with six cannons placed on both South and Sarayburnu direction, one mobile cannon is place on the Wall (Image 12.). A base designed in such a way can be debated on the defense location of cannons. According to the echelle on paper, tunnel under ground is about 300m.'s on each side and inclined tunnel length under water is 1450m.

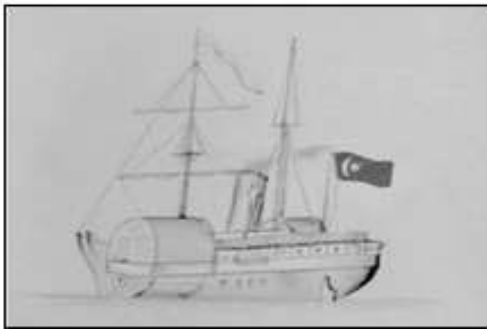


Image 10. Steamer, [7].

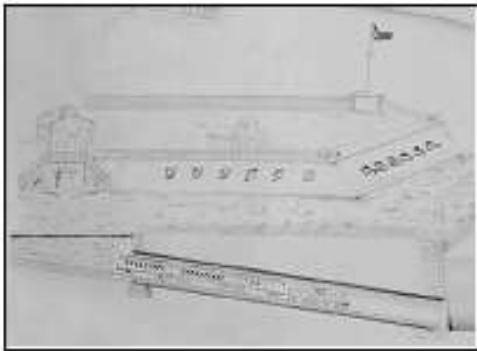


Image 11. Military Protection Base, [7].

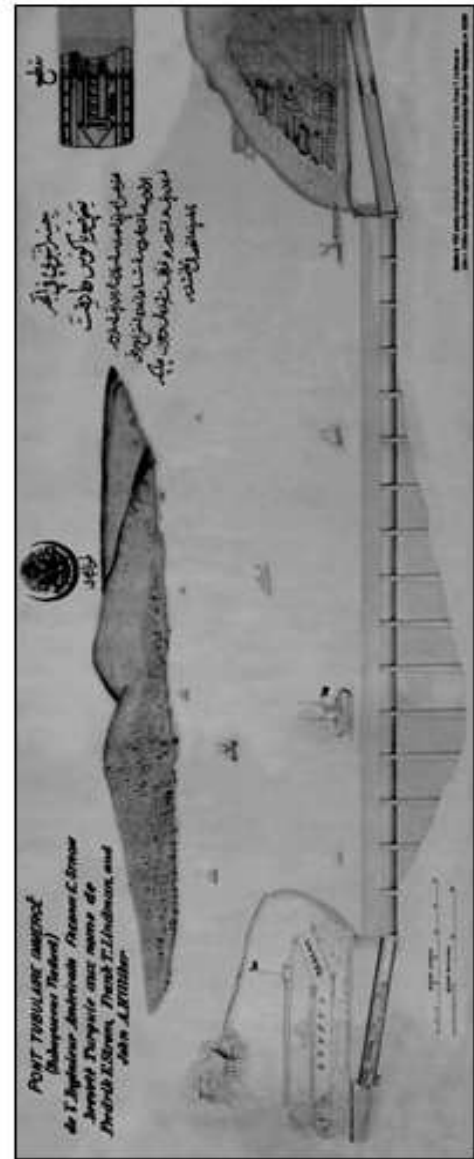


Image 12. Tubular Passage Way Proposal of Strom Et. Al. [7]

About Results of the Projects During Abdulhamit II. Period

From Çelik's point of view, with strong probability economic reasons led to negative evaluation of Arnodin' projects. There were'nt any official approval documents and attempts on Project application. İter argues that the empire suffered from consequent wars and new difficulties and new designs were forgotten. Yılmaz states that tubular passage way projects were a part of Abdülhamit's development acts and remained unfinished just like many other projects, government provisioned tubular passage nearly one and a half centry from present. İşmen expresses that tubular passage Project was assumed to e a phantasy and Its application was not even thought of [6, 8, 15, 16].

Mutlucağ shows forth that, large scale projects were proposed to Ottoman Empire, most of these were not performed due to being not feasible, lack of economic power, probaility of phantasy, asking for bribe and ... etc; hidden in the archives. Same reference rumours aout some sources describing the very first tubular tunnel Project prepared by Rumeli Railway Company. He argues that the government had disapproved the Project of Strom nad evaluated this as a complete phantasy and

adds that real reason behind unrealized Project was lack of money [1].

Çelik and İşmen also states that Storm's Project was regarded as a total phantasy. Another Project Show how political environments effects the evaluation process. For example After the announcement of Meşrutiyet on December 1908 under the authority Grand Vizier Sait Pasha; İttihat ve Terakki Party had won the elections, bridge Project came up again however this time business is ordered to Germans who were in a close relationship with Enver Pasha instead of Frenchs. Man Company was chosen to be the contractor for Galata Bridge Construction by the guarantor Deutshce Bank; price was 237.000 gold liras, It became 250.000 after tram transportation is added [6, 15].

References explain that government evaluated these projects as a phantasy however no evidence is given for this information. The agreement text which is presented in the next section falsifies such explanations.

After ABDÜLHAMİT II.

On September 1917, Ministry of Public Affairs had started a study of bridge or tunnel with order number 52, 15.000 liras was needed to procure essential tools. The ministry ordered raise of budget to supply Money and signing an agreement with the committee in question. This order text was read in the session of Meclis-i Vükela on July 1918, proposal is evaluated and decision made, enterprise is supported. Thus Meclis'i Vükela decided on a tunnel or bridge between Asian to European continent on July 1918 [14].

Before the Project came to the agenda of Meclis-i Vükela, Minisiter of Public Affairs of the time Ali Münif Bey signed an agreement composed of ten articles with Austria-Hungary enterprise Maison Zsigmondy Bela on April 1918. Text messages before the agreement contains "under sea and between Üsküdar and İstanbul" expressions but after the decision of Meclis-i Vükela an alternative second Project is considered (Image 13.) [14].

Analysis of the Document About Tubular Passage Way

Within the scope of this study the agreement text (April 11th, 1918), between Public Affairs Minister of Ottoman Empire Government Ali Münif Bey and the official representant of the company *La Maison Zsigmondy Bela* from Budaphest Imre de Balint, is translated from French to Turkish and comprehensively summarized. Contrary to the incorrect statement of Şahin, there is no ascription of an iron bridge standing on a stone base and Preault in the agreement text in question.



Image 13. Agreement Between Minister of Public Affairs and La Maison Zsigmondy Bela, [17].

As contracted, the company *La Maison Zsigmondy Bela* is going to conduct a drilling survey qualification of which will be set by the government in bosphorus between Üsküdar and İstanbul. The company holds wooden material and drilling

machines in Austria-Hungary enterprise on Asian side of İstanbul. Government will do the procurement, pay for whole costs. These machines and the accessories are considered to be sufficient for drilling under water. Payment procedure will e as follows; the company will present invoices to the ministry of Pulic affaris, ministry of economics will pay the amount that is officially written (İta emri) [17].

The company does not assure quality of work due to lack of such an operation example ran against that much strong current. However, each sample of drilling will be presented to government. Company will keep a diary of whole actions related to the operation. This diary will be proper and under reach of an officer assigned by the emperor. Drilling map will e drawn in line with the diary, a proper drawing will be made for each opening. There will be six drawings, one of these will be on canvas. The company will pay for; shelter and catering costs of the workers close to the drilling area, costs of medicational car of the workers, small boats, carriers, motor boats, fuel oil and coal, sallaries of the carpenters and marine workers. In addition the company will also pay for; projects, transportation costs, travels, passport and travel documents, İstanbul- Budapest travel costs of Mr. S. Zsigmondy, maps and drawings, life and accident assurance of the workers. One week after the workers travel from Budapest, 40000 Austria-Hungary Kronen will be paid. Daily payment of the workers will start and end parallel to the journey of the workers from Budapest to İstanbul. 30 kronen will be paid for each one meter drilling depth of which starts from sea level. Unless the presented invoices of the company is paid within fifteen days, the government will pay for 7% annual interest. In case of any probale problem, these sides may assign two arbitrators, the arbitrators will choose one arbitrator. There are fifteen days to cancell the agreement [17].

What may be understood from this agreement is that a procurement is done by government from the company in question. In the agreement spesification of the job is demanded totally from ministry while quality is not guaranteed and money transaction is defined in detail. It may be inferred that the agreement which is likely to be the result of international relations, may be regarded as a proof of inability of the empire to run the drilling survey within Its own human, machine and material resources. This agreement which does not fit the financial model of railway production process, may be seen as a profit making enterprise using Ottoman Empire. The explanation of control method of bussiness is in favour of government.

One of the results explored within this paper by throughly evaluating the agreement text is that unlike the explanataions of governmental negative comments to the tuular passage projects, It was seriously considered and concrete steps were taken. Yet in 1918 İstanbul was invaded without passing from Çanakkale, board of ministry including ministry of pulic affaris is destroyed [14].

After World War I. Ottoman orders were reshaped, new agreements led to new governments, due to war and Its consequences, It was impossible to mention public affairs acts. Turkish repulic was founded and a reorganization process began in a certain public.

Projects From Repulic Period

A İlter mentions, tubular passage projects (the idea of connection two shores of bosphorus) was also offered in Repulic period. The Project shown in Image 14. is likely to be designed in more detail than Its precedessors of Ottoman Period. In this

Project tubular passage is considered to be closer to the ground and more of its part is under soil. There are three separate ways in the tunnel, middle was designed for railway transportation and the way on the left and right was motorway. Ventilation roofs is a detail that makes the Project more realistic and ground filling is offered as an alternative to bearing feet [16].

According to the dimensions (Image 14.), distance between tunnel walls is 1602m, ventilation roofs is 1350m, obscure points is 1000m. There are two options for tubular passage; one is Sirkeci-Salacak connection and the other is Ahırkapi-Kavak.

A motorway tunnel was considered for the region in question however two problems arose; increase in vehicle traffic around Sirkeci and possibility of harm in historic places during construction activities. In 1956 dated report of De Leuw and Cather Company, constructing a bridge in 1975 was stated to be profitable. Transportation of motor vehicles between Anatolia and Asia in Bosphorus was done by ships. But increase in vehicles cause an irrational increase in ship transportation costs. Moreover transportation time was twenty five minutes and increase in ships would lead to irregularities and accidents so this method became questionable. On the other hand Yeşilköy-Bostancı distance would be taken in half an hour by the new Bosphorus Bridge to be constructed [18].

Bosphorus bridge and beltway construction was programmed to end in 1973. 75,9 billion\$ credit was supplied for the financial coalition of European Community, England and Japan. The credit is owed for 20 years, the payment would be without interest for the first five years and the rest will be paid to the creditor countries in fifteen years with an interest rate of 4,5%. Within ten years time, bridge and beltway construction costs would be gained from the fees of the vehicles to use the bridge. Solution of İstanbul's traffic problem would progress with this Project. It would be possible to pass Bosphorus under any weather conditions. Double sided raw material transportation of Europe-Asia would be easier and especially fresh fruit and vegetable exports would be done more on motorway. Tourism would be effected positively. National economy would practically have social and cultural benefits because of preventing accidents due to long waiting time of vehicles and negatively effected moral mood of the drivers [18].

In 1970, technical staff to construct bridge project was scattered, unorganized and incompatible with each other. The bridge conveys clearly that these kind of projects could not be run by Turkey's own opportunities yet. There were a well educated, learned technical staff in Turkey. It was undeniable fact that well educated staff in Turkey preferred to go abroad. At those times Turkey was a place of intellectual brain exports. İler argues that these brilliant technical minds which had been a value abroad, would return to Turkey and form a technical staff organization and achieve many successful projects. He states his sorrow on the foreign construction of Bosphorus and Haliç Bridges instead of Turkish contractors, engineers and adds that this may be overcome by the union and organization of local staff. There was need for much more bridges in Turkey. It was possible to make these constructions by Turkish engineers and technical staff by creating such a human resource. And after these, new generations of Turkish republic would be able to finish such projects [18].

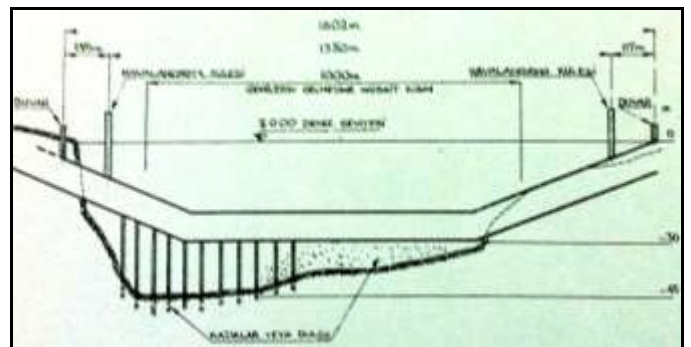
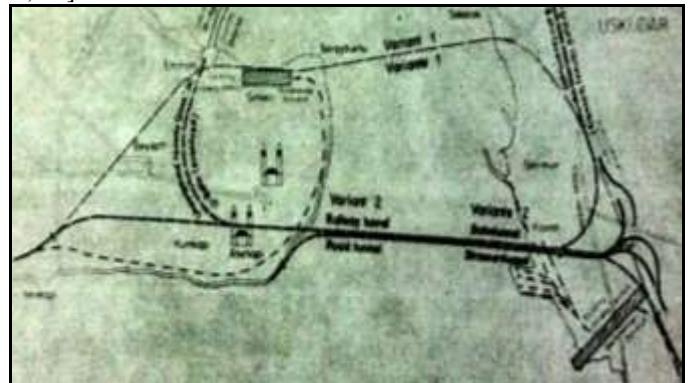
In 1978, second bridge idea was considered in order to enhance passenger and material transportation between European-Asian side of İstanbul and peripheral cities.

Underground train idea which is so expensive and requiring long construction time was abandoned, monorail passenger transportation is offered as soon as possible. Monorail systems were lightweight solutions that can be placed on the railways to be put over the bearing feet in the middle of bridge. Yenikapı-Haydarpaşa motorway tunnel investment cost was much higher than northern bridge. Yenikapı-Haydarpaşa railway tunnel was useless because increase in the number of ship service and docks would meet the need of carriage traffic in 1995. 66% of carriage traffic belongs to foreign nations so any investment regarding to this should be realized by the contribution of these nations [19].

A bridge to be constructed in the North would be planned for motor vehicles as much as pedestrians and trains with monorail systems and European Railway line to pass from North. Newly installed transportation systems should be designed in such a way that private car usage be reduced. Second Bosphorus bridge feasibility report should not be prepared by profit oriented companies, by doing so bridge proposal date led to a very early time. Fantasy proposals took place such as third bridge need arousal in 1995 [19].

Nowadays, due to the insufficient physical situation of Bosphorus and Fatih bridges, tubular passage way construction efforts has been going on [12].

The idea of connecting two shores has been on the agenda of the government also in the Republic period; after the first and second bridges studies on tubular passage proposal realized. İler's explanations becomes invalid today. For example it is not a true statement that it is possible to travel the distance between Yeşilköy and Bostancı easily, additionally realization of the other provisional statements must also be compared with today's circumstances. Tezcan does not advise tubular passage due to cost and long construction time, however Talay states that the studies of this passage has started in order to reduce traffic [12, 18, 19].



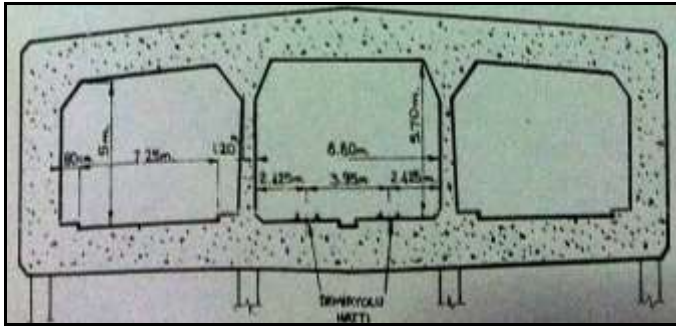


Image 14. A Tubular Passage Way Project Proposed In Republic Period, [16].

Results And Discussion

In the break down period of Ottoman Empire, the technologic and economic gap between Europe grown, borders of the government shrank due to wars. Europe had started to "lick Ottoman Empire like a leech" by making use of the developments in science and technology. In the last century of the Empire, there had been changes in political management styles and rulers attempted to turn this negative situation to positive. However these were not sufficient for rescuing the government. Abdülhamit II. is one of the Emperors that came to the throne in this period, he had a very busy political life. He applied balance policy among foreign nations and gave privileges for the railways to cover the country from one side to the other. He finished Hicaz railway construction by organizing mere muslim capital and Turkish engineers but was deposed by the army.

It is an important detail that the proposals were presented to the government by privately owned companies which has the same name with the owner. The dominant language used in the time of Abdulhamit was French which was used in Project papers and agreement texts. For example even Americans and people from Budapest prepared Project papers, agreement texts in French. Provided that the first city plan is considered, It may be suggested that architectural development is achieved due to military aspects. Positive effects of Adülhamit's despotism period on renovation projects should not be ignored. It is clearly inferred from these projects that political effects constitute to by far the most important factor.

Tubular passage way Project has also been offered in Republic period, after connecting the bosphorus with two bridges like two strings, the Project is on the agenda of transportation today. Another important point is that actually projects offered to solve the problem have effected each other in a continuous sequence.

In the end of this study initial hypothesis has changed as follows. When reasons of the projects is thought political factors are by far the most important ones, other effective factors are; military, economic and city planning. As a future direction for the researchers to develop this research, throwing light on the Projects of Rumeli Railway Company may be suggested. If the situation of "sucking like a leech" is a valid case for today, this may be an ideal and original area of research topic for recent investigators. Archives constitute to a critical importance on conducting historical research so access of these information resources should be made easier.

Asking the following question is appropriate when we consider today in a pragmatic way: Has this country started to realize macro scale projects by its own resources? Is the process of "Sucking like a leech" mentioned in the paper going on? What is the contribution of the mentally competent and well

educated citizens of this country? How has the International balance changed from then to now? What was the results of expulsion of the intellectuals in that period, negative or positive? Are there any privilege zones of foreign investors which were present at that time in railway construction business? Are we able to produce machines today? Are our architects and engineers able to run macro scale projects? Do we have a provision to effect one hundred years later than now? Is impoverishment of Turks in real terms explained by Fesch valid for today? Is the country financially powerful? Are similar collaborators of that period present today? What is best for architects and engineers, being on the side of exploitation or being exploited? Is; trying to realize projects for the sake of the country, a rational situation? Do architects and engineers sign macro scaled projects, will they, is there any organization on this subject or at least any attempt?

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