Uluslararası Sosyal Araştırmalar Dergisi
The Journal of International Social Research
Cilt: 9 Sayı: 43 Volume: 9 Issue: 43
Nisan 2016 April 2016
www.sosyalarastirmalar.com Issn: 1307-9581

BUILDING THE PROFESSIONAL IDENTITIES OF CONSTRUCTIVE PROFESSIONS UNDER TECHNOLOGICAL DILEMMA: ENGINEERING AND ARCHITECTURE IN THE EARLY REPUBLIC

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Abstract
Analyzing the effects on development of constructive professions in Turkey can give clues for understanding the ambivalent role of technology in Turkish modernity project. Hence, this study explores the roots of rising role of engineers and architects as one of the agents of modernity project of Early Republican Turkey.

We will deal in turn with, first, the engineering ideology, the two basic approaches on the role of engineer developed after industrial revolution -the Taylorist and the Veblenist approaches- and their reflections on Turkish case. As second factor, we will question the roots of westernization and progressive history concept in the idea of "*muasır medeniyet*" and relate it with establishment of professional identities of constructive professions in Turkey.

Keywords: Engineering İdeology, Modernity Project, Technology.

1. Introduction

During the last two centuries, Turkish intelligentsia has believed technology is prerequisite of development and welfare. Hence, from the very beginning of the modernization process, importation of technology and know-how has been assumed as vital and supported by the nation state. Unsurprisingly, this attitude was not only specific to the Turkish case. In 20th century, many other late-industrialized or unindustrialized nations at the threshold of modernization like Turkey believed in the critical relationship between prosperity, modernity, and technology. Hence, they suggested a strong link between technology, and the construction of national identities; but this is paradoxical when we consider the internationalization of technology especially after industrial revolution.

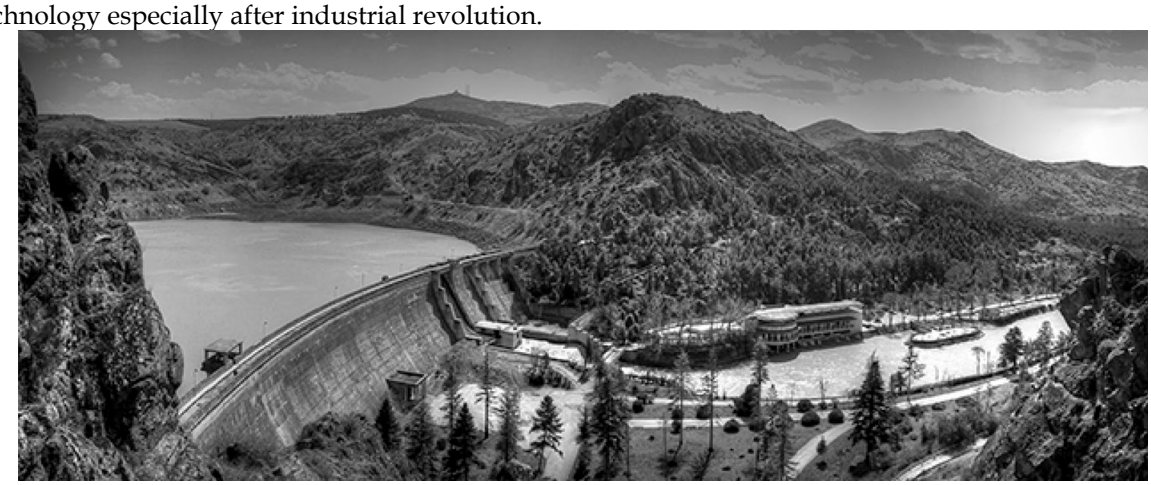

Figure 1. Çubuk Dam 1936 Ankara

[•] Yrd. Doç. Dr., Akdeniz Üniversitesi, Mimarlık Fakültesi, Mimarlık Bölümü
[**] Dr., Mimar, Bilim, Sanayi ve Teknoloji Bakanlığı, Kümelenme Politikaları ve Uygulamaları Şb

Figure 2. Florya Sea Pavilion 1934 Florya- Istanbul by Architect Seyfi Arkan

Under these circumstances, technology and its edifices such as factories, bridges, buildings etc. became both representations of the national identities and measures of the degree of development of the nations. By the establishment of the Turkish Republic in 1923, this double role was epitomized by construction of modern buildings such as Çubuk Dam, Florya Sea Pavilion, Ankara Opera Building (Old Exhibition House1) etc. These buildings were meant to be objects of national pride as well as the modernity of technical knowledge in civil engineering expertise and architecture. From this point of view, the Turkish case has no significant difference from the others like Greece, Portugal, Mexico or Italy[2] in the main narration of nation building and patriotic profile of the constructive professions. İn spite of the same basic characteristics of the age, the story differentiates due to inner dynamics and reactions of a non-western society, which had been vassal of an empire in difficulties.

2. Engineering Ideology, and Modernity

According to Göle (1998, p.15), in order to understand the unique and dominant role of engineer[3] in modernity project, one should first relate engineering ideology with industrial civilization; because, "to the extent that engineers had contributed structuring of the production systems, they had been effective on creation of the industrial civilization both socio-spatially and culturally".

After the second industrial revolution, surplus value and efficiency4 concepts emerged as new aims of production, and then, everything –both objects and people- reevaluated through their contributions to production. Professions were also affected and transformed in this process. Unlike the other professions that were affected by the industrial revolution, engineering have been able to participate and affect the process actively in which all professions were redesigned. In this respect, engineers contributed the modernity project not only with their role in development of technology but also with their agency on new social organization.

In 1911, Frederick Winslow Taylor, an American mechanical engineer, published his seminal work titled "Principles of scientific management" to improve industrial efficiency. In this study, he defends the idea of increasing productivity and benefits of production by scientific management, and asserts that scientific management process can be achieved by rationality which engineering has naturally in its ideology (Taylor, 1997). Thus, among all professions, engineering earned a privileged position; and in this manner, the role of engineer was defined as the manager of production process rather than implementer; and engineer was empowered to run organizations on behalf of capital. However, as per Öncü and Köse (2000, pp.25-42), Taylorist definition of engineering as a miraculous agency for high productivity actually has no originality more than bourgeois re-reading of profession for unification of the world under single market for more profit.

[1] Architect: Sevki Balmumcu 1933-1934)

[2] History and Technology, special issue: National Identities of Engineers, Vol. 23, Iss. 3, 2007.

[3] The notion of engineering today covers a broad area of study diversified from genetic engineering to social engineering, and it is used for a general name of all these professions embraced the principle of positivist thinking. However, it is employed in this thesis not for all these professions but only in place of civil engineering as commonly it was in the 18th, 19th, and early 20th centuries before specialization of the profession. Besides, the specialization of engineering would not truly be launched in Turkey until the second half of 20th century.

[4] For further information see: MARX, Karl (1967) *Capital: A Critique of Political Economy*, International Pub., NY. and HAGGERTY, P. E. (1974) *The Productive Society*, Columbia University Press, NY.

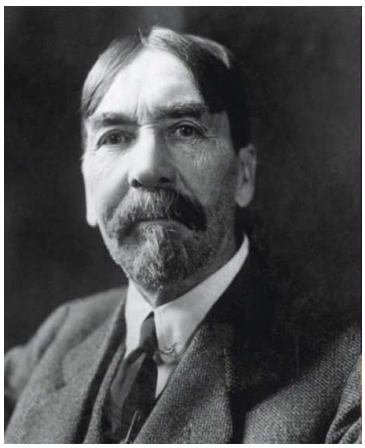

Figure 3. Thorstein Veblen (1857 –1929) . American economist and sociologist.

On the other hand, Thorstein Veblen widened the limits of profession, which was restricted by Taylor within factory to broader limits of society in the same period, but his ideas were popularized after two decades as response to the great depression in 1929. Veblen's engineer, unlike Taylor's, more concerned with social issues rather than economic ones. He/she gave priority to delineate the unique qualities of industrial society rooted in modern technology. Therefore, Veblen defends the idea that engineers who represent positivist values of reason and science should hold positions of management responsibility in governments and own the power. Moreover, this second type of engineer holds a unique position in antagonistic relations between capitalist production systems and social formations, and acts as a mediator. Despite not being political but merely a professional organization, engineering's approach sensitive to social transformations is named in many sources as ideology. Under this ideology, engineers as individuals and under professional organizations go beyond their role in production process, and they have been defenders of social development models, and to a certain extent they had undertaken the responsibility of social engineering[5] (Veblen, 1911, p.10; Göle, 1998, pp.16-17).

Turkey is a peripheral country on the borders of industrialization; therefore, the Turkish engineering practice and ideology differentiate from the main core countries (Köse and Öncü, 2000, pp.95-111). In these countries, engineer earned his/her position mostly based on how much he contributed profit-earning capacity of production. Therefore, rather than embracing Veblen's ideals, engineers mostly present a Taylorist approach. For instance, in France where technocracy had been very dominant until 1970s, engineers had contributed the rational management but deliberately avoided the socio-politic issues. As Picon (2007, pp.197-208) stated, in France, there was no profound connection between revolution and the concern for technological progress carried by the engineering profession. "Technology and engineering were indeed associated with progressive ideals, but they were supposed to put an end to revolution…rather than foster it. Despite almost two centuries of evolution, French engineers never totally repudiated this perspective [and] kept a relatively lower political profile"[6].

On the other hand, in the late-industrialized countries, engineers naturally embraced social-minded ideologies. Since these countries are mostly young nation-states, which had been not able to accumulate capital to form private enterprise and bourgeois class, engineers unsurprisingly adopt patriotic and social-minded ideologies under this non-capitalist but nationalist work environment. Although, the narrations of technology and engineering in late industrialized countries resemble each other[7], each of them has differences due to their own socio-cultural backgrounds. Among them, the Turkish case can best be compared with Greece due to the socio-economic similarities and the same historical background of two neighboring countries. In both cases, military based schools were the sole educational institutions providing engineering education until almost the end of 19th century. Hence, they built elitist and patriotic character, and adopted high politic profile under military circumstances of the war times. Moreover, both Greek and Turkish engineers actively took part in construction and design of major infrastructural projects since the late 19th century and in development of science based industrial sectors related to second industrial

[5] For social engineering and its vitals see: POPPER, Karl (1996) *The Open Society and Its Enemies*, Vol. I: The Spell of Plato, Princeton University, New Jersey.

[6] According to Picon, a specific kind of ideology influenced French engineers is called Saint Simonism. For further information on Saint-Simonism see: SAINT SIMON, Henri (1975) *Henri Saint-Simon (1790-1825): Selected Writings On Science, Industry, and Social Organization*, K. Taylor (Ed.), Croom Helm, London.

[7] See also; SARAİVA, T.(2007) *Inventing the Technological Nation: The Example of Portugal (1851-1898*), History and Technology, v.23/3, pp.263-273; LUCENA, J. C. (2007) *De Criollos a Mexicanos: Engineers' Identity and the Construction of Mexico*, History and Technology, v23/3, pp.275-288, and YİANNİS, A. et al (2007) *The National Identity of Inter-war Greek Engineers: Elitism, Rationalization, Technocracy, and Reactionary Modernism*, History and Technology, v.23/3, pp.241-261.

revolution under nationalism. Like Greek engineers, Turkish engineers were also participated actively in development and modernization processes as a state supported socio-professional group with strong elitist characteristics. In both cases, engineers promoted the ideas of rationalization and technocracy; moreover, as particular individuals and as professional groups they occupied dominant positions among the various social actors (Yiannis, A. et al, 2007, pp.241-261). Hence, it can be asserted that they both not embraced Taylorist engineering ideology in the absence of national bourgeoisie. Nonetheless, while Greek engineers passionately took part in the political events during the construction of national identity, in the early periods of the republic, Turkish engineers preferred to left their political stance they developed in the late Ottoman period and had adopted the role of implementer of modernism rather than theorist of it.

3. Westernization, The idea of progress and Positivist Tradition in Turkish Modernity

According to Bozdoğan (2001, p.125), the positivist way of thinking as the leading philosophy of the period and as the main idea of modernity project bases on "the progressive history concept", and presents parallelism with engineering ideology. On the other hand, unlike today's conception, in almost two hundred years long process of the Turkish modernity project the terms "development" and "progress" had not always identified within the body of westernization. Much contrary, it was at first assumed as exportation of technologic improvements totally devoid of the westernized daily habitual. Ziya Gökalp (1876-1924), the official ideologue of the Young Turk movement and holder of the first chair of sociology at Istanbul University (1912) was one of the very first Turkish intellectuals proposing the selective adaptation of western knowledge. Gökalp's theory became one of the leading ideologies among Ottoman intelligentsia, and guided the understanding of the term "muasır medeniyet" especially in the Young Turk political vocabulary before 1918. In this context, the diagnosis of Ottoman intellectuals to the decline of the Empire was to import the scientific spirit of enlightenment to reach the technological and the industrial level of development of western countries without their cultural and moral outcomes. As clearly stated in Gökalp's (2006, pp. 89) words in one of his best known essays called Türkleşmek, İslamlaşmak, Muasırlaşmak (Turkification, Islamization, Modernization); "being contemporary with modern civilization means to make and use battleships, cars, and airplanes that the Europeans are making and using". In this respect, the definition of the term "muasır medeniyet" was limited with material outcomes of scientific and industrial development, and associated only with technological advance -especially related with military modernization- until the republican period. Highlighting the products of science and technology as modernity, glorified them together with the socio-cultural role of constructive professions as technology's natural implementers. Since then technology and its artifacts earned representational meanings(Örmecioğlu, 2010:2-8).

In Ataturk's speeches of the late twenties and thirties, muasırlık and medeniyet became two central terms. Most of his 1930s speeches had references to the twin themes of modernization and civilization –in some cases correlated with bayındırlık; such as, "We shall elevate our nation to the level of the most prosperous and civilized countries…We shall lift up our national culture to the level of contemporary civilization[8]". As Bozdoğan (2001, p.106) mentioned, republican intelligentsia perceived the notion of contemporary civilization almost in a teleological manner, hence as Ataturk stated, "the straightest, truest way is the way of civilization" (Akçakayalıoğlu, 1982, pp.626-627); and she continues, they believed that the contemporary civilization is a "universal trajectory of progress that every nation had to follow - a teleological destiny that could not and should not be resisted" otherwise it may "burn and destroy those who are not interested in it" (Giritli, 1988, p.44).

By the reconstruction boom initialized after War of Independence, engineers and architects became one of the important groups in society. Under the influence of the new political ideals of the time, they began to define themselves as part of new elites who contribute to public utility and progress. The development they had in mind was not only material. It is possessed with a strong non-material connotation because prosperity as a result of development was seen as the solution to regenerate the ideal modern society.

Conclusions

Technology as a powerful innovative force had been a topic of discussion even in the lands of its origins. unlike Western countries which share similar cultures, adaptation of Western based technology as an outer innovative force had met with resistance in Ottoman land. During the 17th and 18th century, technology and its products are rejected by conservative groups of Ottomans as parts of unsolicited Western culture. Hence the opposition to Westernisation impeded the development of engineering and architecture, then, caused breaks and returns in the history of Turkish technical education. Even, the Mühendishâne and professors were also on the target of the reactionary revolts, as it was in bloody janissary revolt in 1807 as

[8] "Yurdumuzu, dünyanın en mamur (bayındır) ve en medenî memleketleri seviyesine çıkaracağız. Milletimizi, en geniş, refah, vasıta ve kaynaklarına sahip kılacağız. Millî kültürümüzü, muasır medeniyet seviyesinin üstüne çıkaracağız" M. K. Ataturk, 10th year speech, 1933.

three of professors were killed[9]. Nevertheless, Turkish engineers and architects as individuals and as a national professional groups established a permanent relationship with modernism in despite of society's Westernization dilemma. On the other hand, this reaction also gave the profession its heroic character on behalf of modernization, and development. From the very beginning, Turkish engineers and architects have taken their place on the side of modern elites as the representatives of rationality and implementers of modernization.

In fact, the engineering had already been a privileged domain of knowledge in the Ottoman period by reason of its strategic importance in army as artillery corps. Then engineers gained power with late industrialization attempts of Ottoman Empire and construction of Hijaz Railroad line. By the reconstruction boom initialized after War of Independence, engineers became one of the important groups in society. Under the influence of the new political ideals of the time, State engineers began to define themselves as part of new elites who contribute to public utility and progress. The development they had in mind was not only material. It is possessed with a strong non-material connotation because prosperity as a result of development was seen as the solution to regenerate social relations. Therefore, technocracy, which has social engineering utopia in its main core, was easily adopted by these constructive professions who built their professional identity on positivism and engineering ideology. After then, their belief in the scientific and rationalistic ways of problem solving even in social area, motivated them to construct modern Turkish society along with the construction of built representations of Turkish prosperity and technical advancement.

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