

**TECHNOLOGY TRANSFER THROUGH THE MOVEMENT OF
PEOPLE: THE CASE OF THE 1933 UNIVERSITY REFORM**



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THE CASE OF THE 1933 UNIVERSITY REFORM

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A handwritten signature in black ink, appearing to read 'M. Kiliçkan', with a large flourish extending to the right. There are some small marks and a vertical line to the right of the signature.

Özet

Türkiye Cumhuriyeti kuruluşundan birkaç sene sonra 1933'te, "Üniversite Reformu" olarak bilinen bir reform hareketiyle yüksek öğrenim kurumlarını yeniden düzenledi. Türkiye'nin Üniversite Reformu dönemi, Almanya'da Nasyonal Sosyalizmin yükselişi ile aynı zamana denk geldi. Nazi rejiminde işlerini kaybeden bir çok değerli Alman ve Almanca konuşan akademisyen, Türkiye'ye mülteci olarak geldiler ve Üniversite Reformu'nda yer aldılar. Bu mülteci akademisyenler, ekonomi, tıp, fen bilimleri, sosyal bilimler, hukuk ve sanat gibi çoğu alanlarında uzmanlaşmışlardı ve Türkiye'de kaldıkları sürece ülkede modern, Batı tarzı üniversite eğitiminin temellerini atmaya yardımcı oldular. Bu tez, 1933 Üniversite Reformu'nu, insan ve işgücü hareketliliği ile yapılan bir teknoloji transferi olayı bağlamında incelemektedir. Tez, Üniversite Reformu'nun, mülteci akademisyenlerin beşeri sermayelerini teknolojik değişimin araçları ve katalizörleri olarak kullandığını savunmaktadır. Bu da yeni metodolojilerin tanıtılması ve uyarlanmasına, eğitim bilgi tabanının zenginleştirilmesine ve Türk üniversitesine aktarılan değerlerin, yeniden ve yerli olarak üretilebilmesi yeteneğini kazandırdığını önermektedir. Bu sonuca varmak için tez, mülteci akademisyenlerin belirli alanlardaki katkılarını, bu alanların değişim ve gelişimini değerlendirir, ve özetle 1933 sonrası Türkiye'ye akademik göçün Türk yüksek öğretimi üzerindeki etkilerini inceler.

Abstract

In 1933, the newly established Turkish Republic set out to reform its tertiary education institutions in an event that would come to be known as the University Reform. This period coincided with the rise of National Socialism in Germany, which displaced many valuable German-speaking scholars, a great number of whom moved to Turkey as refugees and took part in the Turkish university reform. The refugee scholars specialized in a vast array of fields including economics, medicine, natural sciences, social sciences, law, and the arts. Through their stay, they laid out the foundations for modern, Western-style university education in Turkey. This thesis examines the 1933 University Reform in Turkey in the context of a massive technology transfer event facilitated via the movement of people. It offers that the 1933 University reform utilized the refugees' human capital as agents and catalysts of technological change, which resulted in the introduction and adaptation of new methodologies, accumulation in the educational knowledge base, and endowed the Turkish university with the ability to indigenously reproduce the transferred values. To arrive at this conclusion, the thesis details the contributions of the refugee scholars within their given fields, examines the development of these fields and their education in Turkey as instigated by these contributions, and altogether evaluates the effects of the emigration on Turkish higher education.

Foreword

The following work examines the Turkish University Reform of 1933, which was catalyzed by the efforts of many refugee scholars who fled Nazism in the wake of World War II. It analyzes the reform event in the context of technology transfer facilitated by the movement of people. The thesis is submitted for the degree of Master of Arts in Economics at Yeditepe University. Preliminary readings into the subject began in late 2014 and, after a long and arduous period, the thesis was finished in early 2017.

My interest in the subject matter is due to a combination of the following research interests: human capital flight, the concept of technology, and technology transfer.

Human capital flight is currently often exemplified in the phenomenon of “brain drain” where less developed countries lose their trained and educated human capital to more developed countries. Turkey, my home country, suffers from human capital flight; a rising trend in the emigration of highly educated people (especially academics) after late 2013 attests to the fact that this suffering will only continue. Therefore, it was most interesting to look back and examine an event where Turkey actually *gained* brains under rare, though unfortunate, circumstances: refugee scholars who fled from Germany and other European countries following the threat of National Socialism after 1933.

The concept of technology, and by extension *technology transfer*, presents the more theoretical and philosophical arm of this thesis. In our daily lives, technology is often something we don't really think about. We are usually more interested in reaping its (physical) benefits, rather than debating the concept of technology on a philosophical level. To this end, I sought to—perhaps boldly—reshape my own understanding of technology, what it is and what it pertains, and what changes when technology does. If technology does not simply only constitute tools and gadgets, but more broadly defines ways of thinking, ways of doing, mentality and methodology; if it is a social, cultural, political and economic phenomenon all at once, what happens when the “technology” of this broader definition is *transferred*? What changes? How does it impact social change, adapt into a different culture, shape people's ideas, and lead to development?

Combined, these two ideas fused into the question: “How did the arrival of the refugee scholars from Nazism, and their efforts in the University Reform of 1933, change things in Turkey and its

higher education in particular?” A thorough examination of the University Reform and the works of the refugee scholars, provided both general results and small details: the refugees helped install a Western-style tertiary education system in Turkish academia, left behind many academic guideposts and raised the next generation of Turkish scholars to follow in their place; additionally, they helped establish the Istanbul Society for the Protection of Animals, to add in some trivia. These are the sorts of information you will find in this work.

I give my heartfelt thanks and express my gratitude to my supervisor, Nuri Vedit İnal, whose meticulousness can only be matched by his cheerful optimism: his efforts on this thesis were near endless, but not only that, he made the task a joy to write and to discuss, often for hours on end. Acknowledgements also go to Reşat Kayalı, who first made me aware of the 1933 University Reform and—perhaps unwittingly—set me on this long journey.

I would also like to thank my family for their guidance and support: my father, for knowing my penchant for extensive deliberation and putting me on this path, and my mother, who has been a steadfast role model through the hardest times.

Lastly, thank you for reading. It has been a long, winding road throughout the years; I dearly hope that the read is an enjoyable one.

Nur Merve Kılıçkan

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Glossary

Academic Ranks

Ottoman Academic Ranks

Müderris (lit. “lecturer”) was a title in the Ottoman and Seljuk education systems. The term stems from the Arabic root *ders* (Turkish: lesson), and connotes a person who can give lessons, either as a profession or as simply by being capable of giving them, due to being learned and knowledgeable. Historically, a *müderris* was typically educated and graduated from the *medrese* education system, in possession of an *icazet* diploma. The *müderris* title was given to people who taught lessons in science and/or theology in a *medrese* or mosque. The title was also used in the universities established after the Tanzimat reforms. In this usage, it may be considered to be similar to a professor in European universities.

Müderris Muavini (lit. “lecturer’s aide”) was a title in the late Ottoman and early Turkish education system. A *müderris muavini* was an assistant *müderris*, i.e. an assistant professor.

Muallim (lit. “teacher”) was a title in the Ottoman education system. In Ottoman usage, *Muallim* typically connoted teacher below university level ranking, such as in high and primary schools. In the context of the 1933 University Reform, the *muallim* were expected to teach courses that were complementary to those taught by the *müderris*, and in the case of students becoming too numerous, they could also be expected to lecture and hold conferences about the *müderris*’ subject (Dölen, 2010a, p. 135).

German Academic Ranks and Terms

Professor Ordinarius (*ordentlicher Professor; o. Prof., Univ. Prof.*) was a title in the German higher education system. By definition, a professor ordinarius is the occupant of a chair with control over the teaching of his subject, as well as a share in the government of the university. For example, Gerhard Kessler was a professor ordinarius of national economics at the University of Leipzig prior to his emigration. The title is currently obsolete in the German academic ranking system.

The title was adopted by Turkish universities following the 1933 university reform as *Ordinaryüs Profesör (ord. Prof.)*.

Professor Extraordinarius (*außerordentlicher Professor, ao. Prof.*) was a title for a professor in the German education system. The professor extraordinarius did not occupy a chair, often specialized in a side-area and was subordinated to the professor occupying the chair.

Privatdozent (PD, P.D. or Priv. –Doz.) is a ranking in the German education system. The title connotes a person who holds certain formal qualifications that denote an ability to teach at university level, as well as supervise students of up to PhD level independently. A *privatdozent* typically has a higher doctorate degree, i.e. a habilitation. In contrast to professorship, however, a *privatdozent* does not sit a professorship chair nor hold a necessarily salaried appointment at his conferring university; he may seek private appointments elsewhere and the title can be revoked in cases of serious misconduct or disagreement (such as per the *Berufsbeamtensgesetz*.)

Habilitation is a term originating from the Latin term *habilitare*, which means to “make suitable and fit”, in the context of becoming fit to conduct self-contained research at the university level. In its early usage in the 17th century, the term *Habilitation* was synonymous with doctoral qualification, though it was later extended to post-doctoral qualification by the 19th century. A habilitation requires a habilitation thesis based on individual scholarship, and is considered to be the required qualification to pursue academic careers in Germany, Austria, and Switzerland, as well as some other European countries. A habilitated scholar in Germany receives the *venia legendi*, “permission for lecturing” a specific subject at the university for their lifetime.

Turkish Academic Ranks

Ordinaryüs Profesör (ord. Prof.) was a title invented during the 1933 University Reform and connoted a professor who *above* professor rank. It was given to scholars who had been

professors for no less than five years, occupied a chair, and were known for having conducted acclaimed academic research in their chosen field.¹ *Ordinaryüs Profesörs* presented and defended additional works of research to the university senate after obtaining their professorship. The use of this title was abolished in 1981 through changes in *Yüksek Öğretim Kanunu* (Higher Education Law), article 2547. The last Turkish holder of the title, *ord. Prof.* Reşat Kaynar, passed away in 2006.

In colloquial use in modern Turkish, *ordinaryüs* typically implies significant knowledge and renown in a chosen academic field, often conceptualizing an older scholar who through his time has raised other accomplished scholars (as demonstrated by the oft-used phrase *Hocaların Hocası* (“Professor of Professors”) in reference to ordinarii.). In this regard, it is interesting that the Turkish use of the title generally connotes an American/Western *emeritus* rather than a German *ordentlicher professor*. Additionally, it should be noted that the very word itself is Latin for “ordinary”, whereas the Turkish colloquialism implies anything but. When the concept of the “ordinarius” was transferred to Turkey, it did not remain within the boundaries of its literal meaning, and was transformed over time until it conceptualized something entirely different, which was undoubtedly shaped by the reverence and respect towards those who first held the title. This is an example of the transfer of a concept and differences in interpretation caused by the 1933 University reform.

Profesör (Prof.) is the professor rank.

Doçent (Doç. Dr.) is an associate professor. The term originates from the German original *Dozent* and is considered its equivalent.

¹ Prior to the changes in higher education law in 1981, academics in Turkey (in most cases associate professors) seeking to obtain a professorship would present a ‘professorship thesis’ to the university senate in order to obtain their title. The successful defense of this thesis along with evaluation would result in a professorship, either with a chair (similar to the German concept of *ordentlicher Professor*) or without (similar to *außerordentlicher Professor*). In order to become an *ordinaryüs Profesör*, the *profesör* would defend an additional work of research against the university senate.

Yardımcı Doçent (Yrd. Doç.) is an assistant professor. *Yardımcı Doçents* have Ph.D.s in their chosen fields and are employed universities in academic careers.

Doktor (Dr.) is a Ph.D., not necessarily employed by universities.



1. Introduction

1933 was a year in which two events important to both Turkish and German history coincided. On the Turkish side, 1933 was the year in which the young Turkish Republic – now a modern nation-state based on secular principles, after the fall of the Ottoman Empire – started a significant reform in its higher education. On the German side, it was the year in which the National Socialists seized power in Germany and displaced a great number of valuable academics for political, racial, or altogether arbitrary reasons. Bringing these two events together was the emigration of displaced scholars from Germany (and other countries afflicted by fascism) to Turkey. Exiled from their home countries, a great number of scholars from Europe came to Turkey as refugees, and took part in the “University Reform” that was taking place. They contributed greatly to the development of modern higher education in Turkey by introducing Western education technology to the country. Altogether, the event posed an example of the act of technology transfer, one that was instigated by the movement of people.

This thesis proposes that the emigration of many German and German-speaking scholars from Europe to Turkey in the 1930s, specifically to take part in the Turkish University Reform of 1933, was an act of technology transfer. It proposes that the movement of these people, who represented significant amounts of human capital willingly relinquished by their home countries, enabled the transfer of advanced education technology from Europe to Turkey. This event catalyzed the development of the modern Turkish university through the introduction and adaptation of new technology, led to an accumulation in the Turkish knowledge base, and endowed the Turkish university with the ability to indigenously reproduce the transferred values. To arrive at this end, this thesis examines the 1933 University Reform in Turkey. It investigates in detail the contributions of the refugee scholars, which led to development in many educational areas in Turkey, including economics, law, medicine, natural sciences, social sciences, and the arts.

The thesis is structured to provide an introduction to the 1933 University Reform and the resulting technology transfer by first examining the historical context of the event, from both the Turkish and German sides, in Chapter 1. Chapter 2 follows with a discussion on the concepts of technology, the transfer of technology, and the various components that are vital to an act of technology transfer. Chapter 3 encompasses the analysis of how the reform and technology transfer, through the arrival of the refugee scholars, impacted the various fields of

study at their respective locations; with sub-sections discussing the developments in the fields of Economics (at the University of Istanbul and the Ankara Higher Institute of Agriculture, with a specific focus on agricultural economics), Medicine (at the University of Istanbul and Institutions in Ankara), Formal and Natural Sciences (at the University of Istanbul), Letters (Social Sciences at the University of Istanbul, Social Sciences at the Ankara Faculty of History, Language, and Geography, and Political Sciences at the University of Ankara), Law (at the Istanbul University Faculty of Law), and Fine Arts (specifically Architecture and Music, at the Istanbul State Academy of Fine Arts, and the Ankara State Conservatory, respectively). Chapter 4 provides concluding remarks and summarizes the scope of the refugee scholars' contributions to Turkish higher education as well as their non-educational contributions, such as their work with the Turkish government and their sociocultural contributions; this chapter also provides a criticism of the 1933 University Reform and the subsequent Technology Transfer, from both the giving and receiving sides, before concluding.

In this chapter, we will provide some historical background in order to present the situational context of the events leading up to the 1933 University Reform and the arrival of refugee scholars at Istanbul University.

1.1 Historical Context: The Turkish Side

In the late 17th century, the Ottoman Empire's defeat at the Battle of Vienna in 1683 had halted the Empire's expansion into Europe and signaled a period of stagnation that followed for the next century. Nearly a hundred years later, another major defeat, this time against the Russians in the Russo-Turkish War of 1768-1774, is considered by many scholars to be the point at which the aging (and by that time, long stagnating) Ottoman Empire fell into a period of steady decline. Commonly accepted reasons for the decline include traditional conservatism, pride that resulted in isolation, unwillingness to establish ideological relationships with Europe and the rest of the modern world, religious scholasticism, and political turmoil (Ortaylı & İnalçık, 2008).

For many in the Ottoman Empire, the fact that the long-lived Empire was beginning to fail was difficult to accept. In particular, the failures of the Ottoman Empire's military – which had historically been the Empire's greatest asset – was devastating for the Ottoman rulers to behold, and brought them to the realization that the Empire was falling behind its modern

counterparts in many areas, specifically in matters of its military strength, its internal and external political situation, and the state of its economy.

In response to its failures, the Ottoman Empire in its period of decline then attempted to reform itself. Beginning in the late 18th and early 19th centuries, modernization became a big effort in the Empire, and kick started a period of internal reforms. The Ottomans' first catch-up movement was the *Nizâm-ı Cedîd* (lit. "New Order") program during the reign of Selim III, who ruled from 1789 to 1807. *Nizâm-ı Cedîd* included a series of reforms in various areas such as governance, land tenure, and trade legislation. The utmost importance, however, was given to the reformation and modernization of the Ottoman military after a Western model; so much that the phrase "*Nizâm-ı Cedîd*" later began to almost exclusively refer to the reform in the military. In order to follow the Western model accurately, during the course of the *Nizâm-ı Cedîd* movement, the Ottoman Empire brought officers from France to educate its soldiers in European military strategy, employing foreign experts from Europe to strengthen its domestic capabilities.

The Ottomans' second attempt to catch up with its modern counterparts was perhaps its most famous one. The *Tanzimat* (lit. "reorganization") period, which started in 1839 and ended in 1876, was the most extensive Ottoman attempt at reform, and is considered by many historians to have been the point at which the Ottoman Empire truly set its sights on Westernization. Like the *Nizâm-ı Cedîd* before it, *Tanzimat* sought to reorganize the Ottoman Empire's ailing assets, its military, technology, and economy. The *Tanzimat Fermanı* (lit. "declaration of reorganization"), also called the *Tanzimat-ı Hayriye* (lit. "auspicious reorganization"), was declared in 1838 by Sultan Abdülmecid II. The imperial edict specifically underlined that the Empire was in a state of decline, but that better, more auspicious administration, which would be made possible through reform, new legislation and new institutions, would cure the Empire—the "sick man of Europe". *Tanzimat* was also defined by the attempt to unite the Empire's peoples under the banner of Ottomanism, a response to the political climate of the 19th century and the rise of nationalism. Altogether, the *Tanzimat Fermanı* was considered to have been inspired by European civil rights movements, in particular the French Revolution and its treatise on the concept of citizenship and human rights. It was, however, also conducted with respect to the Quran, Islamic law, and the Ottoman Empire's extant laws and traditions, and as such, formed a synthesis of both Western and Eastern ideologies.

As previously stated, the various areas touched by the *Tanzimat* reforms included the Ottoman Empire's legal system, its finances, military, educational system, and economy. In matters of law, *Tanzimat* defined the concept of an Ottoman citizen and abolished differences between Muslims and non-Muslims, adopted a new Civil and Criminal Code, prepared a Commercial Law named *Kanunname-i Ticaret*, abolished slavery and slave trade and decriminalized homosexuality, and established new courts that functioned in a relatively secular manner (Hussein, 2011, p. 3). For the Empire's finances, *Tanzimat* prepared its first modern national budget, reorganized taxation, established its first central bank *Bank-ı Osmanî*, and introduced its first legal tender in the form of banknotes—though the *Tanzimat* period was also the first point at which the Ottoman Empire drew loans from European creditors. The Ottoman Empire attempted industrialization during this period as well. Military improvements were intended through a law of general conscription, the formation of a new navy, the establishment of a ministry for the navy by the name of *Bahriye Nezareti*, and the reformation of military education.

Most important for the purposes of this thesis, however, was what *Tanzimat* did for Ottoman education. A great many steps were taken to improve Ottoman education during the long run of *Tanzimat*.² The first step was the establishment of a council called *Meclis-i Umûr-ı Nâfia* (lit. “Council of Public Works”). This council had a broad array of responsibilities that aimed towards the betterment of the Empire's public works towards the end goal of economic development. It was also responsible for organizing education as well (Erdoğan, 1996, p. 190). After the establishment of another council by the name of *Meclis-i Maârif-ı Muvakkat* (lit. “Council of Temporary Education”) in 1845, it was decided that the Ottoman Empire would adopt a tripartite education system in the model of French education. The new Ottoman education institutions would include the *sıbyan* (primary) schools for children, *rüşdiye* schools for teenagers, and tertiary education, which would be undertaken by an institution by the name *Dar-ül-fünun*.

² The *Tanzimat* movement resulted in the establishment of a number of higher education institutions, all of which achieved varying levels of success. The various schools and higher education institutions that were established as a result of the *Tanzimat* movement and other reforms will be examined in detail in the following chapters, according to their specific fields. This will provide a better context of the history of education in those specific areas prior to the 1933 University Reform.

1.1.1 Darülfünun

Translated from Ottoman Turkish, the name Dar-ül-fünun means “the House of Sciences”. *Dar* means House, and *Fünun* connotes a collective of the sciences. As an institution, *Darülfünun* was an idea brought forward during the early stages of the *Tanzimat* movement, envisioned as a modern university that would be capable of teaching the people of the Ottoman Empire the various sciences it had neglected up until this point. By educating its people in modern sciences, ideas and methodology, the Ottoman Empire would address the many problems rife throughout its administration, its military, and its economy, and take a step towards catching up with its peers in Europe. The “House of Sciences” was thus an Ottoman attempt to provide a counterpart and peer to the European university. It would serve as the culmination of the reform of Ottoman education, and provide the Empire with the educated minds it needed to realign itself with the modern world.

Unfortunately, success did not come easily. From its inception, *Darülfünun* suffered a lifetime of instability. It was established, closed, and reopened a total of three times from 1863 to 1900, managing to survive as an institution for little more than a couple of years every time it opened its doors to students. *Darülfünun*'s problems, through its many iterations, were various, though there were often usual suspects: it lacked capable academic instructors and was bereft of teaching material, its students underperformed due to their inadequate foundations, it suffered funding and budgeting issues, and it became a target of criticism from conservative circles. As such, the Ottoman Empire's attempt at establishing a modern university became an effort that lasted almost half a century.

The initial criticisms against *Darülfünun* mostly had the same character as the criticisms against many *Tanzimat* reforms. In conservative circles, the idea of establishing a new, modern institution in the model of European universities was seen as a threat towards the existing system. The reformation of education was rejected by the existing *madrasa* schools, which operated on strict Islamic principles and had been in decline for some time.³ Even the very act of naming of the new tertiary education institution *Darülfünun* had been an ordeal: when the idea of establishing a modern university was put forward, it immediately drew the ire of the religious scholars within the *madrasas*, because according to them, ‘science’, or *ilm*, was the domain of religious studies, and they were its sole purveyors. The Ottoman

³ A *madrasa* is a religious Islamic school, and was the foundational education system of the Ottoman Empire. While influential during the rise of the Ottoman Empire, the *madrasa* school system began to fail in the late 16th century. Reasons for its decline included its inability to follow modern science, its detachment from positive sciences in favor of religious studies, and rampant corruption in the school system. The failure of the *madrasa* system is often considered to have been among the primary reasons for the decline of the Ottoman Empire.

government thus did not call their new modern institution a name like “*Dar-ül-ilm*” for fear that it would agitate the religious communities further and provoke stigma against the new institution.

Efforts towards the initial establishment of *Darülfünun* were not easily deterred, however. In the early stages of development, a council was established to decide on the academic materials that would be used by *Darülfünun*, and successful students were selected to be sent abroad to Europe, later to become instructors at the planned institution. Other efforts were spearheaded by the Ministry of Education and the Ottoman elite. The *Cemiyet-i İlmiye-i Osmaniye* (Ottoman Society of Science) was the Ottoman Empire’s first academic society, established in 1861 during the *Tanzimat* movement as a non-governmental organization to promote Western science. It established a journal by the name of *Mecmua-ı Fünun*, which served as a precursor to new tertiary education: it published articles on philosophy, history, geography, politics, literature, chemistry, geology, education, economy, astronomy, and medicine (Akgün, 1995). Further planning was done to provide capable students for *Darülfünun*, with the establishment of a secondary education institution by the name of *Darülmaarif* (which was the foundation of the current Cağaloğlu High School).⁴ Even so, the initial establishment of the *Darülfünun* faced other problems, namely physical ones. The building meant to house the *Darülfünun* took 17 years to be operable after being commissioned in 1845; it was completed in 1863, with the Crimean War between the Ottoman Empire and Russia severely impeding progress.

Following these efforts, the *Darülfünun* was opened for the first time in 1863. The initial activities of the *Darülfünun* took place as open conferences in various subjects including physics, chemistry, biology, astronomy, history, geography, and social sciences. The lectures were given by prominent thinkers and government officials among the Ottoman elite, and were attended by viziers and ministers. Unfortunately, not all those who attended the lectures could benefit from these lectures like the educated elite did, and *Darülfünun* once again came under scrutiny. Due to pressure from religious groups, complaints that state affairs were being ignored in favor of ministers attending lectures, *Darülfünun*’s conferences and other activities were ended after a year. Following a year-long pause, however, *Darülfünun* opened again in

⁴ It should be noted that even the establishment of *Darülmaarif* drew criticism from *madrassa* circles. In order to avoid further criticisms from the *madrassas*—who still held tightly to their opinion that science and education were their domain—*Darülmaarif* was not funded by the Ottoman state. It was funded by Abdülmecid I’s queen mother, the charitable Bezm-î Âlem Valide Sultan, and by a private foundation she owned (Türkiye Diyanet Vakfı, 1993, p. 548). Effectively, this was a workaround, and resulted in the *Darülmaarif* building later being called *Valide Mektebi* (The Mother’s School).

1864, and was moved to Nuri Efendi Konağı (Nuri Efendi Mansion), which had been outfitted with the much necessary chemistry and physics laboratories, as well as a competent library. However, when a fire broke out in late 1865, both of these assets were lost and the institution was closed down again until further notice.

A second opening of the *Darülfünun* was more prepared, and came as part of a more widespread attempt to modernize education in the Empire. In 1867, the Ottoman government requested that Victor Durey, Education Minister of France, prepare a project for the systematization of Ottoman higher education. Durey's project suggested the establishment of a university that would teach the natural sciences, history, law and administrative sciences, with the added establishment of capable libraries. In response to this request, *Mekteb-i Sultani* (currently Galatasaray High School) was founded after the model of a French lyceum. In 1869, the Ottoman government declared the opening of a second attempt of the Ottoman university, *Darülfünun-ı Osmanî* (the "Ottoman House of Sciences"). This new institution was modeled again with a French influence and was also administered in the French tradition. The second *Darülfünun* would split its teaching into three specific categories: it would teach philosophy and literature, law, and natural sciences and mathematics. Presiding over the *Darülfünun* would be the *Nazır* (lit. "administrator"), a rector. Additionally, for the first time, *Darülfünun* would choose its students by testing its applicants. The second *Darülfünun* opened officially in 1870, staffing itself with educators drawn from military education institutions, and continuing its tradition of night-time open conferences. The second *Darülfünun* could only continue its education for a little over a year, however. A statement made by a conference speaker, the Muslim modernist and activist Cemaledin Afganî, "*Nübüvvet sanattır*" ("Prophethood is an art/science), caused considerable controversy, and is cited to have been one of the reasons behind *Darülfünun*'s second shutdown in 1872. Other reasons cited are the lack of teaching staff and teaching material, as well as students without adequate educational foundation.

A third opening of *Darülfünun* took place under the name *Darülfünun-ı Sultani* (the "Sultanate House of Sciences"), which opened its doors in 1874. This attempt at the Ottoman Empire's modern university drew much of its foundation from the *Mekteb-i Sultani* that had been established to complement the second attempt of *Darülfünun*, and *Mekteb-i Sultani*'s French influence, in particular, came with it. Many of the scholars at *Darülfünun-u Sultani* were the French and European professors who also taught at the *Mekteb-i Sultani*, and due to the dearth of available lecturers, the teaching language of *Darülfünun-ı Sultani* was set to be

French. This, in turn, made *Darülfünun-ı Sultani* an option only for students who already knew French, the majority of whom came from the *Mekteb-i Sultani*. Effectively, this almost turned *Darülfünun* into a follow-up on *Mekteb-i Sultani*. Nevertheless, this attempt of *Darülfünun* was outfitted with a variety of faculties including a Faculty of Philosophy, Sciences, Law and Religious Studies. This time, however, *Darülfünun* was shut down due to budgeting issues, closing down its faculties one by one, beginning with the Faculty of Law in 1877. It was eventually dissolved entirely by 1881 (Namal & Karakök, 2011).

The last attempt of the *Darülfünun*, the fourth and the most successful one, took the name *Darülfünun-ı Şahane* (“Imperial House of Sciences”), and was opened in 1900. This took place after the First Constitutional Era, after the Ottoman Empire went through a complete legislative and administrative overhaul. This reopening of *Darülfünun* was requested by the reigning Abdülhamid II, and following a report from the vizier and Minister of Education, it was decided that the *Darülfünun* would once again be modeled after its European peers and, for the purposes of training capable scientists and statesmen, possess five distinct faculties for philosophy, natural sciences, religious studies, law, and medicine. Of these, the first three faculties were established new for the *Darülfünun-ı Şahane*, and the Faculty of Law and Faculty of Medicine drew their foundation from other Ottoman institutions specializing in them, from the *Mekteb-i Mülkiye* and *Tıbbiye* respectively.⁵ Thankfully, many of the problems that had plagued *Darülfünun-ı Şahane*’s predecessors had been alleviated by the fourth attempt of the Ottoman university. The impact of foundational failures, such as the unavailability of teaching staff, the dearth of competent students, or the lack of adequate teaching material in the Turkish language, were not felt as much as in the previous establishments. The fourth attempt at *Darülfünun* thus survived for thirty-three years without closing, though it was reorganized several times during that period. The most important of these reorganizations occurred in 1914-1915 due to a military alliance between the Ottoman Empire and Germany, and due to its similarities with the 1933 University Reform event examined in this thesis, will be examined in further depth.

1.1.2 The 1915 Reorganization of *Darülfünun*

A significant reorganization of *Darülfünun* occurred in 1914 as a result of the Ottoman Empire entering World War I alongside Germany. As the two countries allied militarily and

⁵ These schools will be examined in further depth in later chapters. *Mekteb-i Mülkiye* will be examined in Chapter 3.1, Economics, and *Tıbbiye* will be examined in Section 3.2.1.1 of Chapter 3.2.

politically, the union also brought forth an alliance in culture, and especially in education. Shortly after the outbreak of the war, a German “Institute for Education and Culture” was established in Istanbul. This institute sought to improve relationships between the Ottoman Empire and Germany, especially in educational and cultural matters, and one of its efforts was a reorganization of *Darülfünun* – which we will call the “1915 Reorganization” for the purposes of this thesis. The institute, and also this reorganization, was spearheaded by Franz Schmidt, who had previously served the Ottoman Empire in the Education department of the Ottoman Ministry of Foreign Affairs. For the purposes of this reorganization, a large number of German scholars were invited to *Darülfünun*. These émigré scholars came from a variety of German universities and took various positions at *Darülfünun*, becoming responsible for teaching in various fields:



GERMAN SCHOLARS ARRIVING IN DARÜLFÜNUN AS A RESULT OF OTTOMAN-GERMAN COOPERATION – 1915-1918		
Name	Field	Institute of Origin
Georg Anschütz	Pedagogy and Psychology	University of Hamburg
Gotthelf Bergstässer	Comparative Semitic Languages	University of Leipzig
Friedrich Wilhelm Carl Giese	Ural- Altaic Languages	Berlin College of Eastern Languages
Carl Ferdinand Friedrich Lehrmann-Haupt	Ancient History, Greek and Roman History	University of Berlin
Erich Obst	Geography	University of Marburg
Walther Penck	Geology, Minerology	University of Leipzig
Erich Leick	Botany	University of Leipzig
Boris Zarnik	Zoology	University of Würzburg
Kurt Hoesch	Organic Chemistry	Charlottenburg Technische Hochschule
Fritz Arndt	Inorganic Chemistry	University of Breslau
Gustav Fester	Industrial Chemistry	University of Frankfurt am Main
Friedrich Hoffmann	Economics	University of Hannover
Anton Fleck	Finance	University of Kiel
Walther Schönborn	Civil Law	University of Tübingen
Friedrich Gunther Jacoby	Philosophy	University of Greifswald
Erich Nord	European Civil Law	Chief Interpreter at the German Consulate in Istanbul
Johannes Heinrich Mordtmann	History Methodology	Former Consul General
Eckhard Unger	Auxiliary Sciences of History	Archeologist and Numismatics Expert at the Royal Museum of Istanbul
Werner Richter	German Language and Literature	University of Greifswald
Joseph Würschmidt	Geography	University of Erlangen, Adjunct Professor

Source: (Dölen, 2013, pp. 79-83)

In many ways, the arrival of German scholars in *Darülfünun* in 1915 was similar to the arrival of the refugee scholars at Istanbul University in 1933. While the latter group are the primary subjects examined in this thesis, it should be mentioned that this former group, and the work they did at the *Darülfünun*, was much like a ‘precursor’ to the latter group and what they did at Istanbul University. The methods of the Reorganization were more or less the same: it utilized foreign human capital at an administrative and academic level in order to introduce a European scholarly method, ultimately transferring technology.

However, the 1915 Reorganization of *Darülfünun* cannot be compared to the 1933 University Reform in its level of success. Due to the shortness of their stay, and difficulties posed by the language barrier (despite the Turkish assistants who translated for them), the German scholars who arrived in *Darülfünun* could not contribute to Turkish higher education as much as would have been desired. The 1915 Reorganization of *Darülfünun* led to significant organizational improvements nevertheless; successes were achieved in the establishment of research institutes, the establishment of new laboratories and libraries, the preparation of new textbooks and teaching material, and the introduction of new, modern teaching methods with focus on empirical studies.

The employment of German scholars at *Darülfünun* was the first large-scope attempt at reforming the university through the use of foreign human capital. It can also be said to have laid out some of the groundwork in matters of international cooperation, the use of foreign human capital (in both planning and implementing educational reform), structural and organizational priming (particularly to help overcome administrative or cultural barriers), and ultimately, the transfer of technology facilitated through the movement of people. Unfortunately, in the case of the 1915 Reorganization, the biggest problem was that it was not as long-lived as the 1933 Reform. We should remember, at this point, that the 1915 Reorganization of *Darülfünun* was guaranteed by the military alliance between the Ottoman Empire and Germany during World War I. The end of World War I, which resulted in Germany and the Ottoman Empire's joint defeat, signaled the end of that alliance. Following the signing of the Armistice of Mudros in 1918, and due to political pressure from the Allied Powers, diplomatic relations between the Ottoman Empire and Germany were weakened. After only three years at *Darülfünun*, the German scholars were forced to return home. The 1915 Reorganization achieved some progress in the development of the modern Turkish university, but not enough.

1.1.3 Darülfünun Criticized

At the end of World War I, the Ottoman Empire was in its death throes. While the Ottoman government signed the Treaty of Sevres and consigned itself to severe partitioning of its lands, not all of its people were willing to submit. The Turkish War of Independence began in 1919, led by *Kuva-i Milliye* (Turkish National Movement) and Mustafa Kemal. After four years of war, the Turkish War of Independence was won. It resulted in the end of the Ottoman

Empire, and Turkey became a Republic on October 29, 1923, entering a whole new era. The new Republic of Turkey was a modern, secular nation-state, transformed by a series of sweeping reforms under the six tenets of republicanism, nationalism, statism, populism, laïcité, and revolutionism. Political reforms were followed by legal ones, social reforms by religious ones, and economic reforms by educational ones – often simultaneously, and for one to aid in the success of the other.

Educational reforms in the Republican era were many, and completely revolutionary in nature. The unification of Turkish education abolished the old *madrassa* system of the Ottoman Empire, introduced coeducation of both sexes, improved literacy by adopting the Latin alphabet, and integrated a secular curriculum. Turkish educational reforms, however, did not stop at the reformation of primary and middle schools. Higher education was considered to be of paramount importance, and the young Turkish government looked to higher education to spread its revolutions and to render them eternally sustainable. In 1924, entering the Republican era, the *Darülfünun* was recognized as an autonomous university, the country's sole modern higher education institution. In the words of Atatürk himself, the following was expected of the Turkish education, which would have included *Darülfünun*:

“Our cause is to exalt our presence as the most civilized and prosperous nation. This is the dynamic ideal of the great Turkish nation, which has achieved revolution not only in its institutions, but also forever in its ideas. (...) We can only achieve success in this endeavor by having a plan, and working rationally towards our goals. To that end, it is the utmost duty of this cultural authority to raise the institutions, people, and technical personnel needed by our homeland's great war for development, those who can understand and pass on the ideology of our nation's purpose, to spread it across generations.” (Atatürk, 1929, pp. 312-313) (Translation mine.)

Whether *Darülfünun* succeeded in these goals, however, was a topic of much debate. While *Darülfünun* remained largely untouched during the first ten years of the new Republic, attitudes towards *Darülfünun* began to shift slowly throughout the years.

According to Dölen, attitudes against *Darülfünun* could be split into two very separate camps. The first camp held liberal, reformist beliefs and trusted in the Humboldtian concept of university, and as such, they were fervent believers in the university's autonomy. They noted that the *Darülfünun* should achieve progress naturally on its own, and that it could not be compared with the centuries-old European universities that were considered its counterparts. They also argued that any sort of political intervention directed at the *Darülfünun* would do more evil than good. The second camp, however, saw *Darülfünun* as a symbolic burden. Like

many Ottoman institutions, it was an inherited legacy, one that was associated with a history of failure and served as a constant reminder of the past. For the first ten years of the Republic, the ideas of the first camp had been prominent. However, beginning in the early 1930's, the second camp's ideas began to gain traction (Dölen, 2010a, p. 3).

The second camp's criticisms against *Darülfünun* were many and various. Taşdemiroğlu summarizes that, despite the Republic's early desire to not get directly involved with the autonomous *Darülfünun*, the institution "did not refrain from attitudes and behaviors that were censoring, in violation of, or completely against the Turkish revolution" (Taşdemiroğlu, 2000, p. 191). According to Irmak, *Darülfünun* also could not ever keep up with the Turkish revolution, and effectively "remained a *madrassa*" (Irmak, 2001). By the time the world entered the 1930s, many among the Turkish government were in favor of committing to a thorough examination of *Darülfünun*, which seemed ripe for reform. It should be noted, however, that the arguments against *Darülfünun* were not merely political. While the most evident reasons for skepticism towards the institution seemed rooted in politics and its inability to attend to the Turkish revolution as desired, the *Darülfünun* was indeed beset by a myriad of problems. Outwardly, most obvious failure of *Darülfünun* was that it had simply not accomplished much of note in ten years. There was a significant lack of academic activity and academic quality. *Darülfünun* produced few scientific publications and conducted little scientific research. Its students failed to do their own scientific experiments, as there was little guidance from the academic staff to the student base, and proper use of academic resources was rare. Its own academic staff were incapable of coming to the sorts of constructive agreements that would pave the road for scientific cooperation, and this could not be achieved across faculties and departments either, eliminating the possibility of cross-disciplinary activity. Faculty members were often accused of infighting, with higher rankings rife with cronyism and lower rankings full of scholars who would take other jobs, neglecting their academic activities (Mazıcı, 1995, pp. 56-57). Many of these criticisms would later be confirmed by the education expert, the Swiss pedagogy professor Albert Malche, who would be invited to Turkey in 1932 to investigate the *Darülfünun* and provide advice towards its reform (Malche, 1939).⁶

⁶ Malche's report is difficult to find in its original form. The form was republished with a Turkish translation in 1939 by the Turkish government, but contains a revised version of the original text. Even the most prudent of historians, e.g. Dölen and Widmann, use a secondary source—the law professor Ernst Hirsch, whose book on the history of universities contains a copy of the original report (Hirsch E. , 1950, pp. 229-295).

It should also be noted that the shift in attitudes towards *Darülfünun* also coincided with the Great Depression. Ege and Hagemann offer a point of view that is rooted in economics: they propose that the attitude shift, which led to the reform of *Darülfünun*, was due to economic circumstances which, in turn, transformed politics during the 1930s. Prior to the Depression, the new Turkish Republic had, politically and economically, tended towards liberalism. However, the circumstances posed by the Depression made the Republicans consider the idea of state interventions to be indispensable towards the goal of maintaining the economy, and they began to take increasingly protectionist and étatist stances, which reflected in their political attitudes as well. In turn, the shifting mentality then led to a period of disputes between the étatist Republican government and the liberal *Darülfünun* professors. These disputes mostly took place in writing. They were most evident in serial back-and-forth attacks in the papers *Cumhuriyet* and *Hakimiyeti Milliye*, and later especially the journal *Kadro*, which became *Darülfünun*'s most fervent critic. Ege and Hagemann note that:

“(Kadro) evaluated all Ottoman institutions with reference to a sacred concept: ‘*inkılap*’: revolution, radical reform. An attitude thought to be opposed to *inkılap*, or simply somewhat critical of its necessity and its beneficial character, was immediately condemned, and any institution accused of such thinking was doomed to abolition.” (Ege & Hagemann, 2012, p. 950)

Summarily, the reform of *Darülfünun* became an idea in the 1930s in an attitude shift spurred on by the economic and political circumstances of the time. With political criticisms against the *Darülfünun* on one hand, and a myriad of real institutional problems to address on the other, one thing was clear. The *Darülfünun* was, once again, ripe for reform.

1.1.4 The 1933 Reform

In 1932, the Swiss pedagogue and University of Geneva professor Albert Malche was invited to Turkey, on official business to propose a reform proposal for the Turkish university. Malche's visit, and his subsequent observations of the state of *Darülfünun* resulted in his report, which was titled *Rapport sur l'universite d'Istanbul*. According to Widmann, this report would be best categorized in three separate parts, where he initially introduces the purposes and methods used in his investigation, offers his critical evaluation of the situation of the university, and concludes with his proposals towards a reform of the institution (Widmann, 1999, pp. 77-78). The main points touched on in Malche's report included the following observations, many of which confirmed the early criticisms:

- There is a considerable lack of scientific publications available in the Turkish language.
- The salaries of *Darülfünun* academic staff, particularly *Müderriis* and *Muallim* ranks, are low. They take on secondary jobs in order to alleviate this problem, which leads to a general decline in the quality of education.
- Teaching methods are completely outdated. The courses are too theoretical and almost encyclopedic, and it is expected of the students to memorize information rather than truly absorb knowledge, which impedes attempts at true academic research. Additionally, students do not have any chance to practice what is preached at them; without application, they have no chance at experimental learning.
- The foreign language skills of both academic staff and students are lacking. Only a ‘lucky few’ students, namely those who graduated from English, French or German high schools, can follow courses adequately.
- There is no chance of raising the next generation of competent scholars in this environment (Malche, 1939).

Several issues were raised on the matter of *Darülfünun*’s autonomy. As Malche noted, it was important for an academic institution to have its scientific freedom ensured through a policy of non-intervention. However, it was also the state’s responsibility that this academic institution be administrated accurately, and prevent it from falling into isolation and contentment. It could be argued that Malche thus remained ambivalent on the matter of academic autonomy, but he was also against several issues ingrained in the *Darülfünun*’s administration. One such problem, for example, was an early example of Turkish cronyism, where advancement to *müderriis* (professor) rank in *Darülfünun* was voted on by a council made out of the applicant’s friends and colleagues. It was also clear that Malche also thought that left to its own vices, *Darülfünun* might continue traditions that would impede progress (Namal & Karakök, 2011, p. 32).

It would be wise, at this point, to mention that Malche’s report caused considerable unease among *Darülfünun* staff. Prior to Malche’s arrival, the new Turkish Republic had been observing and analyzing the workings of *Darülfünun* itself, essentially in self-reflection, for a period of over two years, and was making efforts towards *ıslâhat* (lit. “reformation”) and *tensikat* (lit. “severance”). Mere word of these efforts had caused rumors to spread through *Darülfünun*’s academic staff, dampened their moods and “reduced their already lacking teaching ability to near zero”, according to *Darülfünun* cardiologist and later rector Neşet

Ömer (İrdelp) (Dölen, 2010a, p. 235). After a long period of uncertainty caused by the rumor of yet another *Darülfünun* reform looming overhead, the institution had lost its sense of direction in education and teaching, and its discipline began to deteriorate. Neşet Ömer's criticisms – although also self-examinatory and critical of the state *Darülfünun* was in – were then redirected at Malche and signified hesitance towards the reform efforts being handled by foreign hands:

“There is a rumor that *Darülfünun* will be reorganized by a Prof. Malche from Switzerland. Surely the reform of the *Darülfünun*, which is a matter of National Culture, is a necessity; yet to relegate this task to a Swiss man of dubious academic authority... that is difficult for me and those who think like me to fathom. (...) We therefore request that this matter be brought before the Gazi.” (Dölen, 2010a, pp. 235-236) (Translation mine.)

Here, Neşet Ömer criticizes the foreign quality of the reform movement, and requests that Atatürk step in; however, he is unaware that Malche's report had already been thoroughly examined, commented on, and accepted by Atatürk as well as the Ministry of Education (Kocatürk, 2017). It was decided by the Ministry of Education that this particular reform of *Darülfünun* would result in a brand new institution, rather than a new version of the long-time failing *Darülfünun*.

“(Darülfünun's) lectures, professors, associate professors, staff, laws; everything will be reconsidered and reestablished; its programs, its staff's working hours even, maybe its location, everything will be changed. Right-minded people, free of malice, will search for the people suited for the job, not jobs suited for the people; if necessary, we will bring in capable hands from Erzurum to take the position, if there are no local professionals, we will bring in Germans, Russians, whoever; only the elements who will be of use to the university will be invited. Such a system will be built that we can raise capable doctors to send to every corner of the country; so that we can raise the number of our serious scholars and learned men; who have learned not in the tradition of the *madrassa* but in that of modern methodology; so that they may teach, work, and give us a name among universities... We have faith in the manners, knowledge, and graces of the officials from the Ministry of Education and the Swiss expert. We do not doubt their knowledge or objectivity; we are certain that they will do whatever is necessary to elevate this nation. This is a national matter. We cannot listen to people's complaints, act for their sakes or pay heed to their claims of merit.” (Osman, 1933) (Translation mine.)

Seen as a matter of national importance, the 1933 University Reform was carried out with great seriousness, and one of the most important (and contentious) aspects of it was the aforementioned ‘severance’ of its existing academic staff. An *Islahat Komitesi* (Severance Committee) was established within the Ministry of Education to evaluate *Darülfünun* personnel in order to decide who would have to leave and who would remain. This matter of

severance, being an important part of early Turkish history, is a topic of research in itself, and is admittedly too broad-scoped, and often politically charged, to be discussed at length within this thesis. Thus, for the sake of brevity, we shall provide the following summary: while it would be naïve to claim that the committee's decisions were uninfluenced by the sociopolitical conjecture at the time, and led to the dismissal of a number of highly valuable Turkish scholars, it would also be equally naïve—and even ill-intentioned, as the issue is rarely divorced from contemporary politics—to claim that the committee did not operate on the base of simple meritocracy in order to address *Darülfünun*'s problems, particularly its low academic productivity. In the end, *Darülfünun* staff became subject to evaluation, and was reorganized and restructured. As per the decisions of the committee, of *Darülfünun*'s 151 total academic staff, 92 were laid off, with the remaining 59 taken into the reformed Istanbul University and re-employed.⁷

According to Widmann, Malche did not specifically point the Turkish government in a specific scientific or intellectual direction, at least not consciously. However, his report pointed out the problems that would need to be addressed. In his own words, he likened *Darülfünun* to a machine:

“There is significant power loss. This needs to be addressed by making the machine simpler, making its work more intensive, and providing the ones who run the machine the tools with which they can use more convenient methods... The situation is not hopeless. It is serious, but that is all.” (Widmann, 1999, pp. 79-80) (Translation mine.)

From this particular quote, we can infer that Malche thought *Darülfünun* possessed the necessary physical parts, like a machine body. However, it worked inefficiently, as its engineering were too convoluted to comprehend; this would be addressed by making it easier to understand, and by making it focus more on its primary tasks. Finally, what it needed was better methods – better technology – and people who could operate the machine more productively. Simply, the analogy was that if *Darülfünun* were a simpler, more focused machine, and those who operated it knew better methods, it could become what the Turkish government wanted it to be. This was why the Turkish government took Malche's report and

⁷ As this thesis is primarily focused on the refugee scholars who succeeded the academic staff removed from *Darülfünun*, rather than the academic staff in question, this matter of 'severance', and the cases of the dismissed *Darülfünun* academics are not going to be discussed at length. Emre Dölen provides the most extensive account of these academics in *Darülfünun'dan Üniversite'ye Geçiş: Tasfiye ve Yeni Kadrolar* (The Transition from *Darülfünun* to University: The Purge and New Personnel), the third volume of his distinguished *History of the Turkish University* series.

his suggestion to heart, and reformed the University; they made it simpler, more focused, and manned it with operators who knew better methods (and further, could teach these better methods to new operators) – the refugee scholars.

1.2 Historical Context: The German Side

On June 28, 1919, Germany signed the Treaty of Versailles with the Allied Powers of World War I. As the most prominent member of the losing side of the war, by signing the peace treaty, Germany accepted responsibility for the losses and damages caused by the war as a result of her aggression, and received a number of harsh sanctions as a result. It had to cede large amounts of territory, was subjected to military restrictions, and consigned itself to pay substantial reparations that its devastated economy could not possibly pay.⁸ While the Treaty of Versailles earned Germany a period of peace, the economic consequences of that peace led to a long and difficult period of social and political stagnation in Germany.

Over the following years, Germany's difficult situation was exacerbated by the Great Depression. The crack that had begun at the foundation of the country – its economy – grew deeper, and the resulting feeling of uncertainty for the future, now on top of the memory of defeat and the humiliation in international politics, made Germany turn inward. A strong feeling of resentment and injustice had already been looming because of many factors such as the War Guilt Clause. Germany was forbidden to unite with historical allies such as Austria, and the signing away of the resource-rich Alsace-Lorraine and Poland, had ultimately led to the Weimar Republic falling out of public favor. Economically, Germany had already been crippled many times over by the Treaty of Versailles and its sanctions. When Germany declared itself in default in 1922, in what is called the Ruhr crisis, France and Belgium militarily occupied the Ruhr valley in Germany to force the German government to pay the reparations it owed. Poverty and suffering followed. In the period from 1924 to 1929, the Weimar government's attempt to solve the economic misery imposed by the Ruhr crisis by printing money backfired tremendously, and severe hyperinflation made a bad situation even worse. Over the years, the internal political narrative took a sharp turn for the extreme right, as it often does following episodes of economic depression, and a rhetoric that consistently alleviated the public's various anxieties came to the foreground of German politics. One such idea, for example, was the "stab-in-the-back myth", which posed the notion that Germany had

⁸ According to some sources, Germany's total loss of land after World War I was around 13% of its territory, and around one-tenth of its population (between 6.5 and 7 million people) (USHMM, 2017).

not lost the war on the battlefield, but came undone due to internal betrayals. Not all Germans were therefore to blame for the situation at hand; not ‘true’ Germans. It was also during this time that nationalism was proposed as a natural savior. However, national devotion soon gave way to more extreme interpretations of national pride. Political power began to be drawn from manufacturing an enemy out of the “other” – which at the time happened to be Jews, Marxists, and ‘cultural Bolshevics’. Extremism began to rise steadily in the wake of economic collapse and political instability. At the end, the perfect storm was created, enabled by three things Germany thought it needed: someone to blame, a plan to revive the economy, and a man with undeniable skill for demagoguery. These were thus the circumstances in which the National Socialists and Adolf Hitler came to power.

1.2.1 *Die Machtergreifung, or the Nazi Seizure of Power*

After a long period of political instability, the aging *Reichspräsident* of Germany, Paul von Hindenburg, appointed Adolf Hitler as Chancellor of Germany on January 30, 1933. This point in history is commonly dubbed *Machtergreifung* (lit. “seizure of power”) by both German and English-speaking historians alike. It refers to the culmination of the National Socialists’ rise to power in Germany, which after several years, converted the old Weimar Republic and its parliamentary democracy into a centralist dictatorship operating on the Führer principle. The *Machtergreifung* of January 30 was followed shortly afterwards by the Reichstag Fire of February 27, after which Hitler (and President Paul von Hindenburg) declared the Reichstag Fire Decree, sending the country into a state of emergency and suspending many articles in the German constitution that dealt with civil liberties in Germany. These included rights of personal freedom (habeas corpus), freedom of expression, freedom of the press, freedom of association, freedom of assembly, and secrecy of correspondence (Reichgesetzblatt, 28). For the German people, the Reichstag Fire Decree was only a portent of what was to come.

Several days later after the Reichstag Fire and the issued decree, Hitler and the NSDAP, along with the German National People’s Party (DNVP), secured a majority of the parliament in the German federal elections of March 5. Solidifying their political power base, the National Socialist regime began to quickly crack down on their political opponents, dissidents, or more or less anyone deemed potentially suspect. Nazi oppression began to permeate every aspect of German life, and eventually, their reach extended not to only to opposing politicians or known

communists or other such usual suspects, but also to regular citizens going about their daily lives. On April 7, the Nazis issued a law called the *Gesetz zur Wiederherstellung des Berufsbeamtentums* (Law For the Restoration of Civil Service). This provided the context for the arrival of the refugee scholars in Turkey, and will therefore be examined in further depth (after a brief note).

1.2.2 Anschluss

It should be noted at this point that Germany was not the only country that came under Nazi rule to be subject to its new laws. On March 12, 1938, Germany also annexed Austria in an event called the *Anschluss* (lit. “joining”). Thus, five years after the *Machtergreifung*, the same things that happened in Germany began to take place in Austria as well—as part of “Greater Germany” and the Third Reich, Austria also became subject to Nazi laws such as the *Gesetz zur Wiederherstellung des Berufsbeamtentums*. This is how a number of refugee Austrian scholars came to be included in the 1933 University Reform.

1.2.3 *Gesetz zur Wiederherstellung des Berufsbeamtentums*: The Nazi “Law for the Restoration of Civil Service”

The Nazi party’s issue of the *Gesetz zur Wiederherstellung des Berufsbeamtentums*, hereafter to be referred to shortly as *Berufsbeamtengesetz* (lit. “Law of Civil Servants”), was declared on the national newspaper *Reichsgesetzblatt* on April 7, 1933, only two months after the Nazis’ seizure of power. Also known as the Civil Service Law, Civil Service Restoration Act, or Law to Re-establish the Civil Service, the *Berufsbeamtengesetz* was among the first few ‘official’ acts by the National Socialist party to remove its political dissidents, Jews and other undesired groups from civil life, by literally writing into law that they would not be able to work in the government or any sector related to it.

According to the law, in order to restore a professional and national civil service, civil servants who were classified as non-Aryans (or people descended from non-Aryans, especially those with Jewish parents or grandparents) and civil servants who had a history of political affiliation with the Communist Party (or any associated organizations) were to be retired from service. Further paragraphs also gave some vague reasoning regarding officials’ lack of training or the government’s intent to simplify administration. In effect, the law called for the dismissal of many groups of civil servants, with its first version specifying teachers, professors, judges or other such government positions. A revision of the law, which was

passed shortly after, added to this list of vocations lawyers, doctors, tax consultants, notaries and even government-employed musicians.

There was only one minor, short-lived opposition to the *Berufsbeamtensgesetz* at the time it was drafted. In early 1933, the last *Reichspräsident* of Germany, Paul von Hindenburg, was still alive – Adolf Hitler had not yet become the Third Reich's sole head of state. Hindenburg opposed this law, and while not powerful enough to veto it entirely, managed to include several amendments where some civil servants could be considered exempt from this law. Exemptions were to be considered in cases where the civil servant in question was:

1. A World War I veteran who served at the front
2. Someone who had been in civil service since the start of World War I (1 August 1914)
3. Someone who had lost a father or son in World War I

The bill was signed into law on April 7, 1933, after Hitler agreed with Hindenburg's amendments. Hindenburg's amendments allowed for a large number of civil servants—including many refugee scholars—to retain their jobs, but only impermanently. When Hindenburg died the following year in 1934, the amendments were retracted. The clauses deeming certain individuals exempt from the law were removed, and those who survived the first issuing of the law were dismissed regardless of their history of military service, commendations or other honors. The Nazis' ultimate goal, arbitrary dismissal of unwanted individual officials, was achieved at last.

The impact of the *Berufsbeamtensgesetz* was severe. Social historian Herbert Strauss estimates that nearly 15% of all employed university professors in Germany at the time, numbering around 1,100 to 1,500, were dismissed as a direct result of the *Berufsbeamtensgesetz* (Strauss, 1983). Should the dismissal of non-university researchers and scientists who were in training by the time of the law's issuing be taken into account, the number of scholars dismissed as a result of the *Berufsbeamtensgesetz* can be estimated to rise to around 2,000 (Akbulut-Yüksel & Yüksel, 2011). The National Socialist regime was devastating to Germany's scientific life over the years. After their terrifying experience, many German scholars sought to evaluate the loss caused by the *Berufsbeamtensgesetz* and the Nazi era. In a post-war era study in 1956, the German sociologist and economist Christian von Ferber noted a 39% loss in higher education in Germany due to emigration (Ferber, 1956). A later study, the "Handbook of German Emigration" claimed that science in German-speaking countries lost nearly a third of its personnel – essentially, a third of its human capital.

Historian of science Klaus Fischer noted that almost 20 to 25 percent of scientists in Germany were dismissed by 1938 (Fischer, 1991). While for many there was no happy ending, history can take solace in knowing that, for some lucky few, there was chance elsewhere.

1.2.4 *Notgemeinschaft Deutscher Wissenschaftler im Ausland* (Emergency Association for German Scientists Abroad)

The *Notgemeinschaft Deutscher Wissenschaftler im Ausland* (lit. “Association of German Scientists Abroad”), hereafter *Notgemeinschaft*, was an organization formed in Switzerland by the pathology professor Philipp Schwartz in 1933. Its purpose was to function as a community to aid academics who had been subjected to the *Berufsbeamtengesetz* and had lost their jobs as a result. Its primary purpose was to mediate new job opportunities for the persecuted scholars. The organization’s first members were a ‘colony’ of displaced academics who had taken up residence in Switzerland. Established first in a small office in Zurich, the organization was promoted in the Swiss newspaper the *Neue Züricher Zeitung* in April 1933. It soon became flooded with requests for aid and counsel, nearing a thousand requests in the following weeks. Later, it soon became a small self-help group funded by academics and Swiss philanthropists. Within two months of Schwartz’s arrival in Zurich, his offices were working fourteen hours a day with paid and volunteer personnel. Schwartz himself described the organization with the following words, with the heart of a devoted academic:

“Desperate times have made it necessary for us to establish this organization. Our purpose was not to find jobs to sustain our livelihoods. Our sole purpose was to find places where we could serve the science that gave meaning to our existence. Even though it has been six months since we’ve been displaced, none of us are alone. We can gaze safely and calmly into the future: as men of science and research, we who devoted ourselves to this job can continue our work and prove our worth twice, maybe ten times over.” (Widmann, 1999, p. 90) (Translation mine.)

About a month after the establishment of the *Notgemeinschaft*, Schwartz received word from Albert Malche stating that the Turkish government had requested him to write a report regarding the reform of their university, and that positions for some displaced German scholars may be available in Istanbul. Schwartz then made a short trip to Turkey, arriving in Istanbul on July 6, where he met with *Darülfünun* professor Kerim Erim. From there, he was taken to Ankara, and there met with the members of the Turkish government, in particular the Turkish Minister of Education Reşit Galip, as well as with other high-ranking officials at the ministry. Schwartz then proposed the idea that the displaced scholars take part in the Turkish

government's intended reform of their university, and the Turkish officials appeared more than interested.

In his memoirs, Schwartz notes that his meeting with the Turkish government took almost seven hours, and was the first time the *Notgemeinschaft* was officially recognized. He notes that the Turkish officials effectively pelted him with the question "Can you offer us a professor for (...)" which they asked no less than thirty times. Schwartz replied to the ministry's inquiries with names from the *Notgemeinschaft*'s list of available scholars, their short biographies and backgrounds, and if available, provided his own personal opinions on them. During their lengthy work, the officials of the Turkish government and the *Notgemeinschaft* decided upon the contracts to be made between the reformed university and the refugee scholars that would populate it. The agreed upon contract for employment at the 1933 University Reform held the following clauses:

- The average length of a contract is five years.
- For the first three years, education will be conducted in foreign languages such as English, German, or French. After three years—at which point the refugee scholars are required by the contract to have learned Turkish—education will be in Turkish.
- In order to raise Turkish academics and scientists, graduate and post-graduate studies will be conducted by the refugee scholars.
- By the end of their third year, refugee scholars will be required to publish textbooks for their courses. Turkish translations of these publications will be prepared by the refugee scholars, and their Turkish aides where necessary.
- If requested, the refugee scholars will serve as advisors to the Turkish government as experts in their respective fields.
- The refugee scholars will devote all their time to teaching and research and be required to conduct their own lectures and exams themselves.
- Salaries will be paid in full and in cash.
- If the need arises, the refugee scholar will personally appoint a surrogate to conduct his courses, practice or exams, and is required to notify the Rectorate about the matter.
- In the case of illness, a year's salary will be paid in full. In the case of death, the refugee scholar's spouse or children will receive this amount.
- Transport costs for the refugee scholar, their family, or their belongings will be paid for by the Turkish government (Dölen, 2010a, pp. 465-467).

At the end of the meeting, Schwartz noted that he “lost track of time”, though he didn’t mind as “(These hours) ... meant as much as creation itself to those who had been so unjustly and outrageously been thrown out of Germany.” At the end of the day, Schwartz sent the *Notgemeinschaft* a telegraph, saying that he had found jobs for “not three, but thirty” displaced scholars (Widmann, 1999, pp. 91-92). The Turkish side seemed equally excited by the agreements made after the hours of grueling work. Education minister Reşit Galip is quoted to have spoken very enthusiastically:

“Today we have achieved something extraordinary, something without example. Five hundred years ago, when we besieged Istanbul, Byzantine scholars fled the city and exiled themselves to Italy. We couldn’t prevent it. What resulted there was the Renaissance. Now we take back from Europe what we once let go. We hope to reform our nation. Bring us your science, your methods; teach our youth the ways of knowledge. I offer you my sincerest thanks and respects.”

In Galip’s words, the essential idea behind the 1933 University Reform, and the arrival of refugee scholars from Germany and other German-speaking countries, was abundantly clear. The Turkish Republic had set its sights on a noble goal: modernization and reform, which it would achieve through learning Western methods, Western science, and Western technology. Through the arrival of the refugee scholars, it would *transfer* this technology.

In the following chapter, we will examine the concept of *technology* and in particular, the *transfer of technology*. We will begin by investigating the details of what comprises technology and provide an accurate definition of what we consider technology to be. In addition, we will analyze the concept of technology transfer and its various components, and following a brief discussion of the various modes of transfer, we will illustrate how the arrival of the refugee scholars enabled such an act.

2. Technology and Technology Transfer

2.1 Technology

For most people going about their daily lives, technology is often represented by the various tools that make their lives easier: the internet, mobile phones, computers, gadgets and trinkets. In colloquial usage, these physical constructs are all that comes to mind when one thinks of ‘technology’. As easy as it is to reduce the entire idea of technology into an easily digestible, common understanding, in reality, technology represents a whole philosophical concept that represents a deep phenomenon in human life.

According to the Oxford English Dictionary, in the simplest terms, the word *technology* connotes a “branch of knowledge dealing with the arts and mechanical sciences”. It includes the “application of such knowledge for practical purposes, esp. in industry, manufacturing, etc.,” and contains the “sphere of activity concerned with this,” in the end becoming the cumulative “the mechanical arts and applied sciences collectively.” Technology is also represented by all “the product(s) of such application(s), technological knowledge or know-how, technological process(es), method(s), or technique(s),” and is often exemplified in “machinery, equipment, etc. developed from the practical application of scientific and technical knowledge,” as well as “particular practical or industrial arts or technological disciplines.” In comparison to the dictionary definition, a popular, and more condensed, interpretation of technology proposed by Galbraith is that technology represents “the systematic application of scientific or other organized knowledge to practical tasks” (Galbraith, 1967, p. 12).

Alternatively, physicist Ursula Franklin defines technology as “practice... the way we do things around here” (Franklin, 1990). If this definition seems too simple, we can consider a more thought-provoking definition of technology given by philosopher Bernard Stiegler in which he considers technics “the pursuit of life by means other than life,” by which the human race can ‘exteriorize’ itself – by creating technology, mankind invents new modes of existence for itself (Stiegler, 1998) (Roberts, 2005). Yet another definition for technology can be given as “a form of human knowledge and a process of creating new realities” (Skolimowski, 1966).⁹

⁹ For those interested in further definitions, Wahab provides a broad-scope analysis of the various definitions of technology and technology transfer in (Wahab, 2012).

Evidently, there are so many varied definitions of the concept of technology to that analyzing it becomes an epistemology in itself—which should not be surprising, as technology is often defined as a subset of knowledge. One can answer many questions about the concept of technology, such as *what* it is, *how* it is, or *why* it is, and every time such a question is asked one would be required to refer to a different field of study to answer it: according to Bijker, the question “What is technology?” would be a philosophical pursuit, “How to make technology?” would be a technical one, “How to use technology?” would require that we think politically, and “How to study technology?” is a scholarly endeavor (Bijker, 2010, p. 63).

The difficulty that lies behind defining technology is due to the fact that technology touches all aspects of human life, and has become an irreplaceable part of humanity through time. Even the way humans discovered and utilized fire and went on to establish civilization is within the parameters of the concept of technology, in fact. Because it is so important, through time, every branch of knowledge and science has studied and continues to study technology, and attempts to define it from its own perspective, tries to fit it into their preferred framework—which results in different taxonomies for the concept of technology. A commonly accepted example is the taxonomy proposed by Mitcham, which offers technology in three specific categories: knowledge (technique, i.e. the specialized know-how for inventing and making artifacts), activity (technique put into action in the production of artifacts) and product (the material products of activity) (Mitcham, 1978). Scholars of technology agree that technology is tangible and intangible at once; on one hand representing the aggregate of “all tools, machines, utensils, weapons, instruments, housing, clothing, communicating and transporting devices” and “the skills by which we produce and use them” on the other, as Read Bain wrote (Bain, 1937, p. 860). Technology thus has a unique quality in that it represents both material and immaterial entities: according to Kumar et al., its material, physical components can be “products, tooling, equipment, blueprints, techniques and processes”, and immaterial, informational components can be “know-how, marketing, production, quality control, reliability, skilled labor and functional areas” (Kumar, Kumar, & Persaud, 1999, p. 82). Technology is also dominated by a social aspect, and is utilized to increase the human capacity to “do”, giving it a social purpose (Choi, 2009). The utilization of technology also thus becomes dependent on “social institutions and non-material noncommittants such as values, morals, manners, wishes, hopes, fears and attitudes” (Bain, 1937, p. 860). It even becomes a cultural matter, as Tepstra and David propose technology to

be “a cultural system concerned with the relationships between humans and their environment” (Terpstra & David, 1985).

When we examine technology in this much broader context, we realize that the concept of technology is more than simply products, their production, or the efficiency by which they are produced—all those are common misconceptions of technology. Metcalfe provides a broader definition of technology that encompasses all the physical, immaterial, social and cultural aspects of the concept:

“By technology, we can mean a body of understanding of cause and effect in human minds, as with the codified realizations of productive knowledge in operating manuals, blueprints, recipes, scientific papers and so on; the capacities and skills that permit action, whether individually or in cooperation with others, not all of which will be written down; and the purposefully organized and designed built structures within which action takes place—the realized, human-built world.” (Metcalfe, 2009, p. 154)

In our quest to define the concept of technology we can often fall into the trap of overlooking its human element. As technology is born from the collective of human knowledge in order to achieve humanity’s purposes, it becomes invariably connected to humans as its creator. In examining technology, one must be cautious in remembering that the nature of technology lies in knowledge—and the essential point that remains about knowledge is that it only exists in the minds of individuals (Metcalfe, 2009, p. 158). Any single individual human being can be considered to have the capability of creating new technologies from scratch or perpetuating the use of previous technologies, with the added ability to innovate and improve on already existent technology. One specific and important quality of human technology is that it is cumulative—due to humans’ ability to engage in social learning, technologies get handed down through social systems, embedding individuals with knowledge of it. As such, individual humans can be considered to be carriers, if not embodiments, of technology because they possess the knowledge that enables its creation or perpetuation. As technology’s creators, utilizers, and sustainers, humans are essentially the gods of technology, inasmuch as technology is the imprint of human knowledge. The two are intrinsically linked to one another; perhaps even like a chicken and an egg. Knowledge of technology is transferred continuously from one human to another, or from one society to another.

If one pursues a more practical, ends-justify-the-means approach, however, what matters most is the end goal of technology, its purpose. In defining technology, Frey draws attention to one other factor most vital to its conceptual existence, and considers it to be human volition, which reflects humanity’s aims, intentions, desires and choices in creating it (Frey, 1987). On

the whole, it can be said that technology is created by humanity in order to *serve* it—it springs forth from the fount of humankind’s collective knowledge, and utilizes humanity’s capabilities, both mental and physical, to achieve a given purpose, e.g. the extension of efficiency or the improvement of systems. Technology is always about obtaining a certain result, be it the solution of problems, the completion of tasks, or the employment of knowledge in exploiting assets; all in all, the improvement of capabilities.

This thesis accepts a broad definition of technology, and proposes that technology is accumulated human knowledge: it includes ability, skills, know-how, methodology, behavioral systems, culture, and traditions of thinking, perceiving, discovering and learning, all of which result in the production of tangible assets such as artifacts and intangible assets such as further knowledge and technology generation. This form of technology, this thesis proposes, is *transferable*, and seeks to provide an example of the *transfer of technology*.

2.2 Technology Transfer

As we follow up on our discussion of technology and its status as a phenomenon that embodies cumulative human knowledge, how it is applied, and what it creates, the concept of transferring technology should, at first glance, be fairly evident. It should represent the *movement* of technology, from one place to another. For example, a typical, catch-all definition of technology transfer is that it is “the development of a technology in one setting that is then transferred for use in another setting” (Barkert, 1993). According to Rosen, layman’s terms can define it as “the movement of something from a place where it is being used or once was used to someplace else where it is unknown”. To make this definition even more understandable, Rosen adds the euphemism that technology transfer is “something like a joke”—a joke is always new to someone who’s never heard it before, regardless of how old it is (Rosen, 1977, p. 95). These are the most basic and simplistic views one can give about the concept of technology transfer.

If we consider the depth and breadth of the definition of the concept of technology, however, it stands fair to reason that technology transfer would also be a much more complex, multi-faceted endeavor. We have argued, for example, that many aspects of technology are intangible—and how, exactly, does one simply ‘move’ the intangible? What of all the various elements embedded in the technology itself—such as know-how, social norms, and cultural systems? How are those to be transferred? Like technology, interpretations of technology

transfer draws the attention of a variety of disciplines, including economics, sociology, political science, public policy, marketing, and the more recent study of management of technology (Kumar, Kumar, & Persaud, 1999, p. 82). Consequently, technology transfer literature is also fragmented and dependent on the focus of the area studying it in most cases. There is no general paradigm that is perfectly applicable to all examples of technology transfer.¹⁰

For the purposes of this thesis, we accept the definition that technology transfer moves a technology, defined broadly as accumulated knowledge, appropriately chosen to fulfill the identified needs of the recipient, from one place to another. The transfer occurs through a selected *mode of transfer*, e.g. the import of technological goods, utilization of knowledge stocks, movement of people, etc. The transfer process itself involves the installation, implementation, and incorporation of the chosen technology into the new system. To accomplish this successfully, the transferred technology must be effectively adopted—or adapted—and eventually become institutionalized. The success of this phase, in turn, depends on the *absorptive capacity* of the receptive environment: this capacity, highly dependent on human capital and education level, ensures that the recipient can successfully operate, maintain, modify, and even improve the transferred technology. Moving forward, to finalize the technology transfer, proper *diffusion* of the technology into the recipient's system is vital to the success of the entire operation. Successful technology transfer is evidenced in its *sustainability*, and achieves its goal of generating *technological capability*, promoting technological learning, and cultivating the skills and abilities necessary for further

¹⁰ A digression should be offered here as to the nature of technology transfer and the motives behind common examples of technology transfer. There needs to be a *cause* for technology transfer, both for the recipient country and the donor country. For the recipient country drawing technology from abroad, the motive is fairly straightforward: the acquiescence of advanced technology, with familiar end goals such as increased productivity, development, or economic benefits. For the donor country, however, motives can differ. If the movement occurs from developed to less developed countries, specific motivational imperatives must precede the transfer of technology in almost all cases; an example of such an imperative may be the donor country's foreign direct investments in the recipient country, if one considers that technology transfer and technological advancement is required for the long-term success of the investment. Simply put, and while it may be harsh to note, it must be said that, in a broader scale, developed countries do not typically transfer their technologies to less developed countries out of the goodness of their hearts; they need an incentive for technology transfer, and more often than not, this incentive is *money*. In most cases, donor countries will be reluctant to transfer their hard-earned knowledge or capacities without adequate compensation, and this compensation is usually found in profit (Choi, 2009). From the recipient's side, technologies can be bought, but are not typically freely given, and altruism has little (if any) effect in motivating technology transfer—for example, Rosen, in his talk about technology transfer to developing nations, drew a contrast between technology transfers to the Middle East and Africa, reasoning that the Middle East is currently seen as a more attractive market for it since “that's where the money is... without money – or solid credit – there will be little precious technology transfer” (Rosen, 1977, p. 98).

technological development. Ultimately, the benefits of superior technology are reaped, and the end goal is attained in economic growth. All throughout the process, technology transfer is subject to the *sociocultural context* of the receptive system.

This thesis proposes that the arrival of refugee scholars from Europe to Turkey in the wake of World War II initiated an act of *technology transfer*, which began not through conscious effort but through a whim of fate. Many scholars who fled Nazism and sought refuge in Turkey served as human conduits of technology movement to Turkey, and through the introduction and contribution of their cumulative human knowledge (know-how, methodology, academic tradition, way of thinking, etc.) to Turkish higher education and other areas, facilitated a series of reforms in Turkish technology. This was catalytic to the Turkish University Reform in 1933, which resulted in improvements such as the introduction of a different university tradition, new methods of creating knowledge, an enhanced type of scholarship, and other such effects, which were injected into Turkish technology through the decades of the refugee scholars' stay in Turkey. The result of this technology transfer was thus visible in many academic and non-academic fields including natural sciences, social sciences, medicine, and the arts.

The example of the 1933 University Reform in Turkey and the contributions of the refugee scholars as human catalysts of technology transfer also exemplifies many of the various stages and elements of a typical technology transfer process. These stages and elements will be examined in more depth, as they are all crucial to the success of a technology transfer process.

2.2.1 Modes of Technology Transfer: The Movement of People

In a typical technology transfer process, the various *modes* used to achieve the transfer of technology can be diverse. Available literature discussing the concept of technology transfer arrives at three common categories of transferring technology: the import of goods, the utilization of knowledge stocks, and the movement of people. The import of goods, in particular capital goods, presents a method of transferring technology through the delivery of advanced equipment with which the recipient can achieve productive results in a short amount of time. For example, a country may acquire sophisticated machinery from an outside source and utilize it to produce amplified output. The utilization of knowledge stocks is a method of transferring technology in which recipients access knowledge of new technology in storable forms. When a country accesses advanced schematics and blueprints as part of technical

agreement, for example, technology is transferred through the acquisition of stored knowledge. The concept of reverse engineering—the act of obtaining a sophisticated technology, most commonly an artifact, disassembling it, and extracting information as to “how it works” through its reconstruction—is also a preferred method in acquiring technology, and falls into this category. The movement of people, on the other hand, involves the (often temporary) relocation of skilled, educated human capital from one place to another, which also connotes the transfer of their technical knowledge, ability and know-how. Often, there is also a strong link between the technologies transferred and the mode of transfer; the ‘content’ can be heavily dependent on the ‘logistics’ and vice versa.

This thesis focuses specifically on the latter category: the *movement of people* as the main modus of technology transfer. Transfer of technology through the movement of people is an often overlooked mode of technology transfer; it is difficult to observe and evaluate, especially in short periods, and due to the nature of the transferred ‘material’. People can be carriers of technology in the way they are the living, breathing embodiments of their theoretical and practical knowledge and skills; however, this is often considered to be difficult to assess because of the intangible quality of these aspects.

Admittedly, the movement of people as a mode of technology transfer is somewhat rare. In many typical transfers, the movement of people is exemplified in cases where people are ‘loaned’ elsewhere in small numbers to conduct technology transfer, mostly to facilitate and oversee an ongoing process. Also, ordinarily, upon the conclusion of the technology transfer, these people return to their donor countries, i.e. their homelands. Here, it must be noted that technology donors are not often willing to part with the educated human capital often seen as agents in the transfer of technology; not permanently, at least. The reasoning behind this is that the highly qualified, skilled people represent significant investments on the part of the donor country; they are assets. Also, it is admittedly quite expensive to bring a person up and to endow him with knowledge and skill—to the donor country; people represent not only a financial investment but also one of time. As such, lacking specific motive (as discussed in footnote #10), countries are not typically willing to relinquish these investments. In rare examples such as the case of the 1933 University Reform, however, we see that it is indeed possible for developed countries to transfer technologies almost involuntarily if they decide to, for example, forgo rationality and exile significant amounts of highly educated human capital to other countries for ideological reasons. With that in mind, it must be noted that the case examined in this thesis presents a rare example in the history of worldwide technology

transfers—a case of technology transfer that was enabled through a dark error in human history that was, in pragmatic retrospect, nothing but illogical.

Though rare, a few examples of the transfer of technology through the movement of people can be drawn from history. Some examples can be the movement of German mechanics and engineers to the United States, where they became influential in the development of assembly lines, or skilled migration to the United States in general. For Turkey, however, one example that eerily echoes what happened in 1933 can be drawn from Ottoman history.

In the late 15th century, during the Spanish Inquisition, a great number of Sephardic Jews were exiled from Spain and emigrated to the Ottoman Empire. At that time, the Sultan Bayezid II welcomed the Jews with open arms, allegedly noting: “You venture to call Ferdinand a wise ruler, he who has impoverished his own country and enriched mine!” (Singer, 1912, p. 430) Indeed, the Ottoman Empire was enriched by the arrival of the Jews as they brought with them new technology: new ideas, methods, and craftsmanship. The expertise, abilities and skills of the refugees Bayezid admitted into the Ottoman Empire were many and various, and were summarized by British historian George Young as follows:

“The immigrant Israelites were employed as doctors, interpreters, and artillerymen. By manufacturing gunpowder and casting cannonballs, they rendered important services to the Ottoman Empire. That was how, in the name of Christianity, we delivered weapons into the hands of her most formidable enemies.” (Young, 1905, p. 141) (Translation mine, from French).

The human capital and the technologies transferred by the movement of the Sephardics served the Ottoman Empire for many years. The Sephardics were responsible for the introduction of the printing press to the empire (though tragically it was left unused);¹¹ the Sultan made a Jewish doctor his chief physician, and many Jewish people were employed at governmental positions, especially in finance; whole families of Jews were craftsmen and artisans, and were considered responsible for the transformation of the city of Thessaloniki into a textile production center; the flourish of trade in many Ottoman cities were also attributed in part to the skills of the Jews.

The arrival of the refugee scholars in Turkey, examined in this thesis, was also such a case in the history of technology transfer. In this unlikely event, a large number of scholars—well-educated individuals embodying significant amounts of human capital, knowledge, skill and

¹¹ The official introduction date of the printing press to the Ottoman Empire was 1493, the same year as the arrival of the Jews, who brought their machinery to Constantinople with them. The technology would not be used by the Muslims in the Empire until 1727 due to religious reasons.

technological endowment—were *forced out* of their donor country, either directly exiled or otherwise pressured, with no desire from the donor country to take them back for the foreseeable future. Effectively, it meant that the donor country was relinquishing parts of its human capital. This, then, presented for Turkey a fine opportunity—a chance to obtain an otherwise unavailable source of technology in the form of human capital. As a result, Turkey sought to utilize these individuals, and their knowledge, by placing them in positions of higher education, where they could be productive both practically and academically. In order to do that, however, it needed to absorb the technologies the refugees brought with them.

2.2.2 Absorptive Capacity

In technology transfer, the concept of *absorptive capacity* refers to the recipient's ability to incorporate the transferred technologies. Absorptive capacity is the cumulative representation of the recipient's ability to interpret, implement and assimilate the technology, along with all its necessary accessories, into its system. Absorptive capacity is highly dependent on the recipient's perception of the transferred technology. It is also influenced by the inherent learning culture of the recipient, the availability of technical personnel, the role the government plays in the process of technology transfer, and the mode of technology transfer (Kumar, Kumar, & Persaud, 1999, p. 84). Absorptive capacity is defined by the technology transfer recipient's *educational levels* and *human capital*.

In technology transfer, the level of *education* of the recipient has a crucial effect on both the course of the process and the end goal of economic growth and development. This is because it determines two things: the capacity of that economy to carry out technological innovation and, in the case of developing countries importing technologies from abroad, adopt and efficiently implement these technologies (Mayer, 2001, p. 3). The *human capital* inherent in the recipient system is responsible for supplying the technology transfer processes with the appropriate human resources, as well as the facilitation of the adoption of further technologies from abroad. Education and human capital affect the speed of the adoption of technology from abroad and consequently productivity; a reduction in the cost of adopting technologies is also a common consequence of better education, because one does not need to keep importing skilled human capital in order to keep utilizing the transferred technology. Furthermore, appropriate human capital enables the enhancement of indigenous technological capability, enhancing the ability of a country to develop its own technological innovations and serves in

the creation of appropriate domestic technology. Higher levels of education lead to a natural increase in absorptive capacity, in particular because education is closely linked not only to inherent knowledge, but also to learning ability. An educated workforce is better able to absorb new technologies, because they are more open to technological innovation, are able to keep up with improvements in technology, and are capable of teaching these new technologies to their peers (Ínal, 2013, p. 90). High education levels and the formation of human capital are thus vital to a country's absorptive capacity, and the success of technology transfer in general.

To this end, developing countries typically conduct educational reforms to enhance their absorptive capacity. There are important interactions between direct technology imports and educational attainment, because imports of machinery and equipment boost productivity only when the economy has an educational attainment that is high enough to allow for an efficient use of the imported technology—if a country imports heavy machinery and can't find the domestic mechanics to operate it, the machines will remain nothing but sunk investments. These are found in more typical cases of technology transfer, however, and are about the transfer of tangible technological artifacts. The case examined in this thesis is the transfer of the intangible—a transfer of *mentality*, rather than anything physical. Even in our case, however, the fact that educational attainment is vital to the successful utilization of transferred technology holds. Even transferred mentalities will fade into obscurity and become “sunk investments” if there are no qualified people about to understand and use them.

2.2.3 Diffusion

It should be realized that technologies, and the benefits they bring, such as the productive knowledge that they promise, are not “in the ether ready, as it were, to be inhaled at will without effort”, to quote Metcalfe (Metcalfe, 2009, p. 159). Significant in the analysis of technology transfer, and vital to its success, is the concept of *diffusion*. Rogers defines diffusion as “the process by which an innovation is communicated through certain channels over time among the members of a social system and by which alteration occurs in the structure and function of a social system as a kind of social change” (Rogers, 2003). If technological progress does not diffuse and does not embed itself in the system so much as it reaches its intended users, its introduction to the system will fail. An example to this can be the act of teaching a student a new method of conducting an experiment (reaching): but also,

in the background, enabling an environment which makes the method familiar to newcomers, so that in time, *more* students can also learn the method by observing the experiments, reading manuals, and trying them out themselves (embedding). Diffusion of technology, in this sense, makes it possible for foreign elements to be introduced to a social system by making them more familiar and easily understandable. It should hereby be noted that diffusion, in this social context, regards the social system receiving the technology as a sort of boundary within which the transferred technologies are diffused—the social system may be an impediment or facilitator of proper diffusion, which will be discussed in Sociocultural Context below (Choi, 2009, p. 52).

Diffusion of technology implies a *proper* installation of technologies in the recipient system, where they are absorbed into its very foundation and become core components inseparable from the whole. Understandably, the diffusion of technology is thus a time-consuming process, but it can be facilitated. The successful diffusion of technology is vital to the recipient country so that it may take full advantage of the transferred technologies, be able to modify them, innovate by adding onto them, and ultimately create its own technologies.

To ensure the success of proper diffusion of transferred technology, technology donors should try to transfer to their adoptees the resources and capabilities necessary to utilize, improve and engender further technology (Choi, 2009, p. 53). This does not however mean that the donors are responsible for diffusion—the donors can (and should) supply the necessary tools to aid in the process of diffusion, but ideally it must be a joint effort by both the donor *and* the recipient. In some cases, the aid of the donor may not even be available and the responsibility to ensure diffusion of the adopted technology might fall upon the shoulders of the recipient. Ultimately they are not the ones responsible for the successful diffusion and sustainability of the transferred technology.

2.2.4 Sustainability

Technology transfer does not simply end with the movement of a technology from one place to another. Arguably the most important thing to note about technology transfer is that its success is wholly dependent on the recipient country's ability to *sustain* the technology after the outside support is removed. After the transfer process is complete, it is common to see a so-called "sustainability gap" wherein the recipient country struggles to maintain the transferred technology, because it fails to provide the technology with the environment it

needs to thrive (Masten & Hartmann, 2000, p. 263). These gaps can be caused by foundational issues such as confusion of cultures, organizations, and institutions. The proper technological infrastructure is critical to any technology transfer process because it is necessary to assimilate imported technology. It is never simply enough to transfer *know-how* without transferring also the *know-why*.

The sustainability of a transferred technology depends highly on the “political will and commitment on part of the key stakeholders to continue providing the local resources and supporting framework” because “ultimately they must be the ones to carry the banner of support forward to ensure sustainability -- not the outside technology provider who ultimately disappears from the local scene” (Klauss, 2000, p. 285). According to Klauss, an error can be found in that the donors of the transferred technologies sometimes offer the resources for transferring technology without giving adequate attention to long-term sustainability issues in the local context. This responsibility, however, should not rest fully on the donor’s shoulders but be taken up by the recipient as well.

2.2.5 Technological Capability

The cultivation of indigenous *technological capability* is the end goal of the technology transfer process. The generation of technological capability is what closes the cross-country ‘technology gap’ between developed and less developed countries.

In using technology transfer, it is of paramount importance to understand that technology transfer is not the end goal in itself—it is only a means to an end, a method. A common trap to fall into in technology transfer is to conduct the process of transfer and remain passive when it is ‘concluded’; one must always remain aware that technological progress, as dictated by its nature, is not a process that concludes. Technology transfer should be done to stand on the shoulders of giants, so to speak, not to sit on one’s thumbs. Using technology transfer to merely improve a given situation temporarily will provide a static result, and that static result will risk stagnation. Technology transfer is utilized to increase the *rate* at which technology develops, which will pave the road for further innovation, and result in cumulative information and knowledge production. Technological capability is therefore manifested through the accumulation of technical knowledge, and is intimately linked to learning. It is vital to remember that not all technological flows will result in the generation of technological capability—successful technology transfer, however, must promote indigenous technological

and scientific development; and recipient countries should cultivate their own technological capability through imported technology (Kumar, Kumar, & Persaud, 1999, p. 84).

2.2.6 Sociocultural Context

The sociocultural context surrounding the technology transfer must be considered thoroughly to guarantee the success of technology transfer. To this end, one must reiterate the following: if technology is defined as a cumulative of human knowledge, applied technique and produced artifacts, then it must also be dependent on these humans and the human-originating sociocultural circumstances surrounding it—in fact, technology is, more often than not, shaped by those circumstances. In technology transfer, this fact becomes crucial. While in some sectors it may be easy to transfer technologies, e.g. installation of new equipment in industrial segments, the transfer process can be completely different for social sectors. This owes itself to the fact that in social sectors, technology is less codified and far less tangible. In social sectors, the transfer of technology can become an intercultural process, and its success requires the incorporation of the distinctive values, norms, assumptions, attitudes, and beliefs that were embedded in the sociocultural environment from whence the transferred technology originated (Klauss, 2000, p. 278). Failure to understand this fact may result in the complete rejection of transferred technology: a commonly given example of such a transfer would be the near-impossible task of transferring a new method of abortion to a country where it is illegal and/or culturally unacceptable. Otherwise, even if the recipient of technology is socioculturally allowing of such foreign incursions, it is still best to tread carefully.

In most cases in technology transfers, transferred technologies need to be introduced in such a way that they ‘fit in’ with the sociocultural environment of the recipient society and link up with the recipients’ inherent technology, knowledge base, and value system in order to be properly institutionalized. To accomplish this, two things can be done: either the society needs to change or the technology. In the case of technologies, they may often need to be *transformed* rather than simply transferred; in the case of society, proper technology transfer may necessitate social change. Obviously, one of these may be more difficult to accomplish than the other, and in both cases it is important to accomplish these changes with minimum amounts of disruption to the ‘usual way of doing things’.

Otherwise, transferred technologies, along with their sociocultural externalities, may be viewed by the recipients as alien concepts. Unable to integrate into the recipients’ systems,

the transferred technologies may then suffer from the results of what is colloquially referred to as “not invented here” syndrome—where the recipients will willingly reject extant technologies, knowledge, research, standards, and even artifacts due to sociocultural clashes. In the event that technology transfer fails due to sociocultural differences—in the event that these differences are not overcome through careful planning—the “good ideas” of the time of technology transfer will not take hold or be only partially accepted. This, ultimately, will condemn the transferred technologies to a slow death as they are overcome by the inherent sociocultural system. In developing countries, this can be observed as a common result, especially if the forces behind the technology transfer fail to understand the underlying sociocultural system, and deal with problems arising from sociocultural circumstances on a mere surface level while allowing core problems to persist.

In the following chapters, we will examine the scope of the technology transfer facilitated by the 1933 University Reform, which was enabled through the movement of refugee scholars from Western Europe to Turkey in the years leading to World War II. A thorough examination of the reforms in various academic fields in Turkey, such as medicine, law, economics, natural and social sciences, and fine arts will follow, with attention given to the state of the education in these fields prior to the reform, how they were impacted by the reform, and especially how the technology transfer via the movement of people catalyzed their reformation. In further detail, we will examine the contributions of the individual refugee scholars to the development of these academic fields in Turkey. After a brief introduction of their backgrounds, we will observe the refugee scholars’ academic and practical work in the country, note their instruction of their students and their influences on their peers, and analyze the scientific (and even also non-scientific) legacy they left behind in Turkey—whether it be in the form of tangible artifacts such as books, journals, articles and other works, in intangible assets such as ability, skills, know-how, human capital and education level, or simply methodology, ways of thinking, and academic mentality; all of these will be representative of the broad scope of technology that was transferred through the event that was the 1933 University Reform.

3. The 1933 University Reform and Refugee Scholars in Turkey (via Scientific Field)

3.1 Economics

According to Sayar's notes of introduction to the Faculty of Economics of the University of Istanbul, the study of economics in Turkey started in the early 19th century (Sayar, 2011). Within *Mekteb-i Tıbbiye-i Şahane* (The Royal School of Medicine), which opened its doors in 1827 in Istanbul, economics was a free elective, taught by Sarantis Archigenes (*Serandi Arşizen*), an Ottoman Greek doctor of internal medicine. Archigenes taught his economics course in French, and took Luigi Rossi's *Cours d'Economie Politique* as the foundation of his teaching.

For the more organized study and teaching of economics in the late Ottoman Empire, four institutions can be named. *Mekteb-i Mülkiye* (School of Political Sciences) was established in 1859 in Istanbul, with the intention of educating district governors in the capital of the Empire before they were sent off to their assigned provinces, towns, or other such districts, as there had been some decline in the prowess of the governing class and a grasp on new administrative methods was necessary. Courses in economics, statistics, finance, sociology, history of economic doctrines and economic geography were included in the curriculum of *Mekteb-i Mülkiye*, but teaching hours were highly restricted and the quality of education was considered insufficient. *Mekteb-i Mülkiye* was later moved to Ankara in 1935, and became the foundation of the Ankara *Siyasal Bilgiler Fakültesi* (Ankara Faculty of Political Sciences).

Hamidiye Ticaret Mekteb-i Âlisi (Hamidiye College of Commerce) was opened in 1881 when the Empire felt the need to educate Muslims in the basics of trade in the Western style with a program built on the French *Ecole de Hautes Etudes Commerciales*. In 1923, it was renamed the *Yüksek Ticaret Mektebi* (College of Commerce) and eventually took on the name of *İktisadi ve Ticari İlimler Akademisi* (Academy of Economic and Commercial Sciences) in 1959.¹² Additionally, according to Ege and Hagemann, the *Yüksek Teknik Mektepler* (Technical Colleges) and the *İstanbul Darülfünunu Hukuk Fakültesi* (Istanbul 'University' Faculty of Law) were also among institutions where economics was taught.¹³ Fındıkoğlu,

¹² Marmara University, which was established in 1983, traces its foundation to the *Hamidiye Ticaret Mekteb-i Âlisi*.

¹³ Ege and Hagemann's use of the term "technical college" is most likely in reference to the *Yüksek Mühendis Mektebi* (College of Engineering). The 'College of Engineering' was a thrice-reformed Ottoman educational institution, founded in 1773 as the *Mühendishane-i Bahr-i Hümayun* (Imperial School of Naval Engineering), to

however, mentions that their teaching was so marginal that they barely deserve mention (Fındıkoğlu, 1946). If one considers the fact that *Mekteb-i Mülkiye* was the largest and the most successful of these schools and that even there a system for the education of economics was not properly installed, it must be concluded that the overall success in teaching economics was low.

After the establishment of the modern republic of Turkey in 1923, and prior to the 1933 reform, universities were for the most part left untouched by the reforms that transformed Turkish society. Sayar's inference about this is that, over a period of ten years, *Istanbul Darülfünunu* taught the subject of economics as it did in Ottoman times: incompletely and inadequately, as a legacy left over by the *Mekteb-i Mülkiye* and under the stiff confines of the *Darülfünun* Faculty of Law (Sayar, 2011). He also notes that this did not present a healthy education of the subject of economics.

Even after the reform, economics in Istanbul University had its own share of problems. Economics remained under the wing of the Faculty of Law for some time. After the arrival of economists Neumark, Röpke, Rüstow and Kessler, an *İktisat ve İctimaiyat Enstitüsü* (Institute of Economics and Sociology) was established within the Faculty of Law. Economics was taught in the Institute alongside sociology and law for about a year, but it eventually became apparent that this was inadequate. The Institute only awarded doctorates, and the courses and seminars provided in the doctorate program failed to be effective because the students, for the most part, lacked the sufficient foundation in economics. In the school year of 1936-1937, when a new program was decided for the Faculty of Law, the weight of Law courses in the program was 84%, with only the remaining 16% being devoted to economics. This effectively meant that economics was only a second priority, and very little could be discussed with such a limited number of courses. Dölen remarks that it "was impossible for a student to have sufficient education regarding economic and social events and issues" (Dölen, 2010a, p. 225). Sociologist Ziyaeddin Fahri Fındıkoğlu even referred to the teaching of economics as 'taking shelter' (*sığıntı*) within the Faculty of Law (Fındıkoğlu, 1946). Students who were interested in economics also complained about this situation later in their *Student Guide*, arguing that

better serve the engineering needs of the empire's navy, as implied by its name. It gave birth to another engineering school, *Mühendishane-i Berr-i Hümayün* (Imperial School of Civil Engineering) in 1795, which included cartography and civil engineering in its curriculum. The two engineering schools were then combined as *Mühendis Mekteb-i Alisi* (Engineering College) in 1909, parting from the military. In 1928, it was renamed as *Yüksek Mühendis Mektebi*, and would later become Istanbul Technical University.

law was an entirely different science compared to economics, dogmatic in essence and not empiric, and that there was no way to solve the prevalent economic issues faced by the country from inside a Law program ¹⁴ (İstanbul Üniversitesi İktisat Fakültesi, 1938). If one also considers the economic climate of the time, this argument is perfectly legitimate: by the time of this discussion, the world economies were still under the effect of the Great Depression and looking for ways to bring about an end to the recessions they were facing. Being stifled under the wing of the Faculty of Law prevented students from developing an economic point of view and internalizing the methodology used by economics. As Sayar points out, law was a science of *a priori* assumptions, dogmatic, abstract, inferential, and incapable of bringing about a solution, whereas economics was based on observation, experiment, and *a posteriori* theory. Only independent research would provide a remedy for the economic chokehold that was 1930s conjunctural reality, and for that, a Faculty of Economics was necessary (Sayar, 2011).

With the arrival of the German refugee professors, the establishment of a Faculty of Economics was made much easier than would have been possible with only Turkish personnel. The refugees were not only highly qualified; they were also eager. Upon the approval of the separation of Economics from Law, and by the demand of the University Rector Cemil Birsel, refugee professor Fritz Neumark set to work on a report detailing the necessity of a Faculty of Economics, and explained the need for a Faculty of Economics by referring to the industrialization efforts of the modernizers.

“The modernization of the Turkish economy, especially considering the incentives given by the state for the industrialization movement, makes it necessary to raise scientists who are well trained in the disciplines of economics. It is not possible to do this properly with the education methods which have been tried thus far in the country. This need will only become greater as industrialization and statism progresses. It is impossible to sate this need with only a handful of students who have been sent abroad for their education.” (Neumark, July 1936) (Translation mine.)¹⁵

After the issue was presented to the Ministry of Education in this manner, the establishment of the Faculty of Economics was approved by the Turkish government on December 14, 1936

¹⁴ It is likely that the complaints of the students in the aforementioned student guide were spurred on by the scholars within the Faculty of Law who had their foundations in economics or were otherwise interested in the subject. By the time the guide was published in 1939, most of the émigré scholars of economics had already arrived and settled in, and had established the Faculty (at least on paper) three years ago—and the students were merely expressing their agreement for—and validating—their rightful separation from the Faculty of Law.

¹⁵ Prof. Fritz Neumark’s report is fully available in (Dölen, 2010b, pp. 690-703).

and Professor Ömer Celal Sarç¹⁶ was appointed as the founding Dean of the Faculty. Eight chairs were established:

REFUGEE ECONOMISTS AND SOCIAL SCIENTISTS		
NAME	Field	DURATION OF STAY
Fritz Neumark	Finance and Financial Law	1933-1952
Gerhard Kessler	Sociology and Social Policy	1933-1951
Alexander Rüstow	Economic History, Economic Geography	1933-1949
Wilhelm Röpke	General Economics, Financial Theory	1933-1937
Alfred Isaac	Economic Organization, Business Administration	1937-1951
Josef Dobretsberger	General Economics, Financial Theory	1938-1941
Umberto Ricci	Economic Theory, Statistics	1942-1946
Fritz Baade	Agricultural Economy	1935-1945

Source: (Dölen, 2010a, p. 506)

On February 4, 1937, the Faculty of Economics officially opened its doors as the fifth faculty of Istanbul University, with five chairs out of eight held by refugee professors, and its opening lecture was given by Professor Gerhard Kessler.

¹⁶ Ömer Celal Sarç (1901 – 1988) was a Turkish economist with a focus on statistics. He was educated in Robert College and later moved to Germany, where he studied at the University of Berlin, earning his doctorate degree working with Werner Sombart. Back in Turkey, Sarç became an associate professor of Economics and Finance. Sarç was later head clerk of the newly established Turkish-German Chamber of Commerce for four years in Germany. Upon a second return to Istanbul, he was the founding Dean of the Faculty of Economics, and remained Dean for twelve years. Later, he was appointed Rector to Istanbul University from 1949 to 1951, and appointed Rector for a second time from 1963 to 1965. Sarç was temporarily employed by the United Nations in New York, lectured at Columbia University, and was also an advisor for the Economic and Social Affairs Committee of the European Council.

3.1.1 Economics at the University of Istanbul

Fritz Neumark (1900 Hanover, 1991 Baden Baden) was among the first names suggested by Philipp Schwartz to the Education Minister Reşit Galip. Born to a Jewish family, Neumark graduated from a gymnasium in Hannover, and after briefly serving in the military after being drafted much like other capable men in 1918, started studying political science at the universities of Hamburg, Munich, and Jena. At the University of Jena, Neumark became a student of Gerhard Kessler, who influenced him to study economics, steering him away from his intent to study Germanistics (Neumark, 1982, p. 55). Neumark later earned a doctorate in 1921 with a thesis on the concept and nature of inflation. He started working as a consultant for the Reich's Ministry of Finance, and also continued his academic career as an assistant at the University of Frankfurt am Main, later earning his habilitation with an inaugural dissertation titled *Der Reichshaushalt* (The Reich Household) in 1927. In 1931, he was appointed a *nichtbeamteter* (lit. non-civil servant) professor extraordinarius at the University of Frankfurt am Main. The fact that he was a *nichtbeamteter*, and therefore not considered a civil servant employed by the Reich, did not prevent him from being dismissed from his position in 1933 due to the *Arierparagraph* of the *Berufsbeamtengesetz*. After his dismissal, Neumark had to start working as a traveling salesman for a salt wholesaler—a job he got through a contact who had been one of his doctoral students. In his memoirs, Neumark notes that while the concept of emigration entered his mind during his miserable job and he denied it for months on end, emigration soon became not only a possibility but an inevitable necessity (Neumark, 1982, p. 29). He arrived in Istanbul with his non-Jewish wife Erica and their two children in 1933, and managed to get his mother, sister and her family to Turkey before the war broke out by 1940. At the time of his arrival, Neumark was among the youngest refugee professors at Istanbul University, being thirty-three years of age.

Neumark taught economics and finance at the University of Istanbul. Perhaps due to his youthful vigor, Neumark is reported to have learned Turkish in a short span of two years, and was said to have been among the first to lecture in fluent Turkish, much to the joy of his students (Widmann, 1999, p. 195). During the first few years of his arrival, while economics was still taught under the Faculty of Law, Neumark sat the chair titled “Economics and Sociology”. He testifies to having had serious doubts about this position, as he had been asked to teach courses on social healthcare and statistics—Neumark claimed that he knew very little of statistics and literally nothing about social healthcare. The Turkish officials, however,

calmed him down with the claim that “the name of the courses I taught or the name of the chair I held mattered little, and that all that mattered was that I was skilled and willing enough to teach levels of the study of economics” (Neumark, 1982, p. 58). Neumark notes that the confusion around the courses taught was later cleared up and he thankfully did not have to teach social healthcare at any point (if he had, he’d have “considered himself a fraud”). Instead, he taught some courses of statistics, sharing his task with the accomplished statistician Ömer Celal Sarç. He also shared the courses of theoretical and political economics with Wilhelm Röpke and Hüseyin Şükrü Baban,¹⁷ and finance with İbrahim Fazıl Pelin,¹⁸ and also taught history of economic thought, which he lectured alone.

Neumark was later instrumental in the establishment of the Faculty of Economics. He was tasked with writing the report that elaborated the necessity of the study of economics to be separated (and freed) from the Faculty of Law, and when his efforts bore fruit, Neumark was given one of the eight chairs in the new Faculty of Economics. He was later named Chair of the Institute of Finance from 1946 onwards.

Neumark published a variety of Turkish textbooks that proved to be very valuable to Turkish economics students and would be used for years. His publications included *Dış Ticaret Siyaseti* (Foreign Trade Policy), *Umumî İktisat Teorisi* (General Economic Theory), *İktisadi Düşünce Tarihi* (History of Economic Thought), *Ekonomi Politikası Dersleri* (Lectures on Economic Policy) among others, spanning a wide array of economic subjects.

Neumark also worked as an advisor for the Turkish Ministry of Economy. As an advocate of Statism, Neumark was highly sought after by Turkish statesmen in minister’s positions who found their economic ideologies to be in sync with Neumark’s. According to fellow refugee Rudolf Nissen, “Turkey’s economic problems required Neumark’s advice, to the tiniest detail” (Nissen, 1969, p. 213). He was one of the only two (alongside Ernst Hirsch) foreign

¹⁷ Hüseyin Şükrü Baban (1890 – 1980) was a Turkish economist, an ordinarius professor and and a former dean of the Faculty of Economics. He was also the head writer for the newspaper Yeni Sabah.

¹⁸ İbrahim Fazıl Pelin (1886 – 1944) was a Turkish financier. He was born and educated in Thessaloniki, and was a graduate of *Mekteb-i Mülkiye*, after which he went to the Parisian school of Sciences Politiques where he studied finance and economics. Upon his return to Turkey, he started his academic career at *Mekteb-i Mülkiye* as a *müderris muavini* in economics and legislative finance. He taught at *Darülfünun*, *Mekteb-i Mülkiye*, and *İstanbul Yüksek İktisat ve Ticaret Okulu* (Istanbul College of Economics and Commerce) (which would later be called *İktisadi ve Ticari İlimler Akademisi* (Academy of Economic and Commercial Sciences) and become the origin of present day Marmara University.) After the 1933 reform transformed *Darülfünun* into Istanbul University, Pelin remained at the school and taught finance and economics until his death. (Onar & Başgil, 1945)

nationals to have been invited to the *Birinci Maarif Şurası* (the First Education Congress) of the Ministry of Education in July 1939. Neumark was a leading name in the field of public finance, and was employed in a number of commissions established by the Ministry of Finance. In one such research commission established in 1945, Neumark was tasked with researching the essentials of income taxation and its applicability to Turkey, presenting the results of his research to the Second Economic Congress in 1948, of which he was also active in its organization. Neumark's research into the taxation system was extensive. It would not be unfair to conclude that he became increasingly interested in the subject after his publication *Gelir Vergileri: Teori ve Pratik* (Income Taxes: Theory and Practice), which he later revised, with a focus on Turkey's system, as *Türkiye'de ve Yabancı Memleketlerde Gelir Vergisi: Teori, Tarihçe ve Pratik* (Income Tax in Turkey and Foreign Countries: Theory, History and Practice). He later translated this publication into German. Neumark's suggestions for an overhaul of the Turkish income taxation system eventually culminated in the Income Tax Reform of 1950 (Şahin & Büyükkurt, 2014). He is widely praised for his efforts, if not altogether considered the architect of the reform (Reisman, 2006, p. 143). Even after his return to Germany, Neumark was very invested in the matters of the Turkish economy: he remained an advisor even from afar, as a scientific advisor to the Ministry of Economy from 1951, and the head of the Ministry of Finance's Council of Advisors from 1966. Later, in 1979, Neumark was given an honorary doctorate in Law by the University of Istanbul.

The students Neumark left behind were incredibly numerous and highly influential in defining Turkish academic and political life. Among Neumark's students were names such as Sabri Fehmi Ülgener,¹⁹ who would later become one of Turkey's most renowned economists and the Dean of the Istanbul University Faculty of Economics. Another one of his students was Osman Okyar,²⁰ who was a prominent liberal economist and was the founding rector of

¹⁹ Sabri F. Ülgener (1911 – 1983) was one of Turkey's most renowned economists and social scientists. The son of a late Ottoman Islamic scholar (who would later become the first Istanbul Mufti) and from a very prominent family, Ülgener graduated from *Istanbul Erkek Mektebi* (Istanbul High School (for Boys)), was educated in the *Istanbul Hukuk Mektebi* (Istanbul Law School), and later studied in the Istanbul University Faculty of Economics under German-speaking émigré scholars such as Neumark, Kessler, Rüstow and Isaac. Greatly influenced by the German school of economic thought, Ülgener would later also become a follower of Max Weber and Joseph Schumpeter. Ülgener was an economist, historian, and sociologist at once. He is highly praised for the depth of his scientific analyses, his familiarity with both the West and the East, and his inferences as to the causality for the divide of economic mentality between the Western and Islamic worlds.

²⁰ Osman Okyar (1917-2002) was a Turkish liberal economist. Son of Fethi Okyar, second Prime Minister of the Turkish Republic, Okyar was educated in Galatasaray High School and graduated with First Class Honours from Cambridge University. Under the supervision of Fritz Neumark, Okyar earned a doctorate degree with a thesis

Erzurum Atatürk University. Other students included Ahmet Memduh Yaşa,²¹ Orhan Dikmen,²² and Refii Şükrü Suvla.²³

Neumark became *heimatlos* in 1939, denaturalized by Nazi Germany on the grounds that he had aided the *Notgemeinschaft* and therefore “seriously sabotaged the reconstruction of the German higher education system” (Şen F. , 2008, p. 202). He was later awarded Turkish citizenship by decision of the council of ministers in 1943.

Neumark remained at the University of Istanbul until 1951, educating generations of Turkish economists before returning to his homeland in the beginning of the year 1952, upon the invitation of the University of Frankfurt. Back in Germany, Neumark served two terms as the rector to the University of Frankfurt, and worked for the post-war German federal government as an expert advisor on Turkey, following German chancellors and presidents on their diplomatic visits to the country. He passed away in 1991.

Gerhard Kessler (1883 Wilmsdorf/East Prussia - 1963 Kassel) was a German economist and social scientist. He earned a doctorate in 1905 and was appointed a professor extraordinarius of economics and sociology at the University of Jena in 1912. Like many others, Kessler served in World War I as a soldier. His academic career resumed when he became the professor ordinarius of national economics at the University of Jena in 1919, and he later moved to the University of Leipzig in 1927. Politically active even as a student, Kessler had

on the “Transition from Neoclassical to Keynesian Theory”, becoming one of Turkey’s most prominent Keynesian theorists. He became the founding rector of Erzurum Atatürk University, and later was the founding dean of the Faculty of Social and Administrative Sciences in Hacettepe University.

²¹ Ahmet Memduh Yaşa (1919 – 2014) was among the very first students of the newly established Faculty of Economics. After graduating, he worked for the Ministry of Customs as an inspector, for Sümerbank and the Istanbul Chamber of Commerce as a director, and ended up devoting all his efforts to academia. He later visited France, where he worked alongside economists such as Henry Laufenburger and François Perreux, and moved to England, where he followed seminars in the London School of Economics. Upon his return in Turkey, he became a professor for the Istanbul University Faculty of Economics. Yaşa was among the 147 academics who lost their jobs after the military coup of 1960.

²² Orhan Dikmen (1915 – 2007) was a graduate of Galatasaray High School who upon graduating from the Istanbul University Faculty of Economics received postgraduate education at Paris University. In the Faculty of Economics, Dikmen held the chair of Business Economics, and was Dean to the Faculty of Economics from 1966-1968. He is known for having founded the *Türkiye İktisatçılar Derneği* (Turkey Association of Economists) in 1948. He was also a founding member of the *Maliye Enstitüsü Vakfı* (Finance Institute Foundation) as well as the *İktisadi Araştırmalar Vakfı* (Economic Research Foundation). Dikmen was also twice the Minister of Agriculture in 1971-1972.

²³ Refii Şükrü Suvla (1907 – 1962) studied in Galatasaray High School and was sent abroad by the Turkish government for higher education to study at Lausanne University. Upon his return, he held the chair of Economics and Financial Theory at the Faculty of Economics and later lectured on economics, money and credit in *Istanbul Yüksek İktisat ve Ticaret Okulu*.

been a member of the *Verband der Vereine Deutscher Studenten* (Federation of the Association of German Students) and was later an assistant to neoliberal politician Friedrich Neumann, and even later became an active political opponent of the National Socialists in both the *Deutsche Demokratische Partei* (German Democratic Party) and its later incarnation, the *Deutsche Staatspartei* (German State Party). Throughout his life, Kessler was a sharp critic of National Socialism, and often wrote for the *Neuer Leipziger* criticizing National Socialist ideologies. In one such article entitled *Deutschland erwache* (Wake Up, Germany), Kessler's criticisms were scathing: in the article, he claimed that the NSDAP program was "hopeless blather full of emotional manipulation, hate and bad German" and decreed *Mein Kampf* to be "boring tripe by a man who'd made talking ceaselessly his livelihood" (Şen F. , 2008, p. 181). In the same article, Kessler also called Adolf Hitler a "*Phrasendrescher und Rattenfänger*" (phrasemonger and Pied Piper), and told the German people to wake up and stop following the Piper's song.²⁴ As a result, Kessler drew the ire of the national socialist student association, which was already strongly present at the University of Leipzig (Möckelmann, 2013, p. 144). The following morning, the lecture halls resounded with "*Kessler raus!*", and fights broke out. Kessler recounts: "Forty youths... kept me from teaching for twenty minutes by whistling, shouting, and swearing. I had seen worse as a soldier; I was in Verdun, on the western front, before the children insulting me had learned how to write the word *Vaterland*" (Hänlein, 2006, p. 38). Soon afterwards, the university senate condemned the student association's protest (though it should be noted that they actually condemned the *form* the protest had taken, in that it had gotten physical), but also claimed that Kessler's article was highly unfortunate. The senate later requested Kessler to remove himself from all civil duties, which he promptly obliged, and he was considered to be "on leave" until the *Machtergreifung* came to pass and he was immediately dismissed. He would later say that "to have been the first German professor to be fired for his beliefs in freedom, rights and justice" was an honor for him. However, he was never truly left alone even after being fired. He was continuously followed by the Gestapo, physically assaulted in Leipzig, had his home vandalized and his office searched, and inevitably he was arrested and jailed without cause or trial. Through President Paul von Hindenburg's personal efforts Kessler was not jailed for long, but he had to hide for months afterward, continuously changing locations until showing up one day in Frankfurt with fake citizenship papers on him.

²⁴ "Wirklich, das sind geschichtliche Stunden für unser Volk. Wachen wir nur auf, stehen wir nur auf, sie zu nutzen! Jahrelang sind Millionen gutgläubig dem Rattenfängerliede nachgelaufen..." (Truly, these are historic times for our people. If we were to only wake up, to stand up, to seize them! Millions have naively followed the Pied Piper's song for years...")

As Neumark and Schwartz tried to get Kessler to the University of Istanbul, the affair soon became a diplomatic ordeal, because Kessler had already gone underground, and coming out to get legal clarifications would have only endangered him further. Formal requests were made by the Turkish embassy in Berlin, and eventually, Kessler was found by the Gestapo and sent to Istanbul along with his family (Reisman, 2006, p. 140).

At the University of Istanbul, Kessler taught sociology. Due to his older age, Kessler never really managed to learn Turkish, but was supported by capable translator-assistants such as Orhan Tuna²⁵ and coworkers like Ahmet Ali Özekten.²⁶ According to Ege and Hagemann, Kessler has four major textbooks: *Genossenschaftswesen* (Cooperatives), *Sozialpolitik* (Social Policy), *Einführung in die Gesellschaftslehre* (Introduction to Sociology), and *Wirtschaftsgeschichte* (Economic History). All of these textbooks were translated by Kessler's trusted colleagues, such as Ziyaeddin Fahri Findikoğlu²⁷, Orhan Tuna, and Sabri Ülgener.

Kessler's teaching activities were extensive and not bound by only the Faculty of Economics; he also taught in the Faculties of Letters and Law. In the University of Istanbul, Kessler established the Institute for Economics and Sociology, becoming its founding chair. When the Faculty of Economics was formally opened, the first lecture was given by Kessler. Kessler's publication activities in Turkey were immense: a complete list of Kessler's publications is given in Cavit Orhan Tütengil's article on Kessler (Tütengil, 1963). As a social democrat, Kessler was widely concerned with Turkey's social policy, and often touched upon such issues in his works alongside economic difficulties and monetary valuation, the introduction of private enterprises, corporatization, scheduling of wages, syndicates and unionization, housing policy, etc. (Hänlein, 2006, pp. 43-44).

²⁵ Orhan Tuna (1910 – 1987) was a Turkish economist with a focus on social policy. He became the Dean of the Istanbul University Faculty of Economics in 1958. Highly influenced by Kessler, Tuna in turn was the professor of students such as Metin Kutal, Toker Dereli and Sabahaddin Zaim.

²⁶ Ahmet Ali Özekten (1906 – 1953) was a Turkish economist. He held the chair of Business Economics in the Faculty of Economics and taught Business Administration, Accounting, Merchant Accounts, and Financial Algebra. He was also a coworker of Alfred Isaac. Özekten is known for his interest in the field of energy economics and published a number of articles on Turkey's coal industry.

²⁷ Ziyaeddin Fahri Findikoğlu (1901 – 1974) was a Turkish sociologist. He graduated from the Istanbul University Faculty of Letters with a degree in philosophy and spent time teaching philosophy, sociology and literature in high schools in Erzurum and Sivas. He earned a scholarship that sent him to the University of Strasbourg to work towards a doctorate, but had to earn a second undergraduate degree in Strasbourg as his Turkish degree was deemed invalid. Back in Istanbul, Findikoğlu became an associate professor in the Istanbul University Faculty of Letters, and later transferred to the Faculty of Economics with a chair in Sociology. He would later become the Dean of the Faculty of Economics.

In his free time, Kessler devoted his efforts into the establishment and organization of the Library of the Faculty of Economics, and is alleged to have personally catalogued nearly 50,000 book cards (Hänlein, 2006, p. 42). Neumark also notes on this, citing Kessler's "extraordinarily large library" and "original habits", also mentioning his hobby of establishing family trees, and his particular interest in Jewish surnames—Kessler allegedly tracked Neumark's own family line to the 17th century (Neumark, 1982, p. 57).

Kessler's beliefs regarding the science of sociology to be based on observation led him to often take his academic studies into practice. He would often be found traveling in Turkey, visiting businesses, villages, farms and mines (and was at some point mistaken for someone whose academic field was indeed mining). Evaluating his observations, he would conclude his travels with papers and articles, making suggestions for reforms, and actively joining the efforts to put said reforms into practice (Tuna, 1963). Hänlein notes that Kessler's articles on Turkish social policy, such as his *Türkiye'nin İçtimaiyat Meselelerine Dair Mülâhazalar* (Considerations on Turkey's Social Problems), which he wrote during 1940-41, were especially striking (Kessler, 1940). Kessler's article regarded the problems of the rural population, who were still following a nomadic lifestyle, with the point of view of a social policy maker. He supported the government's literacy campaigns, and suggested further education for villages' local teachers, as well as their active involvement in the establishment of agricultural cooperatives. He also drew attention to how the milk industry needed to be supported. Kessler also studied the problems of artisans and craftsmen as well as those of civil servants, eventually contributing to reformation projects for job and social security. Kessler devoted not only his academic identity but his very person to bettering lives—he would suggest solutions to municipalities and governmental institutions as to the state of orphaned children, suggest that rehabilitation centers be built for beggars and the homeless, and campaign for the protection of stray animals (which Kessler would attempt to do everywhere, even on the streets, to the best of his ability, upon noticing animal cruelty—in his broken, yet affable, Turkish) (Makal, 2014).

Through his suggestions for reform, which were rarely ignored by the Turkish government, Kessler was also highly active in lawmaking. Kessler was particularly interested in Turkish labor law. He suggested that labor law be extended to include previously ignored sectors such as mining, heavy industry, maritime and agriculture, as well as the writing of a law for the

protection of children from child labor. Kessler was a big proponent of labor rights. In 1945, alongside his longtime assistant Orhan Tuna, Kessler contributed to the establishment of the *İşçi Sigortaları Kurumu* (Institution for Labor Security) and the *İş ve İşçi Bulma Kurumu* (Governmental Employment Agency), which were written into Turkish law as *İşçi Sigortaları Kurumu Kanunu* (Law for the Institution for Labor Security), No. 4792, on July 16, 1945. He also fought for coalition rights, and is believed to have been highly influential in the acceptance of the *Sendikalar Kanunu* (Law of Trade Unions), No. 5018, on February 20, 1947 (Hänlein, 2006, p. 44). Upon the acceptance of the law, Kessler set to work on training many union leaders who, at the time, were highly inexperienced. He also suggested the initiation of a social security system that encompassed securities for health, disability, and old age, noting that the separate subject-based security system used in the West would not be compatible with the Turkish demographic. He published the first extensive work on Social Security in Turkey in 1950, aptly titled *Sosyal Sigorta* (Social Security) (Kessler, 1950).

Alexander Rüstow (1885 Wiesbaden - 1963 Heidelberg) was a German economist and sociologist. Originating from Prussian Wiesbaden, Rüstow was educated in a variety of sciences including mathematics, physics, philosophy, philology, law, and economics at the universities of Göttingen and Munich. He received his doctorate in philosophy from the University of Erlangen with a thesis titled *Der Lügner: Theorie, Geschichte, und Auflösung* (The Liar: Theories, History, and its Solution) on the liar paradox in logic. He pursued an academic career and worked towards his habilitation with a dissertation on the knowledge theories of Parmenides, but like many others was interrupted by his service in World War I, where he was decorated with an *Eisernes Kreuz*.²⁸ After the war, Rüstow started to follow socialism, and participated in the November Revolution.²⁹ Later, he especially adopted the teachings of Franz Oppenheimer as a “third way” between liberal capitalism and Marxist communism. Reisman notes that Rüstow was considered a classicist due to his education, but was ideologically a socialist (Reisman, 2006, p. 135). When Rüstow started working for the Ministry of Economy as an advisor, he became known as a “socialist in service of the state”, and started becoming disillusioned with the disruption of social democracy through its own

²⁸ Interestingly, Kathrin Meier-Rust notes that Rüstow’s volunteered service in the army went against his philosophical views concerning Wilhelmine militarism. (Meier-Rust, 1993, pp. 22-23)

²⁹ The November Revolution, also the German Revolution of 1918-19 was a civil conflict that dissolved the German Empire at the end of World War I and replaced its imperial government with the Weimar Republic. The revolutionaries were largely inspired by socialist ideals, but ultimately failed to create Soviet-style councils like the Bolsheviks in Russia, due to the considerable influence of the Social Democratic Party, which later integrated them into a social democratic system with a parliament.

willingness to accept compromises in response to lobbying by various interest groups (Meier-Rust, 1993, pp. 27-28). Rüstow later abandoned working for the government and instead began to work for the VdMA (*Verein Deutscher Maschinenbau-Anstalten*, the German Engineering Federation) while also lecturing at the *Handelshochschule Berlin* (Trade School of Berlin). During this period, where Rüstow worked with big lobbyist financiers and landowners, he adopted a more liberal outlook. Throughout the rest of his life, Rüstow would then campaign to reform liberalism, coining the term “Neoliberalism” in 1938 at the Walter Lippmann Colloquium. Rüstow’s exile into Turkey was caused by the fact that his name had been added to Chancellor Kurt von Schleicher’s cabinet list as the Minister of Economy—the cabinet had been a last ditch attempt to prevent Hitler from gaining power. After his house was searched by the Gestapo, Rüstow became increasingly agitated, and decided to leave. According to Meier, Rüstow’s name on Schleicher’s list made him expect to be assassinated at the Night of the Long Knives or another such event—just like Schleicher himself.

Rüstow initially moved to Switzerland, where he contacted the *Notgemeinschaft* looking for a job. He then accepted the offer from the University of Istanbul as the head of the chair of Economic Geography. At the University of Istanbul, Rüstow taught a variety of subjects for both the Faculty of Economics and the Faculty of Letters: economics, economic geography, philosophy, and history. And although Neumark testifies that Rüstow never truly warmed up to Turkey and held little interest in its language, he nevertheless published a number of textbooks, lecture notes, and articles in Turkish (Neumark, 1982, p. 54). It is also alleged that many of Rüstow’s later publications were at least partially prepared in Turkey from his “ivory tower”, such as his *Ortbestimmung der Gegenwart* (Freedom and Domination: Taking Bearings on the Present): a monumental, three-volume historical ‘critique of civilization’ in which Rüstow disseminated the social patterns and thought trends that influence the human condition and inevitably lead to repression and barbarism (Rüstow & Attanasio, 2014). In his own words, Rüstow famously wrote: “I affirm freedom and reject domination, I affirm humaneness and reject barbarism, I affirm peace and reject violence. The pairs of opposites are the great poles between which the drama of human history is enacted” (Rüstow & Attanasio, 2014). Rüstow’s great work received wide acclaim; Neumark held this work in the highest regard as being the “most valuable work made by German-speaking refugees during the exile” (Neumark, 1982, p. 55). Interestingly, the exile that Rüstow lived more than sixteen years in a country that was fundamentally foreign to him (Kathrin Meier-Rüst quotes Rüstow

as mentioning a “foreign climate, language, alien environment and mindset”) had provided him with the exact environment to write his *magnum opus* (Reisman, 2006, p. 137).

Through his adherence to a strict code of traditional academic seriousness, Rüstow was highly productive despite facing deep issues for the lack of materials present in Istanbul libraries.^{30,31} Rüstow’s experience in developing Germany’s monopoly and antitrust laws were also used in developing Turkey’s own: through Rüstow’s experiences, the Ankara government learned what not to do as they set out to establish the various oligopolies that would be tasked with the quick industrialization of Turkey (Reisman, 2006, p. 138).

In 1941, Rüstow received a job offer from the New York School of Social Research. His potential departure was deliberately prevented by Turkish officials, who asked the Japanese consulate to deny Rüstow a visa (transit to the United States could only be accomplished through the east at the time) (Şen F. , 2008, p. 219). Rüstow then remained in Turkey, began working with the German resistance movement (though his contract with the Turkish government forbade him from getting involved in political activity—he risked being dismissed as a professor at the University of Istanbul on the grounds that “being an refugee came with at least some bravery”) (Şen F. , 2008, p. 220). He founded the German Freedom Association in Turkey, and acted as a liaison between the American Office of Strategic Services and representatives of the German resistance, particularly the Kreisau circle, which took place in Ankara. Despite the failure of these negotiations, the war eventually came to a conclusion. When his German-citizen colleagues were interned in camps in Anatolia as Turkey entered World War II, Rüstow acted as a representative for the internees. He returned to Germany in 1949, taking a professorship at Heidelberg University and worked as the director of the Alfred-Weber Institute until he retired in 1956. Rüstow’s son Dankwart Rüstow moved to the United States, and became a professor of political science with particular expertise in Turkey and the Middle East.

Wilhelm Röpke (1899 Schwarmstadt bei Hannover - 1966 Geneva) was a German economist. Born to a liberal bourgeois family, he was educated in the Athenäum Stade gymnasium and

³⁰ One particular complaint is tragically quoted: “Why have I not read the *Calvinum Ipsum*? Because (it) is not present in *Roma nova quae est Constantinopolis* and the university library refuses to buy a book consisting forty volumes simply because I want it.”

³¹ Rüstow’s academic legacy remains in the Bundesarchiv in Koblenz. It also includes Rüstow’s activities in the University of Istanbul, as well as his communications to his colleagues.

studied law and political science at the universities of Göttingen, Tübingen, and Marburg. After serving in World War I, he resumed his education, taking an interest in economics and earning a doctorate in economics in 1921. Afterwards, he pursued an academic career by becoming an assistant in political science, completed his habilitation in 1922, and became a *privatdozent* of political science at the University of Marburg, shortly afterwards becoming a professor at the University of Jena at age 24. Before being forced out of Germany, Röpke had been the professor ordinarius for political economy at the University of Marburg.

Röpke's reason for dismissal was his ideological clash with National Socialism. After being influenced early on in his life by socialism, and later by the Austrian school economist Ludwig von Mises, Röpke had developed into a staunch social liberal as a student of Walter Eucken, and later in life would help develop ordoliberalism.³² Röpke was morally outraged by the NSDAP as early as 1930, and was quoted as saying that “whoever votes for the national socialists should know that they vote for chaos instead of order, and for destruction over construction” (Dalaman, 1998, p. 147). After his service in World War I, Röpke had become a strong opponent of, in his own words, “war, cruel and foolish national pride, the desire for dominion and all manner of collective rage against morality” (Reisman, 2006, p. 131). In Germany, Röpke actively combated National Socialism, writing articles both in his own name and under obvious pseudonyms such as “Ulrich Unfried”³³ (Röpke, 1931a) (Röpke, 1932) (Röpke, 1931b). According to Neumark, it was difficult for Nazis to comprehend Röpke's distaste for the regime, since being Aryan, successful, and renowned, he “was so similar to the ideal figure of the ‘young Siegfried’ they imagined” (Neumark, 1982, p. 52). Perhaps because of this, the Nazis were said to ignore Röpke's determined denial of the dictator and his teachings, at least for a while. However, Röpke eventually came under attack following a speech he delivered in Frankfurt after the *Machtergreifung*, both for his persistent opposition and his outrage over the removal of Jewish students and professors at his home university of Marburg. He was named an “enemy of the people”, and following the attempt of two SS officers to ‘persuade’ him, Röpke decided to go into exile. Avoiding the Gestapo, he fled to Istanbul with his family (Reisman, 2006, p. 132).

³² Eucken was an initiator of the Freiburg school of economic thought, which is known for publishing a journal called *Ordo*, and defining *Ordoliberalismus*, ‘ordered liberalism’ (a German variant of social liberalism which holds the belief that the state is necessary to ensure the success of the free market system, especially in ensuring its ability to reach its theoretical potential) and later the social market economy (especially in post-war Germany). For details, see Vanberg's article on Eucken and Ordoliberalism. (Vanberg, 2011)

³³ “Ulrich Unfried” is an obvious pseudonym, and could easily be translated into a made-up name such as “Dave Dissident”, where the surname clearly states the author's intent.

At the young age of thirty-four, Röpke became one of the founding professors of the Faculty of Economics. Although his stay in Istanbul was very brief—four years—it was nevertheless very productive. Being the most renowned of the refugee economists, it fell to Röpke to prepare the curricula and plans for teaching economics at the University of Istanbul, and for that reason he had been made the first director of the Institute of Economics, under the Faculty of Law at the time (Neumark, 1982, p. 53). Neumark also says that Röpke was the only refugee economist to be given a ‘normal’ chair in economics before the Institute of Economics became a separate faculty—at the time of Röpke’s emigration, only one chair was directly labeled ‘economics’ under the Faculty of Law, and it belonged to Röpke (Neumark, 1982, p. 58). Röpke was initially tasked with the teaching of economic geography, and later taught economic history and sociology. Through his time teaching, Röpke published a number of books in Turkish with the aid of translator assistants and colleagues, such as *İktisat İlmi* (The Science of Economics) and *Konjonktür ve Buhranlar* (Crisis and Cycles) with Ömer Celal Sarç and *Ekonomi İlminin Tekamül Tarihi* (Development History of the Science of Economics) and *Cemiyet Ekonomisi* with Muhlis Ete.³⁴ An issue with Röpke, however, was his inability to learn and teach in Turkish as commanded by his contract. When his students complained to the rector Cemil Birsel that Röpke had been in Turkey for three years and still spoke no word of Turkish, Birsel called Röpke in, to which Röpke replied “For what I want to teach, I have to use German. My Turkish will allow me to go about my daily life, not further. It will never be sufficient for academic discourse. Please accept that as it is.” Birsel obliged, telling Röpke that it was more important for him to teach than speak Turkish (Şen F. , 2008, p. 214).

Widmann notes that Röpke failed to make a lasting impression, possibly due to his short stay (Widmann, 1999, p. 201). However, an alternative reasoning for this can be considered: Röpke’s strong neoliberalism, with its anti-statism and advocacy of free market economics, was also unsuitable for the Turkish government at the time. It would also be wise to note that, if one takes historical conjecture and the prevalent economic thought at the time into account, this would have also been true of many other countries and their governments. Reisman

³⁴ Muhlis Ete (1904 – 1975) was a Turkish economist and politician. He was educated in the University of Leipzig and graduated from Berlin Trade School. In Turkey, Ete was a member of the Prime Ministry Inspection Board and later became a representative from the Democrat Party, and was Minister at *İşletmeler Bakanlığı* (Ministry of Government Enterprises) from 1950-1951 and the Ministry of Economics and Commerce from 1951-1952. Ete was later a representative of CHP and appointed the Minister of Commerce from 1962-1963. Ete was the founder of the Turkish Economic Association.

writes: “For Röpke’s philosophies to be acceptable for Turkey, and for any other country at the time, half a century would need to pass” (Reisman, 2006, p. 133). In Turkey’s case, as a newborn country recovering from an independence war, industry was important, and with the lack of a previously developed, rich upper-class to hold its hand, the only way to establish manufacture and production was going to be with the help of the state. Perhaps for this reason, Röpke was not as sought after as some of his other colleagues in economics, like the statistician Neumark.

Röpke also never intended to stay in Turkey, as he was rightfully convinced that the National Socialist state would eventually collapse and allow him to regain his position in his homeland, though it took much longer than he had foreseen (Reisman, 2006, p. 131). In actuality, it was very obvious that Röpke did not want to build a life in Turkey or integrate at all, and it could be judged that the longer the Nazi regime dragged on in Germany, the sadder and therefore angrier he got. Röpke also longed for the Central European way of life (and its climate, for Istanbul’s weather gave him trouble, and he is quoted as having cursed Istanbul’s “constantly blue sky” in private) (Neumark, 1982, p. 53). He held a certain amount of pride as a European and claimed he did not want to assimilate: in a letter he wrote to a colleague who had moved to the New York New School for Social Research, he claimed that “...you work in an—incidentally tempting—environment that is not inherently foreign to you, which you need to assimilate into, and surely you will soon enough. As for us (the refugees), we are naturally a foreign element (here), and it is impossible for us to indwell in this country, be it matters of language or sheer quintessence. (...) Some of us are seriously considering taking up Turkish citizenship. As for me, I have no intention to allow the Turks to succeed now at a personal level in what they failed to do collectively in Vienna in 1683” (Şen F. , 2008, p. 214). Eventually, Röpke was happy to leave Turkey for the *Institut Universitaire des Hautes Internationales* in Geneva in 1937. In Geneva, where he spent the rest of his life, Röpke would later lay the foundations of the social market economy doctrine with other economic thinkers such as Ludwig Erhard, Alfred Müller-Armack, Franz Oppenheimer and Friedrich Hayek. He later also became a founding member of the Mont Pèlerin Society. According to Reisman, Röpke’s exile was instrumental in the development of his economic thought, as he had thoroughly been influenced by Alexander Rüstow, whom Röpke had also worked with during his stay in Istanbul (Reisman, 2006, p. 134). He passed away at 66 years of age.

Alfred Isaac (1888 Cologne - 1956 Nuremberg) was a German economist, born in Cologne to a Jewish family. After receiving his habilitation in 1926 at the University of Frankfurt am Main, Isaac became a professor extraordinarius at the then College of Economics and Social Sciences of Nuremberg (which would later become Faculty of Economics and Social Sciences of the Friedrich-Alexander University of Erlangen). When he became a professor ordinarius at the *Handelshochschule* (Trade College) of Nuremberg in 1928, Isaac became the second Jewish person to hold the ordinarius title in Germany, though he was forcibly retired from this post in 1934. After three years spent in grief away from his beloved duty, Isaac was invited to the University of Istanbul and arrived with his wife and sister-in-law in 1937.

At Istanbul University, Isaac took on the task of teaching business administration in the Faculty of Economics. Like Neumark, Isaac learned Turkish rather quickly, in the span of two years, and started giving his lectures without the aid of translators. At the time, Isaac's native field of business administration was even more fledgling than economics was in Turkey. It was an entirely new discipline that Isaac alone was responsible for, and successful in popularizing in the country: it would not be unfair to consider Isaac the architect of business economics and business administration in Turkey.

In his teaching efforts in Turkey, Isaac faced serious problems due to the dearth of available literature on the field of business economics and business administration. It should be noted that even among the refugee economists Isaac was the only one who specialized in business and practice, so he lacked the opportunity to even turn to one of his fellow refugees for help. This overall lack of resources, however, only seemed to inspire Isaac. With astonishing zeal he devoted his time to writing, producing many new Turkish textbooks for his students, as well as translating his previous publications. These publications include much required textbooks for business economics, such as the aptly named *İşletme İktisadı* (Business Economics), which ran two different editions, was translated twice by colleagues İsmet Alkan as well as Ahmet Ali Özeken and Orhan Tuna, spanned three volumes, and was printed from 1940 to 1956. Isaac's books on business finance, such as his *Ticari Hesap ve Mali Cebir* (Commercial Accounts and Financial Algebra), *Maliye Nazariyesi* (Theory of Finance), *İşletmelerde Revizyon ve Kontrol* (Revision and Control in Businesses) and *Muhasebe Tatbikatı* (Accounting in Practice) should also be noted. For his efforts, Isaac became the Chair of Business Economics, a newly established department under the wing of the Faculty

of Economics. In this field, Isaac later became colleagues with Turkish academics such as Ahmet Ali Özeken and Feridun Özgür.³⁵

Much like many of his colleagues, Isaac was also employed as an advisor to the Turkish government. He helped define the mission for the Ministry of Labor, and was later also involved in organizing it. In so doing, Isaac was influential in the formulation of laws regarding social security and social welfare (Shaw, 2013). Isaac contributed to the establishment of fledgling Turkish public institutions, industry and trade enterprises by devising an easily applicable hypothesis that allowed them to compare various available investment options before deciding. Isaac is also credited with the training of many young Turkish economists and financiers for businesses, which should not be surprising considering his publications in the field of business finance.

Isaac was also active outside of academia, campaigning particularly for animal rights. According to Neumark, “Vurma!” (“Don’t hit!”) was one of the first words he learned during his stay in Turkey, in response to witnessing coach car drivers whipping their horses. Though Isaac had been of a somewhat timid personality, he showed a great deal of civil courage on matters that went against his morality, often by way of confronting burly coach car drivers armed only with his newly-learned word (Neumark, 1982, p. 57). He was later a very active member of the Istanbul Society for the Protection of Animals.

Isaac was denaturalized by Nazi Germany in 1941, and all property he had remaining in Germany was seized. After the war, he received an honorary professorship from the University of Göttingen in 1950, and he went there in 1952. His post at the Trade College of Nuremberg was returned to him in 1955, at which point he retired. He passed away a year later.

Josef Dobretsberger (1903 Linz - 1970 Graz) was an Austrian politician, jurist, and national economist. He had become a professor at the University of Graz at 30 years of age and was

³⁵ Feridun Özgür (1912 – 2006) was a Turkish business economist. Educated in Robert College, he later graduated from the Istanbul University Faculty of Economics and was made an assistant to Alfred Isaac, under whose supervision he completed his doctoral thesis on *Finansal ve Plasman Bakımından Obligasyon* (Obligations in Terms of Financing and Placement), and later earned an associate professorship following another thesis on *İşletme İktisadında Faiz Problemi* (The Interest Problem in Business Economics). Later on in life, he went to Harvard University as a visiting professor. He was one of the founders of the Institute of Business Economics.

also its rector in 1937-38. He had been a student of Hans Kelsen, and was influenced also by Austrian School economists Carl Menger and Eugen von Böhm-Bawerk. Dobretsberger was also an active politician throughout his life, and more often than not it outweighed his academic persona and prevented him from spending time on academic work. As a student, Dobretsberger had been a member of the *Cartellverband der katholischen deutschen Studentenverbindungen* (Union of Catholic German Student Fraternities), was a left-leaning political catholic, and from 1935 was the Minister of Social Services for the last non-Nazi cabinet (the “Schuschnigg Cabinet”) of the Federal State of Austria.³⁶ As the rector of the University of Graz, Dobretsberger had cancelled teaching activity at the university in January 1938 due to the protests of the strongly represented National Socialist students. When the *Anschluss* occurred in March, Dobretsberger resigned, and was the only professor at the university to do so. (Şen F. , 2008, p. 159) Then, Dobretsberger abruptly disappeared, and when news of his removal from both professorship and rectorate started going around, colleagues in Istanbul, like Neumark, Rüstow, Kessler and Isaac, started to worry. In a carefully-worded letter addressed to his house—which was also sent to identify his situation—Neumark asked Dobretsberger for a “capable replacement” for Wilhelm Röpke at the University of Istanbul, with the hidden message of whether Dobretsberger would take this position himself (Neumark, 1982, p. 60). The letter was later delivered to Dobretsberger by his wife—he’d been imprisoned, sharing the same fate of all other former Schuschnigg cabinet members. When Dobretsberger was allowed to reply to Neumark’s letter, he requested the job. After much effort, Dobretsberger was released from prison, and after months of evading the Gestapo, came to Istanbul with his family (Reisman, 2006, p. 138).

Dobretsberger taught general economics and political economy in the Faculty of Economics, and published a number of economics textbooks in Turkish, especially on the subject of economic policy. Unfortunately, Dobretsberger was not as productive as he might have been due to his rather short stay and political interests. Dobretsberger and a number of communist refugee scholars established a debate group where they discussed Marx. Interestingly, according to Şen, Dobretsberger never became a communist himself. (Şen F. , 2008, p. 159) Neumark considers his political leanings to be ‘rather far left’ without explicitly naming him a communist (Neumark, 1982, p. 61). Dobretsberger’s primary concern was to oppose the

³⁶ The Federal State of Austria, also known as *Bundesstaat Österreich* or colloquially *Ständestaat* (Corporation State) was Austria between the years 1934-38, a one-party state governed by the political Catholic *Väterlandische Front* (Fatherland Front). It ended with the *Anschluss* after being annexed by Nazi Germany in 1938.

Anschluss, and Nazi Germany in general. According to Neumark, Dobretsberger felt threatened as the war moved in Hitler's favor, and was further aggrieved after the arrival of German ambassador Franz von Papen in Ankara (Neumark, 1982, p. 61). Şen notes that Dobretsberger had reviled Papen even as an ambassador in Austria, and by some ironic twist of fate, he had followed Dobretsberger even to Turkey (Şen F. , 2008, p. 159). Intimidated, Dobretsberger left Turkey for Palestine, where he conducted anti-Nazi propaganda. Later on, he did the same in Cairo. After the war, Dobretsberger returned to Vienna, where he established a newspaper which had communist leanings. In 1953, he became a co-founder and federal representative of the Democratic Union, established when the Austrian Communist Party and left-wing Socialists merged to create a People's Opposition.

There is an unclarified issue of 'spying' regarding Dobretsberger—allegedly, some Nazi officers were informed that Dobretsberger had been sent to Turkey by the Nazi government in order to spy on the émigré scholars. This is mentioned by Herbert Scurla, a Nazi official who was responsible for observing the refugee scholars, in his infamous Scurla Report (Scurla, 1939). Another document that attests to this exists, though it also refers to some uncertainty on the matter (Museum Online, 2010). Based on the testimony of Fritz Neumark's son, Matthias Neumark, who knew the Dobretsberger family very well, there was no possibility of such a charge. Reisman concludes that Dobretsberger must have had the Nazis fooled (Reisman, 2006, p. 139).

Dobretsberger was denaturalized from Reich citizenship after an interview he gave to the paper *Journal d'Orient* in which he said "We have become Turks here, found a new homeland. If I were to serve in the army again, I'd do it in the Turkish army" (Şen F. , 2008, p. 159). After the war, he returned to Austria in 1945, and resumed teaching at the University of Graz. He also tried to pursue his political career, though he quickly became disillusioned, saying "I thought I could be useful to my country, and therefore made the mistake of returning. (...) The only thing me and my old friends can agree on now is how to play cards." He became a representative in the Austrian People's Party, though he immediately renounced the party after hearing of the *Oberweiser Konferenz*, where leading members of the party carried out a secret meeting with former high-ranking Nazis, which only led the party to lampoon him as an "old refugee" and a communist. Dobretsberger then finally joined the Communist Party of Austria. He passed away in 1970.

Umberto Ricci (1879 Ricci, Italy - 1946 Cairo, Egypt) was an Italian economist and statistician. In his home country of Italy, Ricci had been a professor of statistics at the universities of Parma and Pisa, and also lectured economics at the universities of Macerata and Rome. He was a representative of classical liberal economics, and his particular academic interests were agricultural economy and economic theory. Unlike many refugee scholars, Ricci was not from a German-speaking country, and arrived in Istanbul at a much later date. Nevertheless, his reasons for leaving his homeland were similar to those of his German-speaking colleagues, and even he himself felt close to the German refugees (Neumark, 1982, p. 62). In Italy, Ricci had been an avid critic and a political opponent of Mussolini, and due to this—much like a number of the German-speaking refugees—lost his post at the University of Rome in 1929. Ricci was thrown into exile for his various and vigorous criticisms of the fascists' economics, such as their bankruptcy of city finances. In an obituary that he wrote for Ricci, Luigi Einaudi (who would turn out to be the second President of Italy after the war) writes that, "Unable to reply to the criticisms effectively and therefore atrociously derided, the Dictator vindicated himself by depriving Ricci of his chair" (Einaudi, 1946). When the offer from the University of Istanbul found him, Ricci had been teaching economics and statistics at the Law Faculty of the new National University of Cairo alongside a number of other Italian scholars who had shared similar fates. When Italy entered the war in 1942, friendly civil relations between Italy and Egypt all but seized. In the same year, Ricci was invited to Turkey by the Turkish government in order to succeed Dobretsberger.

Ricci was considered to be more of a theoretician than most. Perhaps for this reason, Ricci was not very influential on the study of economics in Turkey, and was not as renowned as the refugee scholars who are often remembered for their more practical work. Nevertheless, Ricci's value as a theoretician is unquestionable. Ricci was massively renowned for his theory; he was the most famous of Italian economists before the Fascists' rise to power, second only to economists like Vilfredo Pareto and Maffeo Pantaleoni. He followed the economic tradition of Pareto as well as that of Léon Walras, and was known for his theoretical analysis of their doctrines (Ricci, 1933). Sayar notes that Joseph Schumpeter also greatly valued Ricci as a theoretician (Sayar, 2007).

Ricci left behind volumes on economic theory. His books included subjects such as the theory of capital, the theory of wants, the theory of value, and savings and taxation; his Turkish textbook on the theory of value, *Teorik İktisadın Unsurları: Kıymet Teorisi* (Elements of

Theoretical Economy: The Theory of Value) can be considered an example of his legacy to Turkish economic thought. His publications also included numerous monographs on supply and demand curves.³⁷

Ricci continued to teach in Istanbul until the end of the war, upon which he sought to return to Italy. Tragically, he passed away during the voyage home of a heart attack.

3.1.2 Conclusion

The study of economics in the University of Istanbul can be considered symbolic of the reform of 1933. The tragedy that unfolded in German-speaking countries and central Europe after the 1930s displaced many talented scholars for wholly unjustifiable reasons, such as their religion, ethnicity, heritage, or political beliefs. Among economists, however, it can be seen that a common cause for termination was often based on ideology. Political opposition to the regime among social scientists such as economists was common, as seen in the examples of Kessler, Röpke, Dobretsberger, Baade, and Ricci.

The economists that arrived in Turkey during and after the reform can be noted for the diversity of their ideological and economic traditions. Turkey received a number of representatives in various schools of economic thought: statist advocates taught in the Istanbul University Faculty of Economics as well as free market proponents, business economists alongside pure theoreticians, German historical school students together with Walrasians, neoliberals among social democrats. The result was the cultivation of an entire generation of Turkish scholars from a variety of economic traditions and diverse philosophical backgrounds, as the cosmopolitan Istanbul was ever wont to have as one of the few crossroads of the world. It led to a cornucopia of young academics with thousands of new ideas, with which they set out to start an entire country's economy from a war-torn scratch.

³⁷ Ricci's bibliography can be found in his biography by Bini and Fusco. (Bini & Fusco, 2004)

3.1.3 Economics and Agricultural Economics at *Yüksek Ziraat Enstitüsü* (Higher Institute of Agriculture)

Both the Ottoman Empire and the Republic of Turkey were agricultural economies. While the Ottoman Empire boasted major military successes through its rise, it later began to fall behind its counterparts in technology, and as its military began to stumble as a result, the whole Empire entered a period of decline. The Empire's failing economic state was exacerbated by its failure to catch up with the Industrial Revolution: the Ottoman economy remained unindustrialized and was largely dependent on agriculture well into the 19th century. During the Tanzimat period, the necessity to improve the state of the what had become the backbone of the Ottoman economy was realized.

According to Kadioğlu, the first attempts to establish a school capable of teaching agricultural methods can be traced to *Ziraat Talimhanesi* (lit. House of Agricultural Practice), established in Yeşilköy in 1847. The *Talimhane* was part of a large complex, which included a cotton farm called *Ayamama Çiftliği*, and they were in close proximity of a cloth weaving factory in Yedikule, which had been built at around the same time. As a whole, the purpose of the complex was fairly straightforward: the school would educate the farmers, the farm would provide the raw materials, and the factory would produce the finished goods. Obviously, the cultivation of cotton or cloth weaving was nothing new in the Ottoman Empire, but the techniques and methods taught at the school were. The *Talimhane* was built with the express purpose of introducing modern agricultural methodology to a reforming economy. To this end, the Ottoman government sought to modernize cotton farming, perhaps as a prototype in modern agricultural production. The model country that employed the most modern methods in cotton cultivation at the time was the United States, and an American expert by the name of Doctor Davis was brought to Istanbul. Davis brought with him his knowledge of agricultural matters, as well as sample seeds, and was employed at *Talimhane* (Yıldırım M. A., 2008, pp. 225-226). He was also given an assistant-translator, Agaton Efendi, who had been educated abroad in France on matters of agriculture. The *Talimhane* had fifty students, twenty of which had been transferred from *Askeri Tıbbiye* (Military Medical School). Meanwhile, modern agricultural equipment and machinery was imported from Europe and demonstrated to the public to promote their use. While high hopes were held for the *Talimhane*, the school failed in its goals due to a variety of problems, such as its failure to attract students from rural areas, lecturers with no time to teach, incapability to use the foreign scholars extensively, and the big lack of academic literature and equipment. *Ziraat Talimhanesi* lasted four years, closing down in 1851 (Kadioğlu, 2005, pp. 1-2).

Another attempt to establish a school of agriculture came three decades later, in 1878, through the efforts of the French-educated Amasyan Efendi, who had been made the head of the Agriculture Directorate, which in turn had only been established recently. It took a long amount of time to establish the school, and it opened after a decade in 1891, transferring students from *Mekteb-i Tıbbiye-i Mülkiye's Mülkiye Baytar* (Civil Veterinarian) department. The school, named *Halkalı Ziraat ve Baytar Mektebi Âlisi* (Halkalı Agriculture and Veterinary College), suffered through several splits: after its veterinary students graduated, veterinarianship was moved to another school, and while the school functioned as an “Agriculture School” for some time, soon afterwards forestry was added to it, only to be moved to another school yet again. *Halkalı Ziraat Mektebi Âlisi* had to close down during World War I, and again during the Armistice of Mudros in 1918. After the declaration of the republic, it was reestablished, and a number of its alumni were sent abroad to Germany for further education and to study modern scientific research methods, more in line with the republic’s point of view. In 1927, a law concerning the reform of agricultural schools operating in the country was passed. The idea of establishing a *Yüksek Ziraat Enstitüsü* (Higher Institute of Agriculture, hereby abbreviated YZE) was a part of the impending 1933 University reform, which would concern itself with the improvement of agriculture and education on agriculture throughout the country. Replaced by the idea of YZE, the Halkalı school was closed down in 1928 (Kadioğlu, 2005).

Yüksek Ziraat Enstitüsü had a unique position among Turkish higher education institutions, especially in regards to technology transfer from Germany, since it was established on the foundation of official Turkish-German collaboration. In 1928, a group of 11 German scientists, headed by *Geheimrat*³⁸ Oldenburg and collectively titled the Oldenburg Committee, arrived in Turkey to examine the education of agriculture within the country, provide their expert opinion, and submit their recommendations for educational reform. This was comparable to Albert Malche’s report on the reform of Istanbul University, but, it should be remembered that YZE was the result of an official collaboration between the two countries. The committee included the rector of the Berlin Higher Institute of Agriculture, a Hr. Schucht, and concluded that the Berlin Institute should be taken as the model for YZE (Taşdemirci, 2000, p. 201).

³⁸ *Geheimrat* was a title held by higher-up official advisors to the Holy Roman Empire. The term was largely abolished after the end of World War I, but was used to denote official appointment of advisory positions for honorees well into the 1930s.

A school that preceded YZE was *Yüksek Ziraat Okulu* (College of Agriculture), established in 1930. In 1933, it was turned into an institute. According to Çetiner, modern education of agricultural engineering began with YZE. YZE was intended to be the brains behind the operation of the Turkish agricultural reform, which ultimately meant to modernize Turkish agricultural practices (to “save it from ploughs pulled by oxen (*karasaban*)”, to quote Çetiner), observe Turkey’s agricultural issues with a scientific point of view and provide solutions to its problems, and raise agricultural engineers to serve Turkish agriculture and its farmers as well as to conduct research in the field (Çetiner, 2011). YZE was nevertheless considered to be a modest educational center, with only three institutes: Agricultural Technology, Agricultural Equipment Institute: Machinery, and the Agricultural Handcrafts Institute.

The non-refugee Friedrich Falke was appointed as the rector of *Yüksek Ziraat Enstitüsü* when it opened in 1933. Due to the nature of the official collaboration, the development of YZE was considered to be much more systematic, though it could also be said that much power was handed over to the German side of the collaboration. At YZE, all levels of administration (including the rectorate, deanships and institute directorships) were granted to foreign scholars, and Turkish scholars were only employed at assistance levels, working as teaching assistants and performing translation jobs for lecturers. Additionally, in contrast to Istanbul University, whose majority of foreign scholars were refugees escaping Nazism, the majority of foreign scholars employed at YZE were official appointments of the German government, though a number of refugees were still employed at YZE through the intervention of the *Notgemeinschaft* (Schwartz, 1972, p. 48).³⁹ Due to this quality, YZE was an institution that soon became highly dependent on politics.

While delving into the depths of YZE’s political issues would go beyond the purposes of this thesis, it is nevertheless necessary to elaborate on its political background in order to paint a picture of the situation the institution found itself in. According to Regine Erichsen, who wrote extensively on the subject, from the German point of view, the YZE was a product of German-Turkish foreign policy, and it had inherited a specific role from a legacy of long-time relations between Germany and the Ottoman Empire that started in the 19th century. Erichsen notes that Wilhelmenian foreign policy was economic in essence, and aimed towards the

³⁹ “The foundation of an Agricultural and Veterinary University in Ankara, which was originally planned with the mediation of the *Notgemeinschaft*, fell into the hands of the Hitlerian lobby (...) yet we managed to find places for some of the highly qualified émigrés even among those groups.” (Translated by Erichsen, (Erichsen, 2000, p. 45).

“peaceful economic penetration” of the “sublime port” in order to obtain commercial access, which would be accomplished easily once the target country and its people were primed through cultural and scientific transfer (Erichsen, 2000, p. 39). The establishment of YZE, alongside other institutions, was thus a byproduct of German *Kulturpolitik*. In YZE’s case, this was glaringly obvious due to official cooperation between the German and Turkish governments. Erichsen also notes that the establishment of a “German university” in Turkey was among the goals of a German Schools Advisory Committee set up in 1915 – and it can even be argued that the extensive employment of refugee German-speaking scholars at Istanbul University ended up serving that exact purpose, though whether it happened the way the German government wanted is arguable. Even so, when 80% of Istanbul University’s academic staff was comprised of exiled German scientists by 1935, the German press actually heralded it as a success of German *Kulturpolitik*... often heedlessly omitting why the German scholars were in exile in Turkey in the first place (Erichsen, 2000, p. 43). The term *Kulturpolitik* seemed to have had different meanings at home and abroad.

As a result of being a collaboration between Germany and Turkey, even as an educational institution, YZE had to suffer the fate of becoming a hotbed of political activity. According to Philipp Schwartz, “... (YZE) was originally planned with the mediation of the *Notgemeinschaft* (but) fell into the hands of the Hitlerian lobby, yet we managed to find places for some of the highly qualified refugees even among those groups” (Schwartz, 1972). Twenty out of twenty-four of YZE’s scholars were officially appointed by the German government, and often referred to as *Reichsprofessoren*, and YZE seemingly had a reputation for being a “German school”. As the years progressed, however, Nazi Germany’s domestic and foreign policies soon drew the Turkish government’s ire, and YZE got affected by it on an institutional level. While the Nazi government wanted to pursue a far more aggressive *Kulturpolitik* and employ more ‘approved’ German scholars in Turkish institutions, the Turkish government simply kept employing refugees. Herbert Scuria, a Nazi official who came to Turkey to report on the refugee scholars’ activities in Turkey, even proposed to “build up the YZE as a counterweight to the ‘jewified’ University of Istanbul” (Grothusen, 1986, p. 112). As relations between the two countries deteriorated, the Turkish government became increasingly distrustful of the German staff employed at YZE and began to replace them with Turkish scholars (Taşdemirci, 2000, p. 201). The refugees were spared – the others were not, regardless of whether they were followers of National Socialism. The German-appointed rector of the YZE Friedrich Falke, for example, was removed from his post in

1938, despite all his efforts to distance himself from politics. Falke later wrote that he had “witnessed the great work of German cultural and educational achievement at the YZE being destroyed by National Socialism” (Erichsen, 2000, p. 48).

Almost all *Reichsprofessors* had to leave Turkey eventually as the Turkish government refused to prolong their appointments. The refugee émigrés in YZE, while a minority, managed to stay in Turkey for longer than their non-refugee counterparts. As this thesis expressly examines the technology transfer contributions by refugee scholars who came to Turkey fleeing persecution, the contributions of non-refugee émigrés, such as officially appointed experts and scholars on temporary employment will not be examined. The refugee scholars at YZE were Fritz Baade, Wilhelm Salomon-Calvi, Otto Gerngross, Max Pfannenstiel, and Hans Bremer.

YÜKSEK ZİRAAT ENSTİTÜSÜ (HIGHER INSTITUTE OF AGRICULTURE)		
REFUGEE SCHOLARS		
NAME	CHAIR / FIELD	DURATION OF STAY
Fritz Baade	Agricultural Economy	1935-1946
Wilhelm Salomon-Calvi	Geology	1934-1941
Otto Gerngross	Agricultural Technology, Industrial Chemistry	1933-1938, 1947-1966
Max Pfannenstiel	Geology, Librarianship	1938-1941
Hans Bremer	Phytopathology	1934-1950

Source: (Dölen, 2010a, p. 488)

Fritz Baade (1893 Neuruppin - 1974 Kiel) was a German economist and politician. Educated in the *Landesschule Pforta*, Baade studied economics, classical philology, art history, theology and medicine at the universities of Göttingen, Berlin, Heidelberg and Münster. Like many other refugee scholars, he served in World War I. He earned his doctorate in 1922 with a thesis titled *Die Wirtschaftsreform des Grossbetriebes in vorkapitalistischer Zeit* (Economic Reform of Big Business in pre-capitalist Times). By 1928, he was an associate professor of agricultural markets at the University of Berlin. After 1929, he became the director of the Reich Agriculture Markets Research Centre under the Ministry of Food. Baade’s reasons for dismissal were political; he was dismissed from the research center on the grounds that he had been a representative of the Social Democrat Party between 1930 until 1933. Baade nevertheless claimed that his dismissal wasn’t political, and spent a substantial amount of effort trying to get the Foreign Ministry of Nazi Germany not to label him as an emigrant. He succeeded in this endeavor, and due to this was exempt from many sanctions placed on

emigrants, and could go to Germany and return to Turkey at will. As such, Baade was an exception among the emigrés, and was treated fairly favorably by Nazi Germany. This drew fellow former SPD member and refugee Ernst Reuter's ire, who referred to Baade as a "villainous traitor". Baade wrote back to Reuter saying that he wanted to be able to at least send letters and money to Germany, no matter the cost⁴⁰ (Şen F. , 2008, p. 147).

Baade was invited to Ankara in 1935 as an advisor for the Ministry of Economy. An agricultural economist by trade and a scholar devoted to the problems of developing nations, Baade lent his counsel to the Ministry of Economy over a period of nine years. While his advisory position was a priority, Baade also simultaneously lectured on agricultural economy and marketing in the *Ankara Yüksek Ziraat Enstitüsü*. In the manner of written counsel given to the Ministry of Economy, Baade was highly active in his publishing, and was the author of many reports relating to the "...almost complete restructuring of the gestalt of the Turkish economy, especially its agricultural bases" (Baade, 1960)—even years after Baade had left the country in 1948, he still remained involved with Turkish agriculture. Baade's many accounts on the problems faced by the Turkish agriculture were prized even when they did not exactly paint pretty pictures: the 1960 Food and Agriculture Organization (FAO) report on Turkey, which Baade was highly involved in, was exemplary of the Turkish agricultural situation and the immediate precautions that would be necessary to take. Baade's reports on the Turkish agriculture were extremely extensive, and more often than not his suggestions for agricultural reform were immediately implemented. Baade's suggestions were in favor of increasing Turkish capability as an agricultural economy and increasing its competence in agricultural exports: Baade's research showed that the standards for much of Turkish agricultural products had to be raised to European standards to even be eligible for exportation. To this end, Baade was successful in bringing together Turkish food producers for many improvements, such as standardization processes, drying, canning and so on. In addition to that, Baade also researched Turkey's pastures and arable land, pointing out dangers of erosion and diminishing grasslands. Outside of agriculture, Baade also published reports on the development of the tourism industry, observing accurately Turkey's potential in

⁴⁰ Baade's wife, Edith, was of Jewish descent, which would have resulted in his exile regardless. Also, according to Şen, Baade's reasoning for being a non-emigrant (which infuriated Reuter in the first place) was because he wanted to help an ex-partner, another Jewish woman, Helene Leroi, whom he'd had two daughters with. His daughters had escaped to the United Kingdom, but Helene was still in Germany, and at risk of being sent to a concentration camp. She was taken in and hid by a former social democrat colleague of Baade's, and needed money to buy food off the black market.

the sector. He was also an active proponent of the development of Turkey's human resources and the nurturing of its human capital (Tütengil, 1965).

Baade's contract with the Turkish government ended prematurely in 1939, which were apparently "completely due to Turkish inner politics" (Şen F. , 2008, p. 148). Baade then went to Istanbul and worked as an advisor in the private sector. Towards the end of World War II, after it became clear that the Axis Powers were losing the war, the Turkish government ended diplomatic relations with Germany on August 2, 1944. The subsequent declaration of war against Germany deemed all German citizens in Turkey as the "citizens of an enemy state", and as Baade had never been denaturalized by Nazi Germany, he too became such an "enemy citizen". Baade did not return to Germany, and was interned at the province of Kırşehir along with his family. Even so, Baade showed no sign of disappointment or indignation in response, and instead continued his scholarly pursuits despite his internment. He conducted archeological surveys in the surrounding countryside, leading to the discovery of the Terme hot springs and water sources. A resurgence of the popularity of Meerschaum tobacco pipes⁴¹ is attributed to Baade, as he discovered an abundant source of the Meerschaum mineral around his internment province and pushed for the opportunity to make it into one of Turkey's exported luxury crafts (Reisman, 2006, p. 142).

Baade was released from internment in 1945. He went to the United States the following year. From 1949 to 1969, Baade was a member of parliament in the German Federal Republic. He became the chair of the Turkish-German association, and from 1964 was an honorary consul of Turkey. In a trip back to Kırşehir in 1958, he was also awarded honorary citizenship.

Wilhelm Salomon-Calvi (1868 Berlin – 1941 Ankara) was a German geologist, known internationally for his discovery of a Radium-Sol thermal spring in Heidelberg, the strongest source of radium salts in the world (Salomon, 1927). Born in Berlin to a Jewish family as Wilhelm Salomon, he converted to Roman Catholicism in 1892 and also took on his wife's surname Calvi. Salomon-Calvi was educated in the universities of Zurich, Berlin and Leipzig, and earned his doctorate with his thesis "*Geologische und petrographische Studien am Monte*

⁴¹ Meerschaum (literally, sea foam) is the mineral sepiolite, often used in making smoking pipes. Popularized in the early 18th century, the pipes were often manufactured in Vienna, with the raw material imported from Turkey. After the 1970s, however, the export of the mineral was outlawed, as the country began to set up its own artisan industry for the unique goods.

Aviolo im italienischen Anteil der Adamellogruppe” (*Geological and petrographic studies on Monte Aviolo in the Italian part of the Adamello Massif*) in 1890. Later, he moved to Munich and began to deepen his knowledge of paleontology. In 1893, he became a *privatdozent* at the University of Pavia in Italy, and in 1897 returned to Germany, where he earned his habilitation with a thesis titled “Alter, Lagerungsform und Entstehungsart der periadriatischen granitisch-körnigen Masse” (Age, storage form and origin form of the periadriatic granitic-granular mass) at the University of Heidelberg. Later in 1901, he became a professor extraordinarius for stratigraphy and paleontology at the University of Heidelberg. In 1908, he took over the direction of the university’s newly established Institute of Geology and Paleontology, and was a professor ordinarius by 1913. Salomon-Calvi taught at the University of Heidelberg for thirty-seven years (Kadıoğlu, 2007-2008, p. 188).

Salomon-Calvi was removed from his position at the University of Heidelberg due to anti-Semitic reasons in 1933. According to his student Max Pfannenstiel (who would follow him to Turkey), Salomon-Calvi left Heidelberg for racial-political reasons, and did not so much volunteer to accept the Turkish government’s invitation and did so after much mature and nuanced deliberation (Widmann, 1999, p. 364). Salomon-Calvi was sixty-six years old when he arrived in Turkey. From 1934 to 1935, he was responsible for the direction of the Institute of Geology at the Higher Institute of Agriculture, and took on Şevket Ahmet Birand⁴² as an assistant and protégé. Salomon-Calvi started out by expanding the Institute, but did not direct or teach in it for very long. After two years, and after passing his duties over to the non-émigré Austrian scholar Prof. Leuchs, Salomon-Calvi moved to the Ministry of Agriculture in

⁴² Şevket Ahmet Birand (1900 – 1956) was a Turkish professor of geology. Born the son of a farmer, Birand graduated from *Halkalı Ziraat Okulu* (Halkalı School of Agriculture) and became an assistant at the same school after graduating. In 1928, he was sent to Germany on a state scholarship to study abroad, and there he continued his studies at the Universities of Berlin and Heidelberg, focusing on geology and mineralogy. He earned his doctorate from *Landwirtschaftliche Hochschule Berlin* (Agricultural University of Berlin)—a German agriculture university the YZE itself was modeled after. After learning German agricultural methodology there, Birand returned to Turkey, and became the head of the geology department at YZE. Committing himself to academic work, Birand embarked on many trips where he analyzed Turkey’s natural and mineral resources, earning his habilitation with a thesis titled *Bursa Nilüfer Vadisi’nin Jeolojik, Petrografik ve Petrolojik Vaziyeti* (The Geological, Petrographical and Petrological State of Bursa’s Nilüfer Valley) in 1936. By 1943, he was a professor, and by 1947, an ordinarius. When Ankara University opened, Birand became the head of its natural sciences department. Birand was teacher to many students of agriculture, natural science, and geography, and supervised the doctorates of Turkish geologists such as Nagiz İlgüz, Utarit Aktuğ, and Mesut Özüygür, who in turn also became academics. Birand himself was a prolific academic, and published textbooks, articles, and papers on geology, mineralogy, soil erosion, and soil mapping. Examples of his textbooks include *Mineraloji Dersleri* (Lectures in Mineralogy) and *Stratigrafi* (Stratigraphy), while examples of his research papers include *Nazilli Çevresinde Görülen Tuz Çökelekleri ile Karasular Üzerinde Jeolojik Müşahadeler* (Geological Observations On the Salt Precipitates and Marbles around Nazilli), where he studied Turkey’s famous salt lake, *Tuz Gölü*. Birand was a member of the German Geological Society. He passed away in Germany in 1956 during a research trip (Sayıt, 14-18 April 2014, p. 6).

order to organize research projects on Turkish geology. He became a founding member of *Maden Tetkik ve Arama Enstitüsü (MTA)* (General Directorate of Mineral Research and Exploration) and directed it from 1936 to 1938.

On the suggestion of the French geologist Ernest Chaput, the University of Istanbul offered the directorship of its Institute of Geology to Salomon-Calvi in 1935. Salomon-Calvi refused this offer, considering his work at MTA, the request of the then Minister of Agriculture, and his project to establish a new institution for the research of geology in central Anatolia.

Salomon-Calvi was interested in Turkey's geological issues, and attempted to establish an independent institution for geological surveys, presenting a report to Prime Minister İsmet İnönü. In his report, Salomon-Calvi pointed out that, until now, geological research in Turkey had been left to the initiatives of lone individual researchers or to mere coincidence, and that institutions like MTA and Etibank⁴³ were too busy with the extant mines. He noted on the necessity of establishing another institution, one that would be capable of conducting more specific research and bestow further education in geology. In addition, he also detailed Turkey's other geological matters, such as water sources, claiming that they would be a source of income for the state if handled properly (Salomon-Calvi, 1936). Unfortunately, Salomon-Calvi's efforts towards establishing this new Turkish geological society were ultimately unsuccessful. Funding for Salomon-Calvi's project was reduced significantly following Atatürk's death in 1938, and he resumed his work at MTA, taking on an advisory position in 1939, which he kept until his death. From this point on, MTA again became Salomon-Calvi's primary establishment, and he was highly influential in its growth and development.

Salomon-Calvi is credited with at least 37 publications which he wrote in Turkey, the latest and most prominent of which was *Untersuchungen über Erdbeben in der Türkei* (Studies on Earthquakes in Turkey) (Widmann, 1999, pp. 257-258).⁴⁴ He also wrote *Antalyas*

⁴³ Etibank was a Turkish industry bank, established in the early Republican period in 1935, as a part of the first Five-Year Plan, as an *İktisadi Devlet Teşekkülü* (State Economic Entity)—a public institution funded entirely by the state in order to operate with commercial principles. Established with the express purpose of financing efforts to utilize Turkey's underground resources in particular, Etibank held a distinct focus on the financing and crediting of mining operations, the production of raw materials required by Turkey's infant industries, as well as energy production and distribution. Etibank's areas of operation grew too large in later years, leading it to move operations to other institutions—such as relegating iron mining and steel manufacturing to Karabük Iron and Steel Works (now Kardemir); coal mining the Turkish Coal Manufacturing Institution; and energy production and distribution relegated to the Turkey Electric Institution (now split into TEDAŞ and TEAŞ). As a bank, Etibank was privatized in 1998 and closed down in 2001. Etimaden, a public company focusing on the mining of boron and byproducts, continues some of Etibank's operations a successor (Etimaden, 2017).

⁴⁴ A full list of Salomon-Calvi's publications in Turkey is available in (Kadioğlu, 2007-2008, pp. 193-194).

Geologische Lage und die Möglichkeiten seiner Wasserversorgung (Antalya's Geological Place and the Possibilities of its Water Supply), and compiled catalogues on Turkey's water supplies, thermal springs, and earthquakes. Adolf Wurm comments on Salomon-Calvi's work in Turkey:

“He spent the last part of his life in Turkey in Asia Minor, and there found a very attractive worksite waiting for him. His long voyages gave him the opportunity to find and explore big and undiscovered parts of Anatolia. These places gave him so many new tempting problems to solve, and he immediately set to work on solving them with unstoppable vigor, despite his age. The best proof of this is his publications, among which are catalogs of Turkey's water sources, a catalog on earthquake risks, his catalogue of thermal springs. He conducted oil surveys in Northern Anatolia. He tried to make the scientific results of his research applicable for the benefit of the nation, and he did not stop working until the last few weeks before his passing” (Wurm, 1950) (Translation mine.)

Salomon-Calvi passed away in 1941 at seventy-three years of age. He was interred at the graveyard in Cebeci, Ankara, with a state funeral, representing the Turkish government and his friends' respects for his efforts in Turkey.

Otto Gerngross (1882 Vienna – 1966 Ankara) was an Austrian chemist. Not much is known of his early life, other than that he was born in Vienna and that he switched to German citizenship when he later moved to Germany for his job around 1900. Gerngross was a student of the Nobel laureate Emil Fischer, and through his suggestion was invited to take a professorship at Berlin-Charlottenburg Technical University in 1913, where he studied organic chemistry and protein technology. The German-appointed rector of YZE, Friedrich Falke, offered Gerngross a professorship at YZE, which he took (Widmann, 1999, p. 258).⁴⁵ Gerngross arrived in Ankara in July 1933.

According to Şen, Gerngross' undesirability was rooted in the fact that he, along with his wife, was classified as a *Volljude* (full-Jew), despite the couple's conversion to Christianity early on in their youth (Şen F. , 2008, p. 167). Interestingly, Gerngross was not initially denaturalized or forcibly removed from his position at the Technical University of Berlin—he (technically) retained his position there as he had (technically) been invited abroad by Falke. However, the university put him on 'leave' for three years, and extended it for one year every time until the *Anschluss* in 1938. From then on, he considered himself a refugee. In 1941,

⁴⁵ Widmann refers to Falke as being “forward-looking” in reference to his employment of Gerngross, who was considered undesirable due to his heritage (Widmann, 1999, p. 258).

Gerngross' whole family was denaturalized from German citizenship, though he would return to Austrian citizenship after World War II (Widmann, 1999, p. 258).

At YZE, Gerngross held the chair of Agricultural Technology, which Widmann considers “the only important chair in a very modest Faculty” (Widmann, 1999, p. 259). Gerngross was especially interested in researching indigenous species of bread grains in Turkey, and claims in his autobiography that with the use of a *Brabender* farinograph, the Polatlı wheat flour from central Anatolia made an even better flour for cooking purposes than the flour produced from the United States' famous *Manitoba* wheat breeds (Widmann, 1999, p. 259).⁴⁶ He was also interested in the development of viticulture in Turkey, as well as the industry related to it: he spent three years in this faculty testing equipment for automatic grape mashing and teaching people how to use them. Gerngross also wrote several reports on the development of the leather industry in Turkey with his assistant Cahid Öncü⁴⁷, such as *Türkiye’de Ziraat ve Deri Endüstrisi* (Agriculture and Leather Industry in Turkey), *Türkiye’de Debağat Maddeleri, Ham ve İşlenmiş Deri Vaziyeti* (Tanning Materials in Turkey and the Situation of Raw and Processed Leathers), *Türkiye’de Bir Dericilik Enstitüsünün Kurulmasını İcap Ettiren Esasat* (The Fundamentals of Establishing a Leatherworking Institute in Turkey). According to Yelmen, Gerngross and Öncü were together responsible for the establishment of scientifically enhanced leatherworking in Turkey, and were influential in developing production standards for Turkey's leather industry (Yelmen, 2005). In addition to Öncü, Turgut Yazıcıoğlu⁴⁸, Mustafa Uluöz (Özmir)⁴⁹, Aral Olcay⁵⁰, Emir Gülbaran⁵¹, Necati Renda⁵², Saim Saraçoğlu⁵³, İsmet Ayıter et al. were Gerngross' students.⁵⁴

⁴⁶ A farinograph machine, developed first in 1928, is used in the baking industry to measure the specific properties of flour. Its measurement scale is in *Brabender units*.

⁴⁷ Cahid Öncü (? - ?) was a Turkish professor at Ankara University. Like Gerngross, he was particularly interested in the development of leatherworking in Turkey, and wrote several books on the subject, such as

⁴⁸ Turgut Yazıcıoğlu (1938 – 1983) was a 1960 graduate of Ankara University. He earned his doctorate in 1966 and became an associate professor in 1970, being transferred to the associate professorship chair of Leather and Fiber Technology at the Faculty of Agriculture in Ege University in 1973. He became a professor in 1980, and served as a vice-dean at the Faculty until his death in 1983 (Ege Üniversitesi (Ege University), 2005).

⁴⁹ Mustafa Uluöz (Özmir) (1917 – 1972) was a 1938 graduate of YZE, an agricultural engineer and one of its first alumni. He became an assistant to the Agricultural Handcrafts Institute in 1942, earned a doctorate in 1948, and moved on to become an associate professor in 1951 then a professor in 1957. Uluöz was a member of the board of directors of *Türk Yüksek Ziraat Mühendisleri Birliği* (Association of Turkish Agricultural Engineers) and served as both dean and rector at Ege University for multiple elections. Uluöz was also the general secretary of TÜBİTAK from 1966-1967 and a member of its Agriculture and Forestry Research Group, as well as its Scientist Training Group. He was highly influential in the development of TÜBİTAK (Scientific and Technological Research Council of Turkey) Marmara Research Center's Nutrition and Food Technology Unit. Uluöz was posthumously given a TÜBİTAK Service Award in 1978 (TÜBİTAK, 2016).

⁵⁰ Aral Olcay (1932 - ?) was a 1955 graduate of the Ankara University Faculty of Sciences. She received her doctorate under Gerngross' tutelage, and worked as his assistant. After being sent abroad to Fordham University in New York to conduct post-doctoral research on a NATO scholarship for two years, she returned to Turkey and

Gerngross' contract with the Turkish government was not renewed in 1943, and he lost his residence permit. According to Şen, the Turkish government was not in favor of keeping *heimatlos* except for various exceptional situations, and Gerngross was not one such exception (Şen F. , 2008, p. 167). Gerngross thus ran the risk of being arrested, and so he went to Palestine in 1943, working at a *kibutz*⁵⁵ in Tel Aviv for some time. Gerngross then returned to Turkey in 1947—he was invited to the Faculty of Sciences at Ankara University, which had recently been established, and there he founded its Technical Chemistry Institute. According to Gerngross' *Life Story*, which Widmann quotes, Gerngross found an environment better than YZE at the Institute, which was similar to his academic life in Berlin with its work conditions and opportunities (Widmann, 1999, p. 259). In 1947, Gerngross was also awarded the title of *Ordinarius Emeritus* by the Technical University of Berlin. Gerngross remained in Turkey, and at YZE, until his death by old age in 1966.

Max Pfannenstiel (1902 Alsace – 1976 Freiburg im Breisgau) was a German geologist, paleontologist, and librarian. Born in Alsace as the son of a German public notary, Pfannenstiel's family returned to Germany in 1918 and he studied geology and mineralogy at the University of Breslau and at the University of Heidelberg under Wilhelm Salomon-Calvi. He earned a doctorate in geology from the University of Heidelberg in 1926. He later trained in librarianship in Freiburg and Munich, working at the Bavarian State Library from 1930 to 1932, and at the Freiburg University library in 1933. Pfannenstiel then got a job as a research assistant from at the Institute of Geology of the University of Freiburg in 1933 (Kadioğlu, 2007-2008, p. 190).

became an associate professor in industrial chemistry at Ankara University in 1963. She became a professor in 1970, was the chair of the industrial chemistry department for eleven years, and the dean of the Faculty of Sciences for two periods in 1974-1980 and 1988-1993. She later worked at the chemistry department of Çukurova University. Olcay was also a TÜBİTAK Science Council member from 1981 to 1987, and worked as its General Secretary in 1986. She is credited with around 150 publications, and was a reviewer for the journals *Chimica Acta Turcica* as well as *Fuel and Chemical Engineering and Processing*. She retired in 1988 (TÜBİTAK, 2016).

⁵¹ Emir Gülbaran (? – 1981) was a Turkish professor of chemistry and chemical engineering. While not much is known about him, he was an associate professor at YZE and also worked as a professor at Istanbul Technical University.

⁵² Necati Renda (? - ?) was a Turkish professor of chemistry. In addition to his work at Ankara University, he also worked at Gazi University and Yüzüncü Yıl University.

⁵³ Ali Saim Saraçoğlu (? – 2006) was a Turkish professor of chemistry. A 1935 graduate of Galatasary High School, he worked at Ankara University and was also a professor at the chemistry department of Istanbul University.

⁵⁴ An archive of photographs of Gerngross and his students at YZE was donated to Ankara University by his grandson Engin Bağda in 2014. The archive is available online (Habertürk, 2014).

⁵⁵ A *kibutz* is a communal settlement in Israel, typically a farm.

Pfannenstiel was dismissed from his academic position at the University of Freiburg due to racial reasons. According to the Nuremberg Laws, Pfannenstiel was classified a *Mischling* (2. Grades), only partially Jewish (through a maternal grandfather), and while his director applied to the Ministry of Education to keep him employed, Pfannenstiel was still considered unfit for civil service. He then took on a job at a bookstore, and later earned a scholarship from the Rockefeller Foundation to work at the League of Nations library at Geneva. In 1938, he applied to YZE in Ankara, asking for a position at its library, the directorship of which was empty. The German embassy at Ankara contested hiring Pfannenstiel, alerting the Reich's Ministry of Science, Education and Culture and the official stance from the Reich government was that Pfannenstiel would be undesirable in Ankara. The Turkish officials, however, hired him anyway, and Pfannenstiel started working at the YZE library in March 1938, becoming its director. From 1940, Pfannenstiel also worked at the Turkish Historical Society, and was solely responsible for the organization of the Atatürk Library, as per Atatürk's last will and testament. While in Turkey, Pfannenstiel started researching Turkey's geological formations, producing a variety of original publications on geology and prehistorical periods, such as his "*Die altsteinzeitlichen Kulturen Anatoliens*" (Paleolithic Cultures of Anatolia) and "*Die diluvialen Entwicklungsstudien und die Urgeschichte von Dardanellen, Marmarameer und Bosporus: Ein Beitrag zu den klimatisch bedingten, eustatischen Spielschwankungen des Mittelmeers*" (The diluvial development studies and the early history of the Dardanelles, the Sea of Marmara and the Bosphorus: A contribution to the climate-related, eustatic game variations of the Mediterranean (Pfannenstiel, 1941) (Pfannenstiel, 1944) (Widmann, 1999, p. 260).

Pfannenstiel remained in Turkey for three years, as stated in his contract. During his time working at YZE, he applied to return to the University of Freiburg, trying to reclaim his job as he had been claimed only a *Mischling*—only to have an investigation launched on him, his old coworkers, and employers by the Reich ministry. Though Pfannenstiel mostly received positive responses from his coworkers and employers, one response by previous University of Freiburg and Heidelberg professor and then military geologist Julius Ludwig Wilser stood out: "A Jew always remains a Jew (...) (He) was a member of a Jewish gang that had taken an animous position against National Socialism, and even if he changed himself both on the inside and outside, he remains a Half-Jew due to his blood, and has no place in a work group whose highest order is to carry out the Führer's tasks. The German civil servants are Adolf Hitler's brothers in arms" (Reisman, 2006, p. 81). According to Reisman, this quote is

testament to the Nazification of German universities. By exploiting a legal loophole between the two laws of the *Berufsbeamten-gesetz* of 1933 and the *Deutsche Beamten-gesetz* (German Civil Service Law) of 1937, however, Pfannenstiel managed to get a special order to employ him in civil service in Germany: he was classified a *Mischlings 2. Grades* (second degree mixed race) and the laws regarding that classification were disputable. After obtaining his right to go back and work in his home country, Pfannenstiel then returned to Germany to work at the library of the University of Erlangen, though he was later drafted and employed at a military library. After 1943, the Reich's treatment of *Mischlings* became more severe, and he was discharged from the military as being unfit for service, though he continued to work as a contracted employee of the Military Geology Staff Library. After the war, he returned to the University of Freiburg and worked at its library. He later took on a professor ordinarius chair for geology, and served as the dean of the university's Faculty of Mathematics and Natural Sciences and also was its rector from 1954-55. He died in 1972.

Hans Bremer (1891 Leobschütz – 1964 Wiesbaden) was a German botanist. Born in Leobschütz, which was then in Prussia but is currently in Poland, he was educated in biology physics and chemistry at the universities of Breslau and Munich, earning a doctorate in zoology from the University of Breslau in 1922. He specialized in plant protection, and started working at the *Biologische Reichsanstalt für Land- und Forstwirtschaft* (Biological Institution for Agriculture and Forestry).

Bremer was invited to Turkey as an expert on plant pathology to work for the Ministry of Agriculture in 1937, and had refugee status. In Turkey, he initially worked at the Bornova *Zirai Mücadele Enstitüsü* (Plant Protection Institute), a research station under the wing of the Ministry of Agriculture, until 1940. He later became a lecturer at Ankara University's *Zirai Mücadele Enstitüsü*, and taught there until 1951. Examples of Bremer's publications on plant pathology in Turkey include his three volumes on *Türkiye Fitopatolojisi* (Turkey Phytopathology) and a collection of his publications called *Türkiye'nin Parazit Mantarları Üzerinde İncelemeler* (Studies on Turkey's Parasitic Fungi), which consist of six parts. He is also the author of *Keimlingskrankheiten der Baumwolle in Südwest-Anatolien* (Seedling Diseases of Cotton in Southwest Anatolia). According to Kadioğlu, many samples of parasitic fungi that comprise the herbarium of the Ankara *Zirai Mücadele Enstitüsü*'s Phytopathology

department were donated by Bremer or otherwise supplied by him from institutions in Europe.

Bremer was invited back to Germany by the Federal Biology Institution in 1951. Despite his return, Bremer maintained contact with his colleagues, assistants and students in Turkey, and retained his interest in Turkey's phytopathological issues. For his success in the area of plant protection, Bremer was given an award by the German Phytomedicine Society, and during his award speech, while talking about his experiences as a phytopathologist in Turkey, peculiarly took ill mid-speech and died, leading to allegations that he may have been poisoned (Kadıoğlu, 2007-2008, p. 191).

3.1.4 Conclusion

Seeking to rebuild the foundations of an economy ravaged by war, in its early years, the Turkish republic placed a lot of importance on its agriculture. The establishment of the YZE was testament to the republic's will of developing Turkish agriculture as a vital part of the country's economy. The aim of establishing a self-sufficient agricultural system, capable of feeding the country's growing population and supplying its nascent industry, was among the first large-scale economic policies the republic pursued. This policy also came with the correct idea that institutionalizing and improving the education regarding agricultural practices would provide the Turkish agricultural economy with the boost it needed. The goal was to bring agricultural education to international standards and to modernize all agricultural practices, and to this end, a collaboration between Turkish and German governments provided a direct and organized way of accomplishing this goal.

The YZE was a unique example in the 1933 education reform that it enabled technology transfer at an institutional level. The transfer of technology brought on by the YZE could be argued to have been the most evident and systematic example of the technology transfer ensured by the 1933 reform. The YZE was based on and modeled after modern counterparts in the form of the German agricultural colleges, managed and operated in much the same way, and was manned by academic staff that were experts in the German *écolé*. This all led to accurate and successful introduction of the technologies that were intended to be transferred across the two countries.

Even so, the YZE was not as fortunate as it might have been. The way it fell prey to political influences—perhaps inevitably, considering the political climate of the period—led to many unfortunate disappointments. In an ideal world, one might have wished for the YZE to remain untouched by political and ideological influences, what with it being first and foremost an educational institution, but reality is rarely that simple. In this regard, the circumstances of the YZE, and the way it found itself trapped in political intrigue, can be said to have been an example of possible impediments in the act of technology transfer: of unwanted external influences. The Turkish government's response to these impediments, i.e. the replacement of the German academics at YZE, might have been a move to cleanse the institution of such influences, but it could also have been a purge of human assets that could have otherwise remained productive, if not for the unfortunate circumstances. It stands to say that while the lesson learned from the YZE's example is that "education should be divorced of politics and ideologies", one should be reminded that accomplishing such a gargantuan feat is something that escapes most educational institutions even today.

3.2 Medicine

3.2.1 Medicine at the University of Istanbul

A study as vital to human well-being as medicine requires careful instruction. In light of this, and not unlike most other institutes of higher learning in the world, the study of medicine enjoyed a unique position at the University of Istanbul and its predecessors. In fact, it would not be entirely unfair to say that the importance weighed on the arts of medicine was greater than on any other scientific field at the university, especially as the Faculty of Medicine eventually became the foundation of the new Turkish republic's healthcare system.

The history of medicine in Turkey can be traced back very far, and not only to the Ottoman period but also to the Sultanate of the Anatolian Seljuks. According to Namal, medicine was studied in the Seljuk sultanate in the 13th century, and passed on to the later Anatolian *beyliks* (principalities) during the 16th century, through the educational system of the *madrasas* (Namal A. F., 2010). Medicine was among the most important subjects studied in the madrasa system, and through time, caused Anatolia to develop a strong tradition of the study. For example, the madrasas established in Kayseri and Sivas were specifically devoted to medical study, as early as the early 13th century.^{56,57} In the Ottoman Empire, the Bursa *Darü't-Tib* (House of Medicine) opened its doors in 1400 on the orders of Bayezid I, and was an institution for clinical medical training as well as a practicing hospital. The *Sahn-ı Seman* madrasa complex, built in the 15th century in Istanbul, contained eight small and eight large madrasas devoted to a variety of studies including medicine; it contained a *şifahane*, a hospital, a *tabhane*, a charity building for recuperating patients, and a *tımarhane*, a lunatic asylum. Additionally, the Fatih *Darü'sşifa* (House of Healing) was known for having a history of at least 350 years of medical study, and was considered to have been a foundation of the University of Istanbul Faculty of Medicine (Namal A. F., 2010).

During the declining years of the Ottoman Empire, several attempts were made to catch up with the scientific level of Europe. Reforming the study of medicine was among these efforts.

⁵⁶ The legend of the *Çifte Medrese*, the “Double Madrasa” in Kayseri speaks of Gevher Nesibe Sultan, sister to Giyaseddin Keyhüsrev I, who made a dying wish to her brother to build a hospital so that others would not suffer her fate. Gevher Nesibe's wish was granted posthumously upon the establishment of the *Şifahane*, lit. “House of Healing” in 1206. It was taken further when Gevher Nesibe's nephew, Izzeddin Keykavus I, built a *Tıphane*, lit. “House of Medicine” near it in 1214. The two ‘houses’ became the “Double Madrasa”, and were used for medical teaching well until 1890.

⁵⁷ Izzeddin Keykavus I also built the *Şifaiye Medresesi*, the “Hospital Madrasa” in Sivas in 1217. It was used as a hospital as well as a school of medicine. Keykavus was known for valuing the study of medicine and doctors highly; possibly because of the loss of his aunt, the aforementioned Gevher Nesibe, as well as his own often infirm condition.

Initially however, as was often the case with Ottoman reform attempts, the target was the military. In 1805, by the orders of Selim III, the *Tersane Tıp Mektebi* (Navy School of Medicine) was established in order to fulfill the medical needs of the navy. *Tersane Tıp Mektebi* was to obtain its required equipment from Europe and employ scholars who had received medical training in Europe. However, it was short-lived. It did not survive the rather tumultuous situation the Ottoman Empire found itself in during the time, and fell victim to several important historical events such as Kabakçı Mustafa's revolt against Selim III, or the *Alemdar Vakası*.^{58,59} In 1827, Mahmud II had a *Tıbhane-i Amire* (Royal Hospital) established, again to fulfill the needs of the military: it was a school responsible for training doctors, surgeons, and other medical personnel who would serve the new, reformed Ottoman army. Split into two parts as *Tıphane* (House of Medicine) and the *Cerrahhane* (House of Surgery), *Tıbhane-i Amire* also included scholars who had received their medical training in Europe. The employment of foreign scholars was not at all unusual: in fact, a French surgeon by the name of Sat-Deygalliere was the Chief Physician at *Tıbhane-i Amire* (Namal A. F., 2010). Later on, by the orders of Mahmud II, more European scholars were personally requested from Prince Matternich of Austria, which resulted in the arrival of military doctors Jakob Anton Neuner and Karl Ambros Bernard, as well as apothecary Antoine Hoffmann.⁶⁰ Karl Ambros Bernard would eventually become the *muallim-i evvel* (First Teacher), given the honors by Abdülmecid II, and reestablish the school as the *Mekteb-i Tıbbiye-i Şahane* (The Royal School of Medicine) in 1839.⁶¹

⁵⁸ *Kabakçı Mustafa İsyanı* (Kabakçı Mustafa Revolt) was a janissary revolt in May 1807. Incited primarily as a reaction to Selim III's Western-oriented *Nizâm-ı Cedid* (New Order) movement—which included a series of deep-reaching reforms to civilian and commercial life, administrative order, general sociopolitics, and especially the military—it resulted in the dethronement and subsequent assassination of Selim III, and put Mustafa IV on the throne. Janissary revolts such as these are infamous in Ottoman history for happening regularly, and are considered to have retarded the progress of the country by various scholars, e.g. (Gökçek, 2001, p. 237).

⁵⁹ *Alemdar Vakası* (The Alemdar Event) was another janissary revolt in November 1808. After the dissolution of the *Nizâm-ı Cedid* movement, reformists now banded behind a general named Alemdar Mustafa, who defeated Kabakçı Mustafa and marched on Istanbul, in turn dethroning Mustafa IV and putting Mahmud II on the throne. The reforms continued, which further provoked the janissaries and led to yet another revolt where the janissaries moved on Alemdar Mustafa and Mahmud II. The result was a bloody citywide battle that caused tremendous damage to Istanbul (Ünal, 2008).

⁶⁰ Literature on Karl Ambros Bernard may cite his name as Charles Ambroise Bernard.

⁶¹ Karl Ambros Bernard (1808 - 1844) was an Austrian doctor. Sent by Prince Matternich to Istanbul as per Mahmud II's request for a capable physician to reform his hospitals, he worked in Istanbul for six years. Bernard was very successful at the task given to him to lead and reform the *Tıbhane* and Ottoman medical institutions in general. Set on Western-minded reform and very influential, Bernard was personally responsible for a decree from Abdülmecid I that allowed medicine students to dissect cadavers (such a decree from the Ottoman sultan and caliph effectively overwrote Islamic law, which normally disallowed such a practice). Unfortunately, Bernard died abruptly in 1844 at 36 years of age, putting an end to his reformative and productive potential. He is interred in the Santa Maria Draperis church in Beyoğlu. (Altıntaş, 1993)

Mekteb-i Tibbiye-i Şahane produced its first graduates in 1843. By 1848, it started publishing its own journal of medical studies. In 1848, four of its alumni were sent abroad to Vienna to take an exam in medical competence, and were successful. This resulted in the *Mekteb-i Tibbiye-i Şahane* to be considered a *faculty* of medicine, similar to those in Europe. Indeed, in some ways it was: the official teaching language of *Mekteb-i Tibbiye-i Şahane* was French, and this had not been the only example of an Ottoman medicine school teaching in a foreign language. In the previous incarnation of *Mekteb-i Tibbiye-i Şahane*, at both the *Tıphane* and the *Cerrahhane*, courses on medicine were taught in foreign languages, often in Italian or French, and an often at a lower level so as to allow students—who were not always proficient in the foreign language—to understand what was going on (Etker, 2005, p. 35). Foreign influence was noted throughout the Ottoman medical schools from early on through the language used, the academics present, and even the students taught at the school, as oftentimes the students of medicine were members of minority groups of the Empire. Admittedly, the implications of this are somewhat complicated. According to Namal, a foreign language being the official teaching language of the medical school was responsible for a divide between students (Namal A. F., 2010). Students of non-Muslim minorities were often proficient in Western languages because the Ottoman Empire traditionally employed the minorities as intermediaries and translators in economic and political relations with the western world and their children had an affinity with foreign languages (Özkan, 2010). Meanwhile, Turkish students were more often educated in Persian and Arabic, with French only being added to their curricula in the late 18th century as the necessity to communicate with the western world increased. As such, due to difficulties presented by the roadblock of a language that was more often than not foreign to them, Turkish students would often split off from the rest of the group to choose areas where medical studies were relatively less demanding, like pharmacy. The study of general medicine, therefore, was ultimately more accessible to a minority than it was to the majority, and it all resulted in relatively low success. In the forty years after the establishment of these medical schools, they had graduated 300 physicians in total for the Ottoman Empire. This was barely enough to cover the demands of the military, let alone the common populace.

By 1857, students began clamoring for medical education in the Turkish language. In 1867, the necessity was finally realized and the *Mekteb-i Tibbiye-i Mülkiye* (Civilian Medical School) was established, with a pharmacy school to follow. Graduates from the *Mekteb-i Tibbiye-i Mülkiye* were to be employed directly by municipalities to work as district

physicians. The change from French to Turkish as the teaching language was a turning point in Ottoman medical study. In 1870, the *Askeri Tıp Okulu* (Military Medical School) also switched to teaching in Turkish, and there was soon a significant improvement.

During the last few years of the 19th century, Germany became particularly influential in the Ottoman Empire due to the buildup of the German-Ottoman alliance and all-around good relations policies. As part of these operations, German scholars were sent to the Ottoman Empire. Robert Rieder and Georg Deycke arrived with intentions to reform the *Askeri Tıp Okulu*, but ended up establishing yet another hospital, the *Gülhane Seririyat Hastanesi* (Gülhane Teaching Hospital), which was officially opened on Abdülhamid II's birthday on December 30, 1898 (GATA, 2011). This hospital was eventually renamed *Gülhane Tatbikat-ı Askeriye Tatbikat Mektebi ve Seririyatı* (Gülhane Military Practice, Teaching Hospital and Clinics), and produced many capable physicians. Recognized for their efforts, they were given the honorary title of *Paşa*. Rieder *Paşa* later suffered a fall while inspecting the construction of new clinics in Haydarpaşa and had to return to Germany, and Deycke *Paşa*'s contract with the Ottoman government ended eventually, but Julius Wieting arrived in his place. This hospital is the foundation of *Gülhane Askeri Tıp Akademisi* (Gülhane Military Medical Academy), more often known by its acronym GATA.⁶²

Eventually, when a suitable building was constructed at Haydarpaşa, the Military and Civil Medical Schools were merged, and started be called a Faculty. When World War I broke out, the Ottoman Empire joined the fray, the Faculty of Medicine became more important than ever. In difficult conditions, the Faculty even started publishing a new medical journal in 1916: *Tıp Fakültesi Mecmuası* (Journal of the Faculty of Medicine).⁶³ Academically, the Faculty of Medicine was tied to the Istanbul Darülfünunu, and became one of the most important academic centres within the Darülfünun—to be reformed substantially by the 1933 University reform.

When the 1933 University Reform took place, a significant number of professors from the Darülfünun Faculty of Medicine were dismissed. According to Dölen, the Faculty of Medicine prior to the reform employed 56 academics in total; half of these academics (of varying Ottoman academic titles) were dismissed from the Faculty during the reform.

⁶² GATA, as an academy of medicine belonging to the military, was closed following the military coup attempt of 2016. Its Gülhane hospital is to be relocated to Haydarpaşa, and renamed *Sultan Abdülhamid Eğitim ve Araştırma Hastanesi* (Sultan Abdülhamid Research and Practice Hospital).

⁶³ This journal is now called the *İstanbul Üniversitesi Tıp Fakültesi Mecmuası* (Journal of the Istanbul University Faculty of Medicine).

Darülfünun Faculty of Medicine				
	<i>Müderris</i>	<i>Muallim</i>	<i>Müderris Muavini</i>	Total
Not Dismissed	8	7	13	28
Dismissed	16	2	10	28
Total	24	9	23	56

Source: (Dölen, 2010a, p. 377)

Following the dismissals, the positions vacated by the Darülfünun professors were filled with Turkish professors of scientific qualifications and merit, who had predominantly been educated in Europe, as well as refugee scholars from German-speaking countries.

Due to its size, it would be appropriate to examine the reform of the Faculty of Medicine in three sections: *Tıbbiye* (the Medical School), which included Institutes; the university clinics; and the dentistry and pharmacy schools.

3.2.1.1 *Tıbbiye (School of Medicine)*

Tıbbiye was the theoretical foundation of the study of medicine at the University of Istanbul. As mentioned above, it had its roots in the 1827-built *Tıphane* part of *Mekteb-i Tıbbiye-i Şahane*, and had traditionally been its academic segment. Later on in its life under Darülfünun, *Tıbbiye* encompassed the research institutes tied to the faculty. After the 1933 reform, *Tıbbiye* included the following refugee scholars in its roster:

ISTANBUL UNIVERSITY FACULTY OF MEDICINE		
<i>Tıbbiye (Medical School)</i>		
REFUGEE SCHOLARS		
NAME	FIELD	DURATION OF STAY
Philipp Schwartz	Anatomical Pathology	1933-1951
Siegfried Oberndorfer	General and Experimental Pathology	1933-1944
Hans Winterstein	General Physiology	1933-1953
Julius Hirsch	Hygiene	1933-1948
Hugo Braun	Microbiology	1933-1950
Werner Lipschitz	Biochemistry	1933-1938
Felix Haurowitz	Biochemistry	1939-1948
Friedrich Dessauer	Radiology	1934-1937
Max Sgalitzer	Radiology	1938-1943
Tibor Peterfi	Histology and Embryology	1939-1946
Karl Löwenthal	Histology and Embryology	1933-1938

Source: (Dölen, 2010a, pp. 500-502)

In addition to these scholars, *Tıbbiye* also employed the general and experimental pathologist Friedrich Reimann (from 1939 to 1950), the otolaryngologist Erich Rutin (from 1934 to 1935) and the biochemist Zdenko Stary (from 1949 to 1956). They were not refugees, however, and will not be examined.

Philipp Schwartz (1894 Versec – 1974 Fort Lauderdale) was best known for his establishment of the *Notgemeinschaft Deutscher Wissenschaftler im Ausland* (Emergency Association for German Scientists Abroad), and his work as part of this association. Schwartz is widely noted for his role in establishing communications with the Turkish government—and subsequently Turkish higher education institutions—to find employment for displaced refugee scientists. In fact, it would not be unfair to claim that without Schwartz, the arrival of the refugee scientists as part of the 1933 reform would not have been possible, and Neumark rightfully considers him “the true spiritus rector of the Turkey project,” (Neumark, 1982, p. 74). Unfortunately, Schwartz’s vital role as the mediator between the Turkish government and the *Notgemeinschaft* often clouds the academic role he held in the University of Istanbul. Schwartz himself was one of the refugee professors to be employed in Turkey.

Academically, Schwartz was a neuropathologist. He was born in Versec in Yugoslavia, to a Jewish family. Schwartz was educated in the University of Budapest, and after interrupting his studies to serve in World War I for the Hungarian army in the Galician front as a conscripted officer, earned his degree in medicine in August 1919. Entering the University of Frankfurt later on, in 1923, he became a specialist in pathological anatomy, and moved up the academic ladder, earning the titles of associate professor and professor. In Germany, his research included pathology subjects such as birth trauma in infants, Virchow ensephality, adult intracranial hemorrhages, glioma localization, and the Recklinghausen syndrome, as well as tuberculosis research.

In March 1933, Schwartz’s home was raided in search of ‘weaponry’, undoubtedly as part of the Nazi campaign to remind Schwartz that, just like every other civil servant of Jewish descent, he was no longer welcome in Germany. The following day, when Schwartz went to work and met his colleagues in the hospital gardens, his colleagues expressed shock, and asked him why he hadn’t already fled. The same night, he did; taking his son to Zurich with him. His wife and daughter followed shortly after (Şen F. , 2008, p. 225).

In Zurich, Schwartz founded the *Notgemeinschaft Deutscher Wissenschaftler im Ausland*, which would change (and save) many lives.⁶⁴ In July, Schwartz personally contacted the Turkish government and started communications, paving the road for the arrival of many displaced refugee scholars in the University of Istanbul.

According to Widmann, Schwartz did not originally intend to become one of the refugee scholars in Istanbul. His management of the *Notgemeinschaft* was an issue and would need to be handed over. Schwartz intended for the former University of Frankfurt *Kurator* Kurt Riezler to replace him, but it was Fritz Demuth,⁶⁵ lawyer and *Kurator* of the Trade College of Berlin, who took up the task.⁶⁶ In 1933, Schwartz arrived in Istanbul with his family, this time to lay down roots, and to teach.

At the University of Istanbul, Schwartz took the position of the director of the Institute of Pathological Anatomy. Schwartz's examination of the state of the institute and the teaching system revealed many problems. To better explain the state of the pre-reform institute, 1903 graduate of the Faculty, Tevfik Sağlam says:⁶⁷

“There was no laboratory devoted to pathological anatomy, but a room. In the room, there was a microscope, a microtome, tinctures, and other things one would find in a supply closet. We never saw the professor work in that room, and we never did any practice either. Rarely, the professor would bring in some preparation to examine under the microscope, and we'd take turns looking at it. The professor wouldn't care if we saw anything or not. Autopsies were equally disastrous. We would listen to lengthy lectures about how we should be doing autopsies, but in a full year we received only

⁶⁴ Schwartz's work at the *Notgemeinschaft* was elaborated on in Chapter 1, Introduction.

⁶⁵ Fritz Demuth (1876 – 1965) was a German lawyer and industrialist. He was a counselor at the Chamber of Commerce in Berlin from 1902 until his dismissal through the *Berufsbeamtengesetz* in 1933. He emigrated to Switzerland, where he co-founded the Emergency Aid Committee for German Scientists Abroad.

⁶⁶ The *Kurator* of a German university is a university officer dealing with financial and legal matters.

⁶⁷ Tevfik Sağlam (1883 – 1963) was a Turkish military doctor and academic. After completing his primary and secondary education in Istanbul, he graduated from *Mekteb-i Tıbbiye-i Şahane* in 1903 as a *Tabip Yüzbaşı* (Medical Captain) and worked at *Gülhane Tatbikat Hastanesi*, also spending a year in Wiesbaden for study. Sağlam had a long and proud history of practicing medicine in the military; he served in the Balkan Wars, World War I, and the Turkish War of Independence, earning many commendations and rising to the rank of General by 1928, at which point he retired completely from military service. He had also been employed by Darülfünun from 1908 onwards, though his academic career had been interrupted by successive wars. Following his retirement, however, Sağlam became a full-time academic at the Darülfünun Faculty of Medicine, serving as an ordinarius professor and the faculty dean. In 1929, he became the first chair of *Tabip Odası* (Medical Association). Soon after the reform, however, Sağlam had a falling-out with Reşit Galip, the Minister of Education, and resigned from his position at the University of Istanbul. He resumed his practice in other hospitals, such as Gureba Hospital and Haydarpaşa Numune Hospital. In 1939, he returned to the university on invitation, and through 1943 until 1946, was the rector of Istanbul University. He is considered to have been influential on the acceptance of laws advocating the autonomy of universities. Sağlam is also known for having combated tuberculosis in Turkey, having founded the Faculty of Medicine chair for Lung Diseases and *Türkiye Ulusal Verem Savaşı Dernekleri Federasyonu* (The Turkish National Federation for Combating Tuberculosis). Sağlam also worked for the World Health Organization, UNICEF, and UNESCO. He was awarded a TÜBİTAK Service Award nine years after his death (Fişek Enstitüsü (Fişek Institute), 2016).

one cadaver. We studied a full year of pathological anatomy—we memorized text notes and passed with flying colors,” (Namal A. F., 2003, p. 2). (Translation mine.)

When Schwartz took over the Institute, he set to work on reforming it. In a report he submitted to the Dean of the Faculty of Medicine, he noted issues with the lack of personnel, equipment, and budget. In addition to that, he proposed a complete revision of the teaching program of pathological anatomy, dividing the study into both practical and theoretical sections, and proposed a detailed program of ten whole semesters (Namal A. F., 2003, pp. 3-5). According to Münevver Yenerman⁶⁸, who witnessed Schwartz’s transformation of the Institute, Schwartz had new laboratories built and existing laboratories improved, constantly pursued a hands-on approach to teaching by involving his students in practice, kept teaching even in the summer periods and on national holidays, and even made his students enjoy exams (by setting his failing students to writing papers) (Namal A. F., 2003, pp. 5-6). Schwartz’s structural overhaul of the Institute took five whole years, but in an activity report to the Dean in 1938, he was pleased with the education in the Institute, and compared the practical teaching system as being better than those of foreign universities at the time. Indeed, Schwartz’s method of “interactive education”, which utilized practice right away in the first semester and theory in the following semester, was quite successful, if a relatively new approach at the time.

Schwartz taught at the University of Istanbul for twenty years. During that time, Schwartz quickly learned Turkish and wrote eight textbooks for the use of his students, most of them published more than once. His *Pathologia Anatomia* and *Histo Pathologia* can be cited as examples of his work on pathology. He also wrote on tuberculosis and tumors. During his stay in Turkey, he authored thirty publications for various national and international medical journals.

Schwartz’s German assistants included fellow refugee scholars Werner Laqueur, who arrived in 1936 and stayed in Turkey until 1950, as well as Adler and Eienstedt, who stayed in Turkey

⁶⁸ Münevver Yenerman (1918 – 2015) was a 1942 graduate of the Faculty of Medicine. She took her medical specialty exam in pathology in 1945, and was an associate professor of pathology by 1948. From 1951 until 1954, she studied at the Department of Pathology at Chicago University and the Department of Endocrinology at the National Institute of Health in Washington DC. In 1964, she became a professor at Istanbul University, where she taught until 1985. Her two volumes on General and Specialized Pathology are considered her *magnum opus* (Dizdaroğlu, 1998).

until 1935. His notable Turkish students include Münevver Yenerman, Besim Turhan⁶⁹, Bedrettin Pars⁷⁰, Talia Bali Aykan⁷¹, and Fikret Tuzcuoğlu.⁷²

According to Neumark, Schwartz was “possessed of wide fantasies and endless energy, but also had a mocking, often sarcastic temperament, which made people his enemies even when they did not want to be.” Neumark notes that Schwartz did not see the admiration and appreciation he had objectively earned due to his great efforts for the refugees, and was often met with an undeserved distrust and antipathy, from both Turks and Germans (Neumark, 1982, p. 74).

Schwartz became a Turkish citizen in 1948. In 1953, he moved to the United States upon an invitation from Pennsylvania Warren State Hospital, where he directed its Pathological Anatomy Research Institute. In 1973, in celebration of his twenty years of service, he was awarded the title of “Dr. Honoris Causa” by Istanbul University upon the suggestion of Münevver Yenerman. He died peacefully in 1977.

⁶⁹ Besim Turhan (1876 – 1973) was a 1919 graduate of *Mekteb-i Tıbbiye-i Şahane*. A military doctor like most other graduates of his time, Turhan served in the Turkish War of Independence and was awarded the *İstiklal Madalyası* (Medal of Independence). After the war, he was sent abroad to France in 1923 to study pathology, returning to Turkey in 1927, where he practiced at Haydarpaşa Numune Hospital, Diyarbakır Military Hospital, and the Faculty of Medicine. After the reform, Turhan was awarded an associate professorship at Istanbul University, which he took, following his resignation from military service. He was a professor by 1941. From 1944, Turhan led the Cancer Research Institute, and following Philipp Schwartz’s departure, became the director of the Institute of General Pathology and Pathological Anatomy. Turhan was a member of the French Anatomy Association, and a founding member of the Turkish Pathology Association (Yenerman, 1974).

⁷⁰ Bedrettin Pars (? – 2004) was a graduate of the Faculty of Medicine, and a professor at the Institute of Pathology.

⁷¹ Talia Bali Aykan (1918 – 2003) was a 1941 graduate of the Faculty of Medicine. She became an assistant to Philipp Schwartz immediately after her graduation. In 1946, she went to the United States for study, and was employed at the research laboratories of Cornell University Faculty of Medicine, Dallas Veterans’ Administration Hospital, Los Angeles Cedars of Lebanon hospital, and later at Johns Hopkins Hospital when her scholarships were extended. She returned to Turkey in 1951, bringing back pureblooded animal specimens for the Faculty of Medicine’s newly established animal breeding unit and experimental pathology laboratory. By 1952, she was an associate professor, and by 1955 was given directorship of the Histopathology divisions of Çapa. Aykan was later arrested and detained from October 6 of 1960 to March 14 of 1961. This was a time of political turmoil, and Aykan’s arrest was due to the ‘inconsistencies’ on the autopsy report of Turan Emeksiz (who was shot dead on May 28, 1960 by the police in student demonstrations against *Tahkikat Komisyonu* (a Democrat Party committee established to regulate the activities of opposition parties and public media)). After her release, she returned to her work, becoming a professor in 1969. She was a member of the Turkish Medical Council, the Turkish Cancer and Radiology Association, the International Pathology Academy, and the Forensic Medicine Council. She retired in 1985, with around 70 national and international publications (Sav, 2003).

⁷² Fikret Tuzcuoğlu (1930 - ?) was a 1956 graduate of the Faculty of Medicine. He worked at the divisions of general surgery at Çapa and from 1958 moved on to various university hospitals in the United States and Germany. He returned permanently to Turkey in 1962 and became the founding Chief Physician at the private Menderes Hospital.

Siegfried Oberndorfer (1876 Munich – 1944 Istanbul) was a German pathologist. He received his degree in medicine in 1900 at the University of Munich, and pursued an interest in pathology in the department of Pathology in Kiel. Mentored by Arnold Ludwig Heller, Oberndorfer developed a ‘holoptic’ technique that allowed for the assessment of organs in the context of their functional relationship to other surrounding organs.⁷³ In 1902, he started an internship at the University of Munich, and earned a position as a lecturer in late 1906 following a work on appendicitis. In 1907, he published his work on carcinoid tumors, which he would be remembered for. He directed the Institute of Pathology in the Schwabing hospital of München from 1910 on.

Despite his twenty-two year service as an accomplished professor and a history of military service as an army pathologist for Germany in World War I, Oberndorfer fell victim to Nazi anti-semitism due to his Jewish heritage. He was forced out of his position from the München-Schwabing hospital in April 1933. Through his colleague Philipp Schwartz, Oberndorfer accepted a position in the Institute of Pathology at the University of Istanbul. Oberndorfer arrived in Istanbul a few months after Schwartz. Upon his arrival, Oberndorfer brought no less than 75 valuable publications with him, including books and articles he had written throughout his lengthy career, starting from 1900 (Namal & Honti, 2003, p. 155). Oberndorfer was among the oldest of the refugee scholars to arrive in Istanbul—he was 57 years old when he arrived in 1933—but apparently, this was hardly a handicap for him. Oberndorfer’s experience and wisdom meant that he was much loved by both his colleagues and students. His assigned assistant and translator, Üveis Maskar, commends in a remembrance article Oberndorfer’s humility, honesty and openness to discourse, his fatherly attitude and skills in teaching (Maskar, 1943). Also, according to Widmann, Oberndorfer was the best example among all the refugee scholars for his ability to adapt to the unfamiliar situation and foreign community he found himself in, despite his older age—many other older refugee scholars did not behave the way Oberndorfer did (Widmann, 1999, p. 123). His assistant, fellow refugee scholar Peter Ladewig, who came to Istanbul with Oberndorfer to work with him at the Institute of Pathology as a laborant, is perhaps among the best to comment on Oberndorfer, considering how close they were. Ladewig says: “...the storm that raged around him cost him his homeland, his job, and his family, and at first he looked broken and alone. Yet, in Turkey, he found a new homeland, a community that satisfied him, that he

⁷³ The quality ‘holoptic’ refers to the shape of the eyes of various insects, where they nearly cover the entire exterior of their heads. In this context, Oberndorfer’s holoptic technique refers to the way he used his tools to cover the assessment of not only one organ but also the surrounding ones.

directed all his power to, and with his wife's patient aid he soon turned back to normal. With the help of the government, he managed to build a home here, not only for science but for us all, a family made up of a master and his students, to keep and nurture," (Maskar, 1943).

At the University of Istanbul, Oberndorfer is credited with several books that he wrote and translated for his students. Examples of his work can be given as his 1937 textbook *Genel Patoloji* (General Pathology) and his 1946 *Genel Tomur Bilimi ve Kanser* (General Science of Tumors and Cancer), which was published posthumously by his student Maskar.⁷⁴ An extensive collection of Oberndorfer's publications in Turkish and international journals, partially written both with Turkish and German colleagues, can be found in the archives of the *Istanbul Üniversitesi Tıp Tarihi Enstitüsü* (Istanbul University Institute for the History of Medicine).

Aside from his publications, Oberndorfer was best known for his work on the establishment of the Cancer Research Institute, which was founded in 1938. Oberndorfer was the director of this institute from its founding, and contributed greatly to all fields of pathology in Turkey. He is often hailed as the founder of cancer research in Turkey.

Oberndorfer passed away in Istanbul in 1944, at the age of 68, from a thymoma.

Hans Winterstein (1879 Prague – 1963 Munich) was a German professor of physiology who worked for the University of Rostock from 1911 to 1927 and for the University of Breslau from 1927 to 1933. A promising student of prominent physiologists such as Max Verworf and Oskar Langendorff, Winterstein received his professorship in physiology and became the director of the Institute of Physiology in the University of Rostock at the age of 31. In 1927, he accepted a professorship with emphasis on teaching in the University of Breslau, and held this teaching position until the *Machtergreifung* in 1933, upon which he promptly lost his professorship. To the National Socialist regime, Winterstein's undesirability was twofold. He had a history of opposition to National Socialism; Winterstein had been a member of the *Deutsche Demokratische Partei* as a citizens' representative for Rostock and actively campaigned for parliamentary democracy. Winterstein was also considered to be of Jewish

⁷⁴ The term *tomur* can be misleading to speakers of modern Turkish and make them think the word is *tümör* misspelled. Interestingly, it isn't. *Tomur* originally meant swelling, or the bud of a flower, and the word was introduced during the Turkish republic's early reforms to purify the Turkish language in the 1930s. It was briefly used to mean "tumor", but the usage was later abandoned.

descent according to the *Nürnberger Gesetze* (Nuremberg Laws); despite personally identifying himself as a Roman Catholic, Winterstein's father was part Jewish, which meant that Winterstein was unacceptable (Scholz & Heidel, 2004, p. 84).

Upon leaving the University of Breslau in 1933, Winterstein accepted an invitation from the University of Istanbul. After his arrival, Winterstein was named the director of the Institute of General Physiology, and became colleagues with Şakir Pasha, considered to be the architect of modern physiology in Turkey, as well as Kemal Cenap Berksoy, who was the director of the Institute of Human Physiology. After Berksoy's retirement in 1943, the two institutes of General and Human physiology were merged into one Institute of Physiology, and Winterstein became its director.

In the University of Istanbul, Winterstein taught General Physiology with the help of his assistant Sadi Irmak.⁷⁵ Nuran Gökhan⁷⁶ and Meliha Terzioğlu⁷⁷ can be considered among his notable students, and both wrote articles on Winterstein's work in Turkey, with Gökhan's article listing a complete bibliography of Winterstein's research (Terzioğlu, 1981) (Gökhan, 1981).

Arrivals in Istanbul with Winterstein included the biology assistant Harry Rosenbaum, who fell ill a short while after the end of World War II and died in Istanbul of typhus. Winterstein's laborant, a Ms. Eger, eventually moved to Israel.

⁷⁵ Sadi Irmak (1904 – 1990) was an academic of physiology, as well as a politician and former Prime Minister of Turkey. Irmak graduated from Konya's *Rüşdiye* and was set to become a teacher of biology, but entered Istanbul University's Faculty of Law the same year. Irmak was among the 11 students sent abroad on a state granted scholarship, and went to Germany to study biology and medicine, earning his medicine degree from Berlin University in 1929. Back in Turkey, he resumed teaching biology, becoming a lecturer at the Faculty of Medicine in 1932 and later earned his professorship in physiology in 1939. Irmak was the author of *Alfabetik Sağlık Kılavuzu* (The Alphabetical Guide to Health) and *Pratik Ev Hekimi* (The Practical Home Doctor), which he intended for the use of the general public. Also, Irmak entered politics as deputy of Konya in 1943, and served as the Minister of Labor under Şükrü Saraçoğlu's government from 1945 to 1946. He returned to academic life in 1950 after CHP lost the elections, becoming the director of the Institute of Physiology in 1953. Irmak did not resume politics until 1974, where Fahri Korutürk commissioned him to form the 38th government of Turkey, making him Prime Minister for a year before his resignation in 1975 due to a vote of no confidence. After the coup of 1980, he was elected to the Consultative Assembly, and acted as its speaker until 1983. His daughter, Yakut Irmak Özden, is the director of the Institute of Atatürk's Principles and the History of the Turkish Revolution at Istanbul University, and general secretary to the Atatürk Culture Foundation (Atatürk Araştırma Merkezi (Atatürk Research Center), 2013).

⁷⁶ Nuran Gökhan (1925 – 2013) was a physiologist and former dean of the Faculty of Medicine. A 1949 graduate, she received her doctorate in 1952, becoming an assistant professor in 1957 and a professor in 1966. She made several incursions to the United States, studying at Boston University and Washington University. She succeeded Sadi Irmak as the director of the Institute of Physiology and held this position until 1991 (İstanbul Üniversitesi Tıp Fakültesi (Istanbul University Faculty of Medicine), 2013).

⁷⁷ Meliha Terzioğlu (1915 – 1995) was a physiologist and professor at the Faculty of Medicine.

In 1953, at 74 years of age, Winterstein retired from academic work. Organized by colleagues Arif İsmet Çetingil and Sadi Irmak, a ceremony was held in Winterstein's honor before his departure to Munich. In the conferences organized, Winterstein was praised for his introduction of independent teaching in general physiology to Turkey (Istanbul University Institute of the History of Medicine, 1956). Winterstein passed away peacefully in Munich in 1963.

Hugo Braun (1881 Prague – 1963 Munich) was a German professor of microbiology. Educated in medicine in the German University in Prague, Braun worked in the Hygiene Institute of the same university under Ferdinand Hueppe and later in the Pharmacology Institute under Julius Pohl. Braun later accepted a position in Frankfurt University, where he worked in the Hygiene Institute under Max Neisser from 1910 to 1933. From 1907 to 1930, Braun had accumulated more than 93 publications. In 1921, he won the Paul Ehrlich prize for his research in microbiology and the metabolism of bacteria. Despite this productivity, Braun was removed from his post at Frankfurt University in April 1933, and was forced to retire in August, due to the *Nichtarier* heritage of his wife, who had a Jewish father (Reisman, 2006, pp. 236-237).

On October 1933, Braun arrived in Istanbul to fill the post of the Director of the Institute for Microbiology and Epidemiology. When İsmail Hakkı Çelebi, the director of the Institute for Parasitology, retired from his post in 1934, the two institutes were merged and Braun became the director of the Institute for Microbiology, Epidemiology and Parasitology. At the University of Istanbul, Braun taught the students and institute assistants of the Faculty of Medicine as well as the students of pharmacology and dentistry. He published a general, three-volume textbook on microbiology and epistemiology, *Mikrobiyoloji ve Salgınlar Bilgisi*, which was translated by his Turkish assistant and associate professor Ziya Öktem. In addition to his textbooks, Braun also published reports, held conferences, and wrote articles to increase the capabilities of the Turkish medicine students. By 1949, Braun had a total of 166 publications, at least 70 of which were written during his stay in Turkey. He was awarded the Robert Koch prize in 1960. According to Neumark, Braun had a humble, almost shy personality, and was valued greatly for his productivity and academic capability, if not for his social skills (Reisman, 2006, p. 237). A speech delivered by Braun's Turkish student and

assistant Ekrem Kadri Unat⁷⁸ regarded Braun's hardworking personality, noting that Braun taught not only science but also his work methods and ethic (Unat, 1951).

Braun brought a number of colleagues to Istanbul with him. The laborant Toni Weinberg, stayed in Istanbul with Braun from 1934 to 1950; she met and married the fellow refugee Werner Laqueur in Istanbul and left with him to the United States. Giesela Willmanns was another laborant in Braun's employ, and she stayed from 1935 to 1938. Another colleague bearing the last name Silberstein was also a colleague to Braun, and they arrived in 1939, but there is no further information on them (Dölen, 2010a, p. 500).

Julius Hirsch (1892 Hannover – 1963 Basel) was a German hygienist. Educated in the Faculty of Medicine at the University of Munich and later the University of Berlin, Hirsch earned his degree in medicine in 1916. In 1919, he became an assistant at the Berlin Kaiser-Wilhelm Institute of Chemistry. Working under Martin Hahn at the Berlin University Institute of Hygiene from 1923, Hirsch was given the title of associate professor in 1925 and became a professor in 1929. In 1933, he was invited to the University of Istanbul, and was employed as an ordinarius at the Hygiene Institute at the Faculty of Medicine, working towards the establishment of the institute alongside Muhiddin Erel⁷⁹ and Zeki Ragıp Yalım.⁸⁰ Though

⁷⁸ Ekrem Kadri Unat (1914 – 1998) was a Turkish professor of public health. He graduated from the Kabataş High School for Boys and entered the Istanbul University Faculty of Medicine in 1931, becoming a practitioner in 1937. After serving in the military for a year, he was employed by the Faculty of Medicine as an assistant in Microbiology, Parasitology and Epidemiology, replacing the compulsory service he owed to the Ministry of Health and Social Assistance. He became an associate professor in 1942, and continued working at the faculty, though he also served in the military for a total of three times. After the war in 1946, he was sent abroad to Pennsylvania University School of Medicine, and studied at Johns Hopkins University and Duke University, and afterwards conducted research in various laboratories in the United States. In 1949, he returned to Turkey and resumed his position at Istanbul University as a professor. In 1951, he established the WHO Tuberculosis Maturation and Demonstration Center, and led it until 1958, while also making several research trips to the United States at various laboratories as before. In 1958, when the department of Parasitology was separated from the Institute of Microbiology, Parasitology, and Endemiology, Unat became its director. Later in 1967, Unat was influential in the establishment of the Cerrahpaşa Faculty of Medicine, and became its chair of Microbiology, Tropical Diseases and Parasitology. His department was renamed to Microbiology, Parasitology and Infectious Diseases, and even later became the Department of Microbiology in 1976. Unat directed this department until his retirement in 1983. Unat officially served the Faculty of Medicine for over 50 years, lecturing over 15 thousand students, raising over 60 academics; he was also credited with 35 books and around 360 publications. He was a member of the Turkish Medical Society, the Turkish Microbiology Society, the Society of the History of Turkish Medicine, and the New York Academy of Sciences, among many others, and held honorary presidency over the latter (among those of other societies) (Yücel, 1999).

⁷⁹ Muhiddin Erel (1889 – 1986) was a 1924 graduate of the Faculty of Medicine. Sent abroad to study in Hamburg, he received his habilitation in 1932, and returned to the reformed Istanbul University as an assistant professor of hygiene. By 1948, he was a professor, and by 1950, an ordinarius. Erel served as the dean of the Faculty of Medicine from 1946 to 1948, and later became the founding rector of Ege University in 1955. He retired in 1960, only to have his working contract extended four times and return to active teaching. Erel was

literature on Hirsch's work is rare, according to Widmann, Hirsch worked on the betterment of medical hygiene in Turkey during his stay (Widmann, 1999, p. 125). He is credited with a total of 28 publications in his field of expertise, which included works on fermentation chemistry, bacterial biochemistry, chemotherapeutic agents and antibiotics.⁸¹ Hirsch's textbooks on medical hygiene, which he mostly jointly authored with Muhiddin Erel, are also of note; his "Hıfzısıhha Praktikum" (Applied Hygiene) can be considered an example. Hirsch returned to Germany in 1948, and worked in Basel for a pharmaceutical company named Geigy.

Werner Lipschitz (1892 Berlin – 1948 New York) was a German biochemist. Born in Berlin, he was educated in a Berlin *gymnasium* and later studied medicine and chemistry in the universities of Freiburg, Göttingen, and Berlin, earning his medicine degree from the University of Leipzig. Lipschitz served the German army during World War I; he was an army doctor from 1915 to 1916, and was later stationed at a *Lazaretto* hospital near Berlin from 1917 to 1918, during which period he worked under Emil Fischer.⁸² He later became an assistant at the University of Frankfurt and soon after inherited the position of Director of the Institute of Pharmacology after the death of previous director Alexander Ellinger. Lipschitz worked as a professor and the director of the Institute of Pharmacology at the University of Frankfurt for more than ten years, and was also the Chairman of the German Pharmacological Society from 1932. Lipschitz was removed from both posts after the *Machtergreifung* in 1933 due to his Jewish origin. He accepted an invitation from the University of Istanbul to become the founding Director of the Institute of Biochemistry, and arrived later in the same year. Lipschitz brought several of his colleagues with him to Istanbul. Biochemists Ernst Büding

known for his efforts to establish *Hemşirelik Yüksekokulu ve Sağlık Kolejleri* (Colleges of Nursing and Health) (Ege Üniversitesi (Ege University), 2005, p. 91).

⁸⁰ Zeki Ragıp Yalım (1899 – 1970) was a 1920 graduate of the military division of *Tıbbiye*. He worked at Gülhane, and served at the military hospitals of Yıldız and Diyarbakır before retiring from the military and entering the Hygiene Institution in Sivas. In 1926, he was sent abroad to the United States for training, and returned to Istanbul University after the reform as an associate professor of public health and hygiene. He became a professor in 1941, and was later the director of the Hygiene Institute (filozof.net, 2016).

⁸¹ Hirsch's use of the term 'chemotherapeutic agent' can be misleading. While the term currently implies chemotherapy and a relation to cancer, at the time of Hirsch's publications, the term 'chemotherapeutic agent' was widely used for any non-natural (i.e. not phytomedicinal) general pharmaceutical, such as an over-the-counter drug.

⁸² A *Lazaretto* is a hospital, traditionally meaning a quarantine station, or a mobile medical facility for military use. The term is Italian in origin and comes from the name of a leper colony administered by the crusaders "Order of Saint Lazarus of Jerusalem" in the 12th century, which was called a "lazar house" (after the biblical Lazarus the beggar). In this context, World War I lazarets were field hospitals, made mobile for the military, and housed wounded soldiers (Tyson, 2004).

and Ernst Caspari came to Istanbul with Lipschitz, as well as Paula Schwerin, a medicinal laborant.

At the University of Istanbul, Lipschitz is credited with the establishment of the Biochemistry Laboratory, spending great personal effort to build a modern establishment. Lipschitz taught medicinal chemistry in his native German language, his lectures were translated by medicinal chemistry associate professor Saib Ragıp Atademir and physiology associate professor Sadi Irmak. Initially, Lipschitz's lectures focused on theory, but soon afterwards he included experiments and seminars in his lectures for the benefit of his students. Between 1935 and 1938, Lipschitz published 8 articles and two textbooks on biochemical pharmacology, which were also translated by his associates, such as *Hayati ve Tibbi Kimya Dersleri* (Lecture Notes on Vital and Medicinal Chemistry), published in 1937. In 1939, Lipschitz left for the United States, where he accepted a guest position for experimental surgery at New York University, leaving Sadi Irmak to temporarily inherit his post as the Director of the Institute of Biochemistry. Lipschitz's fellow colleagues Büding and Caspari followed him to the United States, but his laborant Schwerin stayed in Istanbul until 1948, working under Felix Haurowitz, who replaced Lipschitz (Öner, 2010, pp. 61-62).

Felix Haurowitz (1896 Prague – 1987 Indiana) was a biochemist of Czech origin. He was educated in a *gymnasium* and graduated from the Charles University of Prague in 1922. Also earning a science doctorate from the Faculty of Sciences in 1923, he was an associate professor by 1925 and a professor by 1930. In 1938, Haurowitz was spending a year as a guest researcher at the Carlsberg Laboratory in Copenhagen on the invitation of Albert Fischer, which he terminated immediately upon hearing rumors of an agreement to be signed between Germany and Czechoslovakia: the Munich Agreement.⁸³ Haurowitz hurried back to Prague to be with his wife and their two children, not daring to cross into Germany with a Czechoslovakian passport; he bypassed all German borders, taking a boat from Denmark to Poland and only then managing to return to his home city of Prague. In Prague, Haurowitz was temporarily mobilized as an army doctor, but the Munich agreement was signed soon

⁸³ The Munich Agreement, signed in the early hours of 30 September 1938, was a settlement allowing Nazi Germany's annexation of Czechoslovakian provinces, collectively coined *Sudetenland*, that were allegedly inhabited mainly by German speakers. Signed between Germany, France, the United Kingdom, and Italy, the Munich Agreement was called "peace for our time" by the British prime minister Neville Chamberlain. However, it went down in history only as a failed appeasement act. By Czechs and Slovaks, the agreement was widely named the 'Munich Diktat', as it was signed between the aforementioned countries without inviting the state of Czechoslovakia to the diplomatic table.

after his arrival, and the *Sudeten* areas were abandoned to German rule in alleged ceasefire. Soon afterwards on October 10, Haurowitz was contacted by Hans Winterstein as to whether he was interested in a position for biochemistry in Istanbul. Initially, Haurowitz delayed, considering Prague to still be “pretty quiet” (Reisman, 2007, p. 6). However, the Nazis eventually gained full control of Czechoslovakia, and as the Charles University of Prague was now considered an independent university of the German Reich, Haurowitz was immediately dismissed for being a Jew. Haurowitz then visited Turkey and, finding the conditions favorable, accepted the offer to become the new director of the Institute of Biochemistry at the University of Istanbul—just as Hitler’s troops invaded Prague. Two weeks later, Haurowitz and his family arrived in Istanbul with only about 2,000 koruny (about \$70) to their name (Putnam, 1994, p. 142).

In Istanbul, Haurowitz took the position vacated by Werner Lipschitz, the Director of the Institute of Biochemistry. Haurowitz started learning Turkish immediately, and was competent enough in the language to deliver his biochemistry lectures in Turkish by his second semester, and could also write his own textbooks in the language (Şen F. , 2008, p. 170). Even so, he requested a German-speaking assistant for his research, and was initially assigned a student assistant Şaban Örnektekin⁸⁴, who graduated in 1941. Also capable of aiding Haurowitz was the German laborant Paula Schwerin, who had previously arrived with Werner Lipschitz. Intending to conduct more research, Haurowitz called for more assistants, and took on Mutahhar Yenson⁸⁵ as a protégé. Together with Yenson, Haurowitz assembled many chemists and chemical engineers who were not graduates of medical schools, and turned his Institute of Biochemistry into a full-fledged research center. Through Haurowitz, many chemists earned their medicine degrees, such as Kirkor Sarafyan, Fahamet Bursa, Mürüvvet Bilen, Prodromos Tanaşoğlu, Radiye Cindi, Sara Gitte Lisie, Niyazi Eryol, Adnan Tümer, Lale Etili, Mürüvvet Tuncay, among others. Haurowitz often suggested that his

⁸⁴ Şaban Örnektekin (? - ?) was a Turkish doctor. He was educated in France. Örnektekin was mostly known for climbing Uludağ in 1924 (Şaktimur, 1994). Örnektekin was the laboratory director of the internal medicine clinic of the Faculty of Medicine and was often found on research trips with mountain climbers, where he was also responsible for the team’s health. He observed and tested on the topic of applied medicine in climbing, testing the haemoglobin levels, blood pressure, and heart rates of team members (and often also their mounts) at various heights, as well as conducting research on the effects of various drugs on the fatigue and nausea induced by mountain conditions such as elevation and pressure (İzbirak, 1946).

⁸⁵ Mutahhar Yenson (1911 – 2003) was a 1937 graduate of the Faculty of Medicine. Yenson was Haurowitz’s first and foremost assistant, earning his associate professorship in 1943 and professorship in 1949. He was the director of the Institute of Biochemistry following the departure of Zdenko Stary. He retired in 1957, but continued working as the director of the Institute of Biochemistry until 1981.

students pursue academic careers. Three of his students, Mutahhar Yenson, Şevket Tekman⁸⁶, and Fahamet Bursa⁸⁷ became professors at the Istanbul University Faculty of Medicine. Haurowitz was credited with at least 49 publications which he wrote in Turkey, and three textbooks (Öner, 2010, pp. 62-63). His *Hayati ve Tıbbi Kimya* (Vital and Medicinal Chemistry) textbook was translated by Sadi Irmak and Osman Saka, and saw four major revisions, taking on the name *Biokimya* (Biochemistry) in its third revision in 1945 as the Turkish language changed. His other publications, various reports, journal contributions and other research, made both by himself and with Turkish colleagues, are available in Horst Widmann's archive.

Haurowitz was pleased with his life in Turkey, be it his progress in research, his quality of life in Istanbul, and the satisfaction he gained from having made contributions to the development of medical education and Turkish healthcare. However, he eventually became concerned for the future of his children as they reached college age. His two children moved to the United States for education in 1946, staying at the home of a fellow chemistry professor. Haurowitz stayed behind in Turkey to fulfill the remaining years on his contract, and followed his children to Indiana University in 1948, where he became a professor.⁸⁸

Friedrich Dessauer (1881 Aschaffenburg – 1963 Frankfurt) was a German physicist renowned for his work on quantum biology, biophysics and radiotherapy, especially his research on, and the development of the X-Ray (Roentgen) machine. The tenth child of a family of industrialists, he was influenced by natural sciences and medical research at a young age, particularly the works of Conrad Röntgen and the medicinal capabilities of X-Rays. Dessauer studied electrochemistry and physics at the University of Munich, and earned a doctorate degree from Johann Wolfgang Goethe University in Frankfurt with a dissertation on a “new high-voltage transformer and its use in generating penetrative X-Rays” (Dessauer,

⁸⁶ Şevket Tekman (? - ?) was a 1938 graduate of *Askeri Tıbbiye* and a specialist in biochemistry by 1944 at *Gülhane Askeri Tıp Akademisi* (Military Medical Academy). He became an assistant professor at Istanbul University in 1948, and was later a professor in 1966.

⁸⁷ Fahamet Bursa (Arat) (? – 1999) was a Turkish chemist who earned her doctorate in 1947. She became an assistant professor in 1949. In 1958, she was sent to İzmir University to teach protein chemistry. She took a professorship position at Istanbul University in 1967, and was responsible for teaching chemistry to students from both the Faculty of Medicine and the Faculty of Chemistry. She served as the director of the Institute of Biochemistry from 1981 to 1989.

⁸⁸ Frank W. Putnam of Indiana University has written an extensive biographical memoir of Haurowitz. (Putnam, 1994).

1917).⁸⁹ After 1920, Dessauer was a full-time professor at the University of Frankfurt, the director of the *Institut für Physikalische Grundlagen der Medizin* (Foundation for the Application of Physics to Medicine), which he had established (Şen F. , 2008, p. 157).

Dessauer was targeted by the Nazi regime for his political activism and his religious background—which, interestingly, was not Judaism but Catholicism. Dessauer was a member of the German parliament from the Catholic political *Deutsche Zentrumspartei* (German Centre Party), which the Nazis were completely hostile to and banned in 1933.⁹⁰ Dessauer had been politically active since the end of World War I. He had been a member of the Frankfurt city council and executive board, and was a member of parliament from the *Deutsche Zentrumspartei* from 1924 onwards. In the parliament, Dessauer often campaigned for the cooperation of all center parties, namely the *Sozialdemokratische Partei Deutschlands* (Social Democrat Party of Germany) and the *Deutsche Demokratische Partei* (German Democratic Party) in overcoming class struggle, with a particular interest in economic and social policy. Dessauer was also a member of the *Reichsbanner Schwarz-Rot-Gold* (Black, Red, Gold Banner of the Reich), an organization formed to defend parliamentary democracy, as well as a member of the pacifist *Friedensbund Deutscher Katholiken* (Peace Organization of German Catholics) (Şen F. , 2008, p. 157). Neumark notes that in 1930, when he met Dessauer, Dessauer commented on the dismissal of Ministry of Finance undersecretary Beusch as being a “horrid and inhumane drama... to be dismissed from a high position so suddenly and to be forced into emptiness, simply because of a change of government” (Neumark, 1982, p. 20) (Translation mine.). Dessauer would experience the same. In 1933, after the Nazi takeover of the German parliament, Dessauer was dismissed from all offices. He was arrested, had his property seized, and was put on trial for *Untreue* (unfaithfulness). Despite being acquitted of all charges, he was no longer permitted to teach when he returned to his home university of Frankfurt. In 1934, his house was raided by students, and he was arrested again, and his

⁸⁹ Further technical information on Dessauer’s device can be found in (del Regato, 1993).

⁹⁰ The Catholic Church and Nazi Germany were hostile to one another. While the Nazi Party had largely developed in Catholic Munich, and received support from lay Catholics, the Catholic leadership typically criticised the Nazi doctrine, especially in regions that did not vote for the Nazis. The relations between the Nazis and the Catholic Church changed to open hostility following the reformation of the Nazi code in 1920. In 1920, the National Socialist program took a decidedly anti-Catholic and anti-Christian identity, and Hitler’s rise to power ultimately led to the *Kirchenkampf* (“church struggle”, named after Otto von Bismarck’s *Kulturkampf* “culture struggle” where Bismarck had tried to subject the Roman Catholic church to state control)—Hitler and his ideologues aimed to de-Christianize Germany and eradicate its churches, or at the very least convert them to their point of view. Throughout the Reich, adherents of Political Catholicism and German priest-dissidents were routinely persecuted, and were often gathered at the “Priest Barracks” of the Dachau concentration camp—which kept German Catholics as inmates, causing the death of 1034 out of 2720. The Nazi persecution of annexed Poland also resulted in 1800 dead Polish clergy.

professorship was revoked on charges of *Nichtarier* status, citing one Jewish grandfather as evidence. Dessauer's arrest was later terminated at the request of the Turkish government, who invited Dessauer to become the director of the Institute of Radiology and Biophysics at the University of Istanbul.

Dessauer's stay at the University of Istanbul was relatively short, but his hard work on the establishment of the Institute of Radiology and Biophysics, its laboratory, and his booming popularity was nevertheless influential. At the Institute's laboratory, Dessauer was an innovator and pioneer. He attempted to furnish his empty laboratory and the institute with the necessary equipment, and had many instruments brought in through donations by various companies like Koch, Sterzal and Siemens. Additionally, he also developed and installed a 400kV radiotherapy apparatus in the laboratory, and at the time, the only other comparable radiotherapy apparatus was a 550kV machine in Los Angeles (Dinç, 2007, p. 241). Dessauer's work was initially practical and confined to his laboratory, and with the addition of the clinic duty he took on at the Clinic of Radiology in Çapa, Dessauer had little time for theoretical work due to the sheer amount of patients who arrived at the Institute. In his own words, Dessauer recounts: "On some days I would have almost eighty patients at my door begging for help, all of them stricken with cancer," (Bremer Beitrage (Bremen Post), 1962, p. 101). Dessauer himself was upset with this situation; Nissen writes with some criticism that "...despite his perfect installment and repair work on the Roentgen machines, Dessauer had little experience in clinical treatment, and he was as uncomfortable about it as his patients. He didn't find the opportunity to use his extensive knowledge on biophysics, and surely he was relieved when he was invited to the Physics Institute in the University of Fribourg," (Nissen, 1969, p. 215). Dessauer did indeed leave for the University of Fribourg in Switzerland in 1938, but it should also be noted that he left also for health reasons. According to Neumark, Dessauer had always carried severe burn scars from his first roentgen experiments (Neumark, 1982, p. 20). Dessauer later died of complications from excessive radiation contamination in 1963, like many other X-ray physicists of his time.

Max Sgalitzer (1884 Prague – 1973 Princeton) was a radiologist. Educated in the German University of Prague, he received his degree in medicine in 1909 and worked at the first surgical university hospital from 1910 on. Serving in the Austrian-Hungarian army during World War I, Sgalitzer fell into Russian captivity for a period of two years before he was sent

back to Vienna. He became the head of the radiology laboratory at the University Hospital of Vienna in 1919, and was a professor extraordinarius by 1931 (Kniefacz, 2015).

Sgalitzer was contacted by Philipp Schwartz in February 1938, offering a contract of three years for the directorate and management of the Institute of Radiology and Biophysics at the University of Istanbul. Interestingly, the offer found Sgalitzer before the German annexation—*Anschluss*—of Austria in June 1938. Sgalitzer had felt bound to his post at the University of Vienna for familial reasons, and had asked Schwartz to give him a month to deliberate on the offer. However, the propaganda for *Anschluss* in March 1938 hastened Sgalitzer's emigration to Istanbul. Despite his best efforts, commendations from his clinic director, mention of his service in World War I and his captivity, Sgalitzer was persecuted and removed from his University of Vienna post due to his status as a 'full Jew' in April. Out of options, he accepted the offer and arrived in Istanbul in September 1938 (Arias, 2016).

A number of persecuted *Nichtarier* Austrians followed Sgalitzer to Istanbul. They were the physicist-engineer Carl Weissglass, his family, engineer Walter Reininger, his wife and radiology nurse Margarethe Reininger, their daughter, as well as nurse Ms. Lindenbaum. Sgalitzer's own children, his son and two daughters, remained in Vienna. His older daughter Gerda could receive her degree in medicine from the University of Vienna only with a discriminating ceremony of *Nichtarierpromotion*, and his younger daughter Elisabeth was expelled from the same university in her second year.

At the University of Istanbul, Sgalitzer worked at the university polyclinic as well as the Institute of Radiology and Biophysics. He is credited with an increase in the quality of services delivered by the clinic, as well as an increase in the number of patients (Reisman, 2006, pp. 244-246). Sgalitzer and his team of refugee scholars in the Institute trained many Turkish physicists, engineers, technicians and nurses on the subject of radiology. They were also given the task of installing and maintaining the university's radiology equipment, oftentimes building new parts from scratch since when it was impossible to order replacements during wartime. Sgalitzer also continued his research and international publications in the field of radiology during his stay in Turkey, building a bridge between the new Institute and the international academic community. He is credited with around 20 publications which he wrote in Turkey, 17 of which are available in Widmann's Archive (Widmann, 1999, p. 129).

Sgalitzer's contract ended in 1943, and he moved to the United States. (Şen, 2008, p. 228) His position as the director of the Institute of Radiology and Biophysics was taken over by professors Muhterem Gökmen⁹¹ and Tefvik Berkman.⁹²

Karl Löwenthal (1892 Berlin – 1948 United States) was a German histologist with his origins in the Histology Institute of Frankfurt University. While not much is known about him, Löwenthal was employed by the Istanbul University Faculty of Medicine, Institute of Histology and Embriology from 1933 to 1939. Löwenthal was a professor at the faculty and the director of the experimental department of the institute. According to Namal and Honti, Löwenthal was employed to conduct practical exercises (Namal & Honti, 2004). He was the youngest of the refugee professors in the Faculty of Medicine, and was the only non-ordinarius professor (Widmann, 1999, p. 130). He remained in Turkey until 1939, and then left for the United States shortly before the breakout of World War II. He committed suicide in 1948 (Namal & Honti, 2004).

Tibor Petérfi (1883 Dés – 1953 Budapest) was a German-speaking Hungarian biologist and histologist.⁹³ Born in Dés, which was then in Transylvania but is currently in Hungary, Petérfi was educated in Klausenburg and earned his medical degree from the University of Klausenburg, later serving in the university as an assistant for zoology and histology. Petérfi

⁹¹ Muhterem Gökmen (1902 - ?) was a 1924 graduate of the Faculty of Medicine. He received further education in medicine in Vienna and Frankfurt, and upon his return to Turkey was assigned to the roentgen department of Sivas Numune Hospital. After the 1933 reform, he was employed by the Faculty of Medicine as an assistant professor in radiology, to work with Friedrich Dessauer and Max Sgalitzer. Gökmen was a professor by 1940, and was made the director of the Institute of Radiology following the émigrés' departure in 1946. In 1973, Gökmen retired, like many other Turkish academics of his generation, due to a change in Turkish retirement laws that disallowed working after a certain age (Kılıçlıoğlu, Araz, & Devrim, 1969).

⁹² Ahmet Tefvik Berkman (1900 – 1993) was a 1924 graduate of the Faculty of Medicine. He practiced in Ankara Numune hospital, and was sent abroad to the Berlin *Charité* to study radiology, for which he received his habilitation in 1930. Upon his return to Turkey, Berkman worked as a free physician for a while before being assigned an associate professorship at the reformed University of Istanbul in 1933. Berkman worked alongside Sgalitzer, and earned his professorship in 1940. At Istanbul University, Berkman was influential in the establishment of an independent chair and clinic for radiotherapy, which occurred in 1962. Berkman's clinic was the first radiotherapy clinic in Turkey to treat tumors. Berkman was also a member of the Istanbul Reactor Committee from 1956 to 1959, and the Atom Energy Commission of the Prime Ministry from 1957 to 1966. Berkman was among the 147 academics removed from their positions following the 1960 coup d'état, known as the *147likler*. He returned to his position in 1962, and retired later in 1973 (Türk Radyasyon Onkolojisi Derneği (Turkish Society of Radiation Oncology), 2016).

⁹³ A confusing oversight by Widmann is that he incorrectly names Tibor Peterfi as *Sandor* Peterfi in (Widmann, 1999, p. 130), despite correctly referring to him as Tibor in footnotes and references. Sandor Peterfi was a Hungarian educator who died in 1913, and has no apparent close relation to Tibor.

later transferred to the University of Budapest, earning his associate professorship in anatomy and histology under Michael von Lenhossék. Petérfi served in World War I as a conscripted soldier and army hygienist, serving in the troops, *Lazaretto* field hospitals, and epidemic hospitals. For his service, Petérfi was awarded with four war decorations. After the war, he returned to academic life; taking a position as a professor of anatomy in a newly established Hungarian University of Pressburg. When the University of Pressburg disbanded into Czechoslovakian and Hungarian sections, Petérfi took a professorship at the Institute of Anatomy at the German University of Prague. In 1921, he transferred to the Kaiser-Wilhelm Institute of Biology in Berlin Dahlem, a position he held until 1934. He was a guest professor at the Zoology Laboratory at the University of Cambridge from 1934 to 1936. Finally, he was a professor at the Medicine and Physiology Institute at the University of Copenhagen (Namal & Honti, 2004, pp. 85-86). By the time he arrived at the University of Istanbul, Petérfi was an accomplished scientist with a lot of world experience under his belt. He was also renowned in the world of medicine for his invention and popularization of the micromanipulator device, an apparatus that could operate on cells examined by a microscope. The first uses of the term ‘micurgy’ is also attributed to Petérfi (Widmann, 1999, p. 131).

Contact with Petérfi was established through the Emergency Committee for German Scholars Abroad. Due to the nature of his employment, Petérfi was somewhat unique in his position among the refugee scholars. Although most refugee scholars employed by the University of Istanbul were invited, Petérfi himself contacted the university. In a 1939 letter addressed to the Turkish director of the Institute of Histology and Embryology, Tevfik Recep Örensoy, Petérfi inquired about an open position, possibly having heard of the one vacated by Karl Löwenthal. Petérfi attached to this letter his curriculum vitae, examples of his work, list of publications, and all his best wishes, along with mentions of his proficiency in English and French, though not neglecting his preference for German (Namal & Honti, 2004, pp. 88-89). Previous considerations for the vacant professorship position, such as Professor Hoepke from the University of Heidelberg or Professor Lanz from the University of Munich were dropped in favor of Petérfi, and he was contracted by the University of Istanbul from March 1939 to March 1944.

In late March, Petérfi arrived at the University of Istanbul. His mother, and later his wife, followed him. Devoting his time to his new position, and considering himself ‘married to his new job’, Petérfi started a lively and successful teaching program. Petérfi was loved by both his students and colleagues; he was often commended for his respectable personality and

philanthropic attitudes. He was aided in technical matters by the laborant Esther von Bülow, a fellow German refugee, who had replaced Margarethe Reininger after the latter's emigration to the United States. At the Faculty of Medicine, Petérfi published several Turkish textbooks, many on the subject of histology, e.g. *Histoloji Notları* (Notes on Histology). A full list of Petérfi's publications can be found in Üveis Maskar's article on him (Maskar, 1981).

In 1941, Petérfi was invited to attend a conference on micrurgy in the United States. He regretfully refused to participate, citing the uncertain political climate (Namal & Honti, 2004, pp. 90-91).

In 1942, Petérfi wrote to the Dean of his Faculty requesting two weeks of travel time to visit his son, who he had heard had been operated on in Budapest while serving in the Hungarian army in World War II. It is unclear whether his request was granted (Namal & Honti, 2004, p. 91).

During the last few years of his service, Petérfi's health began to fail and he was repeatedly hospitalized. Eventually, he was diagnosed with psychological depression by Mazhar Osman. Osman noted on Petérfi's constant vagrancy, longing for his homeland, and the uncertainty of his son's fate on the front. Widmann notes that Petérfi had lived 'the uncomfortable life of a wanderer'; and it had taken its toll on him (Widmann, 1999, p. 131). In 1944, Petérfi received an offer from the Hungarian Ministry of Culture to travel back to Budapest and work in his homeland, although it meant the end of his academic life. Petérfi eventually traveled back to Budapest and worked as a professor ordinarius at the University of Budapest during 1946 and 1948. Petérfi was happy to travel back to Istanbul for a short time in 1948, and during his trip, he explained to his colleague Maskar that he was looking forward to move to Philadelphia, where he would continue teaching. Soon after returning to Budapest, however, he was involved in a car accident, which severely limited his teaching activities. His condition got worse, and he was hospitalized for the last four and a half years of his life before passing away in 1953 (Namal & Honti, 2004, p. 95).

3.2.1.2 University Clinics

The university clinics comprised the practicing arm of the Istanbul University Faculty of Medicine. They were situated in the traditional locales of Ottoman medical facilities, especially the Fatih district (Cerrahpaşa, Çapa, Haseki, Gureba), with the exception of Şişli Etfal Children's Hospital, and Bakırköy as the traditional locale for the mental health clinic. As with *Tıbbiye*, the faculty's practice clinics also employed refugee scholars. While they

were somewhat rarer in clinics compared to the faculty—perhaps due to the hands-on practice nature of the clinics—nevertheless, their capable direction of the practices were widely acclaimed. According to Schwartz, the refugee physicians’ direction was tantamount to the success of the clinics and by extension the faculty and the university itself.

ISTANBUL UNIVERSITY FACULTY OF MEDICINE		
<i>University Clinics</i>		
REFUGEE SCHOLARS		
NAME	CHAIR / FIELD	DURATION OF STAY
Erich Frank	Internal Medicine (Gureba)	1933-1957
Karl Hellmann	Otolaryngology (Çapa)	1936-1943
Joseph Igersheimer	Ophthalmology (Cerrahpaşa)	1933-1939
Wilhelm Liepmann	Gynecology (Haseki)	1933-1939
Rudolf Nissen	Surgery (Cerrahpaşa)	1933-1939
Berta Ottenstein	Dermatology (Gureba)	1935-1950

Source: (Dölen, 2010a, pp. 500-502)

Erich Frank (1884 Berlin – 1957 Istanbul) was a professor of internal medicine. Born as the son of a Jewish mother and a Christian father in Berlin, he received his degree in medicine from the University of Breslau, graduating with honors from the Wiesbaden Faculty of Medicine. As a practitioner, Frank worked in the Wiesbaden central hospital, which was connected to the Kaiser-Wilhelm University Faculty of Medicine in Strassburg. He later earned a PhD, and made his debut in academic life, in which he was also very successful. Frank’s doctoral thesis on “Ortostatic Albuminaria” made him the first doctor to suggest that the named complication could arise in a seemingly healthy kidney. Later in his career, he became renowned for his work on diabetes, popularizing a new blood sugar test he invented that involved a sample taken from the earlobe. He was the first doctor to identify the conditions “Essential Hypertension” and “Essential Thrombocytopenia”. He also developed a synthetic drug that he dubbed “Synthalin”, which was used to maintain a low blood sugar level, the first oral anti-diabetic. According to Neumark, his research on diabetes was so similar to that of Best, Banting and Macleod—the latter two of which got a Nobel prize for their use of insulin on humans—that Frank missed the opportunity to become a Nobel laureate, simply because he had not completed his research (Neumark, 1982, p. 72). Nevertheless, as an unsurprising result of his successful academic career, Frank was an ordinarius professor by 1925, and pursued further practice and research in the Wenzel-Hancke hospital in Breslau as a chief administrator (Özden, 2010, p. 157).

Frank was removed from his position at the hospital in Breslau as a result of the *Machtergreifung* of 1933. Frank had few options, and arrived in Istanbul in August 1934 with his family. With him Frank also brought the laborant chief Kurt Steinitz and dietician nurse Else Wolf. He is also alleged to have brought his entire library.

In Istanbul, Frank was employed at the University of Istanbul as the Director for the Clinic of Internal Medicine. He was assigned to the Gureba Hospital, particularly *Aşağı Gureba* (Lower Gureba), which served Istanbul's poorer citizens and destitute people from Anatolia.⁹⁴ While he was often busy, Frank still managed to set up a foundation for academic research and medical training. In addition to his lectures at the Faculty of Medicine at the University of Istanbul, Frank trained assistant doctors in his practice, and was highly sought after, with medical students from various clinics often joining simply to watch his demonstrations. His notable academic colleagues were Arif İsmet Çetingil⁹⁵, Nebil Bilhan^{96,97} and Hıfzı Bakım.⁹⁸ His various assistants and students included Ferhan Berker⁹⁹, Nejat Harmancı¹⁰⁰, Remzi

⁹⁴ Gureba Hastanesi (today the *Bezmîâlem Vakıf Üniversitesi Tıp Fakültesi Hastanesi* (Bezmîâlem University Faculty of Medicine Hospital)) was a hospital built in 1843 by mother sultan Bezmîâlem Valide Sultan, who was known for her charitable practices, specifically to serve the poor and unfortunate. The name of the hospital can be translated literally as the 'Hospital for Destitutes'.

⁹⁵ Arif İsmet Çetingil (1896 – 1985) was born to a state official employed in the Ottoman palace. He graduated from *Kabataş İdadisi* (today *Kabataş Erkek Lisesi*, Boys' Lyceum) as class valedictorian, received professional tutoring in German and French, and entered *Tıbbiye*. He graduated in 1918, and worked at Gülhane Hospital. When the Turkish War of Independence began, Çetingil left Istanbul with the revolutionaries and moved to Anatolia, earning himself a death sentence from the Ottoman Empire. During the war, Çetingil served at hospitals and practices in Ankara, Sivas and Kayseri. After the signing of the Lausanne Peace Treaty, he was sent to Germany for further medical training, returning two years later in 1925. After the university reform, Çetingil was employed by the Institute of Internal Medicine alongside Erich Frank. Due to Frank's influence, he became increasingly interested in blood diseases, publishing the first Turkish-written book on hematology in 1937. Çetingil was an associate professor by 1937 and a professor by 1941. Çetingil inherited the directorship of the chair of Internal Medicine after Frank's death, and became an ordinarius professor. He served as the dean of the Faculty of Medicine from 1955 to 1957. He retired in 1973 (Tangün, 2013).

⁹⁶ Nebil Bilhan (? - ?) was a Turkish professor, with expertise in diabetics. He was the son of the Berlin ambassador and was therefore naturally close to Germans and German culture. After the 1933 reform, he became a close friend to Erich Frank as well as his colleague (Bezmîâlem Aktüel (Bezmîâlem Current), 2013).

⁹⁷ An interesting memory of Frank and Bilhan in the classroom is quoted by Doğan Hızlan: "... (Frank) was a very serious professor, the kind that wouldn't smile, and like some émigré professors, he had not learned Turkish. In his lectures, birds fly in and out of his lecture hall through a broken window, and one day, a bird empties all his *kismet* on top of the professor's head—as you know, there is a belief that bird excrement is fortunate—and the professor takes his handkerchief out of his pocket, wipes his face and hair, and turns to his translator Nebil Bilhan and says something. And like his German colleague, Bilhan is a sullen scholar, and he translates, with all seriousness, "Good thing cows don't fly," (Hızlan, 2007).

⁹⁸ Hıfzı Bakım (? - 1957) was an associate professor of internal medicine.

⁹⁹ Ferhan Berker (1914 - 2010) was a professor of internal medicine. He graduated from Pertevniyal Erkek Lisesi (Boys' Lyceum, at the time) in 1933 and was a 1939 graduate of the Faculty of Medicine. After serving in the military, he practiced in the 2nd Clinic of Endocrinology under Frank for six years, becoming a medical expert in the field in 1947. Starting in 1953, he began to travel abroad for study, first to England and Germany, and later in 1957, on leave from his mentor Frank to research endocrinology in the Ann Arbor hospital in Michigan. After his return in 1964, he became a professor at the Faculty of Medicine. Berker was involved in various international research projects, traveling abroad to Canada, Germany, the United States, Switzerland and France.

Özcan¹⁰¹, Nuri Orhan Ulutin¹⁰², Ali Ekmekçi, and Mustafa Karaca, among others. Frank is alleged to have raised nearly 50 specialist doctors (Widmann, 1999, p. 136). Frank was of the mentality that practicing faculty members of medicine should be concerned with education, service, and research jointly, and instilled in his students this world view. In 1951, he started a journal, *Istanbul Contribution to Clinical Science*, and in his foreword summarized his philosophy:

“The doctor wants to help and the man of science wants to know. It is the scope of the clinical investigator, who at first views only pure knowledge, that the latter should be transformed into a weapon in the hands of physician who wants to diagnose and cure” (cited in (Özden, 2010, p. 159)).

Frank earned the gratitude of both his patients and academic colleagues for his efforts. A special edition of the *Istanbul University Journal of the Faculty of Medicine*, published to commemorate Frank’s 70th birthday, lauded his work and effort in Turkey as vital to the development and education of medicine in Turkey (İstanbul Üniversitesi Tıp Fakültesi (Istanbul University Faculty of Medicine), 1955). Nevertheless, Frank faced problems stemming from jealous colleagues, who were critical of his salary, and would sarcastically note “Poor as we may be, we still have a few Franks in our pockets” (Özden, 2010, p. 160). Frank also suffered from the schemes of said colleagues, whose efforts exhilarated after he was deemed *Heimatlos* in 1941 by the German government. There were attempts to keep Frank’s contract with the Turkish government from being renewed, and many of Frank’s assistants and medical students were subject to roadblocks in their academic careers.

Additionally, he was responsible for the translation of Frank’s clinical lectures, seminars and meetings. He is credited with 150 publications (Hekim, 2013).

¹⁰⁰ Nejat Harmancı (? - 1991) was a professor of internal medicine.

¹⁰¹ Remzi Özcan (1919 – 2007) was a professor of cardiology. He was a graduate of Haydarpaşa Lyceum, and a 1944 graduate of the Faculty of Medicine. He became an assistant in 1947 after serving in the military, earned his expertise in 1951, became an associate professor in 1956, and was a professor by 1966. He was the director of the Istanbul University Faculty of Medicine Heart and Vascular Diseases Research and Application Center from 1984 to 1991, and was the chair of the department of Cardiology from 1977 to 1987. He was also a founding member of the Turkish Society of Cardiology, which he also directed for 10 years (Türk Kardiyoloji Derneği (Turkish Society of Cardiology), 2007).

¹⁰² Nuri Orhan Ulutin (1923 – 2011) was a hematologist. He was a graduate of Bursa Erkek Lisesi (Boys’ Lyceum) and a 1947 graduate of the Faculty of Medicine. After obtaining his medical expertise in endocrinology in 1952 and serving in the military, he practiced in the 2nd Clinic of Endocrinology under Frank. Later, he went to the Detroit Henry Ford hospital in 1959 to work as a research associate, and researched thrombocytes and Autoprothrombin II-Anticoagulan (Protein C) for two years. Upon his return to Turkey in 1961, he became an associate professor and started practicing in Çapa. In 1963, he became a hematologist, and assembled a research team, establishing the Department of Hematology Routine Research Laboratory, which he directed for 28 years. Five years later, this laboratory was taken under the wing of TÜBİTAK and funded as a research center until 1983. It was kept in operation through external funding until closing down in 1991. Ulutin received a TÜBİTAK Science award in 1970. He retired in 1991, and taught at Marmara University for three more years. He became an honorary member of the Turkish Academy of Sciences in 1995 (Türk Hematoloji Derneği (Turkish Society of Hematology), 2011).

However, Frank was protected by Prime Minister İsmet İnönü, who, upon receiving a telegraph from Frank, immediately ordered the Dean of the Faculty of Medicine to extend Frank's contract, knowing well the extent of the refugee scholar's efforts for the country.

Frank stayed in Turkey for twenty-five years. He was invited to teach in the United States, but refused the offers. After the conclusion of World War II, he was also awarded a medal of merit, and given a membership to the German Academy of Medicine. Yet, he refused to leave Turkey, saying that it was his homeland:

“In den Tagen, da ich schmerzlich überrascht zur Kenntnis nehmen musste, aus meiner Heimat vertrieben zu werden, nahm allein die Türkei mich mit offenen Armen auf. Hier ist meine Heimat. Ich kann hier nicht fortgehen und mich so all der hiesigen Gunst undankbar erweisen!” (“In the days that I received the painful surprise of having to leave my homeland and everything I knew behind, only Turkey greeted me with open arms. This is my homeland. I cannot leave and prove all the local goodwill for naught!”) (Özden, 2010, p. 161) (Translation mine.)

Frank remained *Heimatlos* until his death in Istanbul in 1957. He was posthumously made a Turkish citizen, and laid to rest with a governmental funeral with his students, colleagues, and patients attending. An engraving on his tombstone in Aşıyan Cemetery reads “With the Gratitude of Turkish medicine,” (Özden, 2010, p. 161).

Rudolf Nissen (1896 Neisse – 1981 Basel) was a German surgeon, most famous in the medical field for the first ever pneumonectomy surgery and the “Nissen-Rosetti fundoplication”. Born to a German-Jewish family in Silesia, Nissen received his education in medicine in Munich, Marburg, and Breslau, training under the renowned pathologist Ludwig Aschoff. Nissen's medical education was somewhat delayed due to his service in World War I. He served in a medical corps unit, and was injured by a gunshot during his service, leading to lifetime complications with his lung. After the war, Nissen continued to study at the University of Munich, and was assistant to the renowned German surgeon Ferdinand Sauerbruch. He received his medical degree in 1926, moved to the Berlin *Charité*¹⁰³ with his mentor the following year, and was a professor extraordinarius by 1930 (Reisman, 2006, p. 195). When he arrived in Turkey, Nissen was already a world-renowned surgeon (Doğan, Hot, & Topçu, 2009, p. 256).

¹⁰³ The *Charité – Universitätsmedizin Berlin* is a large, and very old, teaching hospital in Berlin. It was established in 1710 due to the anticipation of an outbreak of bubonic plague in Prussia. As a hospital with significant focus on research, the *Charité* is currently tied to Humboldt University and the Free University of Berlin. It was ranked as the best hospital in Germany from 2012 to 2014.

After the *Machtergreifung*, Nissen quickly became aware of the inhospitability of Nazi Germany. Having married in 1933, Nissen was already making preparations to move to the United States with his family when the invitation from the University of Istanbul reached him in the form of a telegram (Reisman, 2006, p. 195). He accepted the offer to become the chair of surgery, and started his new life in Istanbul on October 1, 1933. Fellow refugees who followed Nissen to Istanbul included the physician Ewald Löwenthal (1934-1939), the medic Lilly Fraenkel (1937-1938), and the surgical nurse Irmgard Althausen (from 1934) (Widmann, 1999, p. 138).

In Istanbul, Nissen was made the director of the clinic of surgery of the University of Istanbul. Prior to his appointment, however, Nissen had also signed a personal contract with the Minister of Education Reşit Galip: in addition to his new position as a scientist, administrator and manager, Nissen would also be expected to participate in various tasks, such as: securing the well-being of newborns and their mothers, participation in the battle against tuberculosis, holding various public health seminars and including his students, aiding charities and health organizations for the development of better public healthcare, and so on (Doğan, Hot, & Topçu, 2009, p. 257). While he succeeded in many of these tasks, Nissen faced some difficulty adapting to the conditions of his new clinic: in a televised interview later on in his life, Nissen would explain that the clinic he overtook had only the barest necessities in terms of equipment and tools, and that adaptation had been difficult, especially compared to his previous clinic at the Berlin *Charité* (Böttcher & Mautner, 1967). Nissen molded the clinic in the organizational model of his mentor, Sauerbruch, and was soon proud to have established a clinic that was both practically and academically capable. In the clinic, Nissen worked alongside Ahmed Burhaneddin Toker¹⁰⁴, Fahri Arel¹⁰⁵, Mehmet Derviş Manizade¹⁰⁶ and

¹⁰⁴ Burhaneddin Toker (1890 – 1931) was a Turkish surgeon. He was born in Van, to a family that moved around a lot due to his father's job as a state official. Toker studied at both Damascus *Tıbbiye* and the Istanbul *Tıbbiye*, graduating from the Faculty of Medicine in 1910. He worked for the Faculty of medicine as a practician for internal diseases, then received an assistantship at the gynecology department. Toker later worked for a government organization for combating cholera and was later a *Hilaliahmer* (Kızılay; Red Crescent, the Turkish equivalent of the Red Cross) commission member. In 1913, Toker was sent abroad to study in Germany, where he studied surgery in Berlin and Hamburg, developing significant expertise by treating wounded German soldiers during World War I. Toker returned to Turkey in 1921 and worked at Cerrahpaşa, where he established a modern surgery department and a roentgen laboratory. Toker was among the Darülfünun scholars who kept their positions following the reform. He had received an associate professorship in 1932, and in 1933 when Darülfünun turned into Istanbul University, was made an ordinarius professor and clinic director. Toker is credited with the first blood transfusion in Turkey and its popularization (Bagatur, 2012).

¹⁰⁵ Fahri Arel (1894 – 1993) was a surgeon with an expertise in cardiothoracic surgery. He graduated in 1917 from the Faculty of Medicine at the University of Geneva, and worked there as an assistant until 1922. In 1933, Arel came to Turkey and was given an associate professorship at Istanbul University. He became a professor in 1940, becoming an ordinarius in 1952. Arel was among the *147'likler* (Batirel & Yüksel, 2000).

Feyyaz Berkay.¹⁰⁷ A list of students and assistants who studied their craft under Nissen includes names such as Hazım Bumin, Ata Topaloğlu, Kemal Baran, Ziver Mesci, Sacit Tezelli, Muhsin Başak, Cemaletdin Tavmen and Sait Tokdemir. According to Doğan, Hot and Topçu, Nissen produced four books on surgery as commanded by his contract with the Turkish government, and also authored 62 scientific papers (Doğan, Hot, & Topçu, 2009, p. 257). A list of his publications during his stay in Turkey can be found in Nimet Taşkiran's "Türk Cerrahi Makaleler Bibliografyası" (Bibliography of Turkish Surgical Publications) (Taşkiran, 1968). Nissen's work on general and thoracic surgery led to new developments in Turkish medicine, and with the clinic in capable hands, he would often undertake journeys abroad in which he attended conferences in the USA and the Soviet Union. In the televised interview, Nissen commended his coworkers and assistants for their hard work, and thanked the Turkish government for aiding in his efforts to develop the clinic.

Nissen's stay in Turkey was relatively short. His contract with the Turkish government ended in 1938 after six years, and he emigrated to the United States, where he set up an ambulatory surgical practice. Later on in 1948, he returned to Germany, to meet once again with his mentor, Sauerbruch. He accepted a professorship in Basel, and worked until 70 years of age at 1967. In 1973, he was awarded an honorary professorship by Hacettepe University. According to Neumark, even several Turkish children were named 'Nissen' in his honor (Neumark, 1982, p. 70).

¹⁰⁶ Mehmet Derviş Manizade (1903 – 2003) was a Turkish professor. Born in British-occupied Cyprus to a wealthy and famous family, Manizade had British citizenship. He graduated from the Nicosia Turkish Lyceum in 1924, and went abroad to study medicine at the University of Vienna, from which he graduated in 1932. He continued his academic career as an assistant, but chanced upon an interesting opportunity while still in Vienna, becoming the personal physician to Madhan Singhi, the son of a Pakistani *Maharaja*. With the Maharaja, Manizade moved to England, where he became a popular physician for Turkish patients. Through his secretary, Şükrü Saraçoğlu (who was the Minister of Finance of Turkey at the time) questioned Manizade as to why he was in England, arranged Turkish citizenship for him, and assigned him to the reformed Istanbul University. The relationship between Manizade and Saraçoğlu intensified due to the problems faced by Turkish Cypriots. Manizade suggested that the Turkish Cypriots be moved to the mainland, which Saraçoğlu staunchly refused on the grounds that losing Cyprus would mean losing the southern beaches. Manizade arrived in Istanbul in 1937 and was taken under Rudolf Nissen's wing, becoming an associate professor by 1946 and professor by 1954, after which he also became a member of the university senate. Manizade's efforts at Istanbul University include aid and influence in the establishment of the Cerrahpaşa surgery building and the faculty's archive. He is also known for establishing Turkey's first orthopedics and traumatology clinic. He retired in 1975 (Kalyoncu, 2001).

¹⁰⁷ Feyyaz Berkay (1913 – 1991) was a 1937 graduate of the Faculty of Medicine, a student witness to the university reform. An assistant to Nissen at Cerrahpaşa after his graduation, he was sent abroad to the United States in 1946 to study neurosurgery. Berkay returned to Turkey in 1950 and started practicing at the first surgery clinic at Cerrahpaşa as an associate professor in 1951. By 1963, Berkay was the department head of Neurosurgery, and a professor by 1964. In 1968, he founded the Turkish Neurosurgery Association, which held its first National Congress of Neurosurgery in 1971. Berkay retired in 1983 due to old age (Özlen, Erdinçler, & Çıplak, 2002).

Wilhelm Gustav Liepmann (1878 Danzig – 1939 Istanbul) was a German gynecologist. While not much is known of his early life, Liepmann was renowned in his home country and internationally for his work on the then-fledgling field of *frauenkunde*: gynecology. He had set forward theses such as the need for pregnant women to do pre-birth exercises, which, for the 1920s, was a revolutionary idea. Before his emigration in 1933, Liepmann had been a professor at the University of Berlin and the director of the *Cecilienhaus* Women's Clinic at the Luisen Hospital (Widmann, 1999, p. 139).

The Liepmann family were threatened by the Nazi regime due to the Jewish descent of Wilhelm's wife, Emma. Therefore, in 1933, Liepmann took the offer from the University of Istanbul to direct the clinic of gynecology and also work as a professor in the field. The clinic Liepmann took over was riddled with problems. At the time of his arrival, the gynecology clinic was situated at the Haseki Hospital in the form of a 'pavilion and two sheds' due to its recent relocation (Namal A. F., 2008, p. 155). The chief of the hospital was also less than welcoming towards professors directly tied to the reformed University of Istanbul, and harbored animosity towards refugee professors that displaced Turkish doctors. Schwartz's memoirs point towards three names among the refugee clinic professors who were deliberately protected from this animosity with the direct intervention of the government, and Liepmann was one of them (Namal A. F., 2008, p. 154).

According to the testimony of Pakize Tarzi, Liepmann's Turkish assistant, who would go on to become the first female Turkish gynecologist, the state of the gynecology clinic before Liepmann's arrival was disastrous: in an attempt to make a show of thriftiness, and earn a commendation from the Ministry of Health, the previous director of the clinic had cut the clinic's budget by half, which only led to filthy surroundings, lack of proper food for patients and a dearth of medicine (Namal A. F., 2008, pp. 154-155). Liepmann would call the clinic a 'shed' in a later conference. In an attempt to fix the situation, Liepmann took responsibility of the repairs and overall organization of the clinic, eventually convincing the university administration to transform an unused building into a modern gynecology clinic, and to even build a second. He ordered the equipment necessary for the new clinic from Germany—which would unfortunately take four and a half years to reach Istanbul due to the outbreak of World War II, as the shipment could not pass through the Danube—and in an attempt to familiarize his students with the new location, he started holding his practice and demonstration lessons in a building nearby.

Liepmann was devoted to his unique field, and instilled in his students his viewpoints regarding the study. In his textbook, *Pratik Jinekoloji* (Practical Gynecology), he wrote that his field served the future. He was also very careful to teach his students the delicate care required for his field and cultivated in his students a strong bedside manner. He would eventually propose the concept of ‘Social Gynecology’ in Turkey, separating patients into various groups and advocating different approaches to their situations, from home care to clinic visits, taking the psychological factors surrounding women’s care and childbirth into account. He advocated, first and foremost, the education of women in the matter of health complications that might arise, and pointed towards education campaigns enacted in Germany as an example. Due to the width of his field, Liepmann had a variety of subjects to ponder. He was often found talking about the Turkish “population policy”, and was devoted to promoting higher birth rates while simultaneously keeping women healthy, which he rightfully insisted was necessary for war-torn Turkey (Namal A. F., 2008, p. 161). He analyzed the rate of caesarean section births in his clinic, and did not often recommend them. He tried to prevent unhealthy ‘backyard’ abortions, conducted studies on the nationwide prevalence of STDs, attempted to raise awareness about infertility, and suggested governmental aid laws for pregnant women laborers, which were common in a rapidly industrializing Turkey (Namal A. F., 2008, pp. 158-160).

After four years of hard work in modernizing gynecology in Turkey, Liepmann’s health began to fail. Blaming his exhaustion on rheumatism in his legs, Liepmann still came to his clinic to teach until his condition got so severe that he was paralyzed in both legs. He passed away on March 20, 1939, of a sarcoma in his spine, and was laid to rest in Istanbul. According to Namal, Liepmann’s sudden death put an end to his then in-progress denaturalization by the Nazi government, and he was mercifully prevented from having to witness the atrocities of the coming war (Namal A. F., 2008, p. 161).

Joseph Igersheimer (1879 Frankfurt – 1965 Boston) was a German-born ophthalmologist. Born in Frankfurt, he completed his primary and secondary education in his home city. Igersheimer’s interest in medicine was brought on by an episode of tuberculosis at a young age. He received his medical education in Heidelberg, Berlin, Strasbourg, and Tübingen, and received his degree in 1904. Moving up the academic ladder, he was an associate professor in the University of Heidelberg by 1909, a professor by 1914 and a professor ordinarius by 1920.

Igersheimer was renowned for his interest in how various diseases affected the eye—he developed this interest early in his life after noticing a white area in the eyes of tuberculosis patients while recuperating from his own bout of tuberculosis. Igersheimer wrote articles and books regarding the impact of tuberculosis and syphilis on the eye, was the first to use arsphenamine to treat the eye, and operate on retinal detachments; and he had accomplished all of these before becoming a full professor. As such, Igersheimer was set for a productive academic career (Namal & Reisman, 2007, p. 5).

The *Machtergreifung* in 1933 and the following issue of the *Berufsbeamtengesetz* put Igersheimer and his family at risk due to both his and his wife's Jewish descent. Realizing the danger, he looked for a place of refuge, while simultaneously attempting to find a place that would allow him to continue his scholarly crafts. Igersheimer found an opportunity through the *Notgemeinschaft*, and was extended an invitation to take over the clinic of ophthalmology at the Istanbul University Faculty of Medicine. According to Widmann, Schwartz considers Igersheimer, along with Liepmann and Nissen, to be the saviors of the attempt to modernize the university, which remained in peril due to a variety of politic and bureaucratic issues (Widmann, 1999, p. 141).

Igersheimer started his tenure at the Clinic of Ophthalmology on October 15, 1933, with a contract that extended until November 1938. In his second week, Igersheimer delivered his first lecture on “Blindness and its Causes” in German. As was the case with all other refugee professors, Igersheimer was also expected to deliver his lectures in Turkish by his third year.

The clinic of ophthalmology suffered from problems similar to those of other Istanbul clinics. Schwartz, while reporting on the state of the faculty and clinics, had previously mentioned that the clinics were in poor shape, neglected, and underequipped; in his own report to the Dean, Igersheimer concurred. The ophthalmology clinic lacked the proper tools for Igersheimer to work with, and the library was lacking in literature on the subject as well. To this end, Igersheimer brought his own books and tools from Germany, which he had previously left behind due to excessive customs costs (of around 7000 Reich marks) (Reisman, 2006, p. 185). He eventually paid the customs costs out of his own pocket, and donated the books and equipment to the faculty, on the condition that they be used by the students.

Igersheimer was quickly renowned in Turkey for the success of his operations. He operated on the ex-minister of Finance, Mustafa Abdülhalik Renda, and was later asked to examine and treat the Minister of Foreign Affairs, Tevfik Rüştü Aras. It would also be interesting to note

that even Fritz Neumark, in his memoirs, is thankful to Igersheimer: Neumark's son was diagnosed with a blindness-threatening cornea difficulty, and while Igersheimer had already left for the United States at the time, there were Turkish ophthalmologists he had already raised to take his place. Neumark's son was operated on by Naci Bengisu¹⁰⁸, who had learned the proper surgical method from Igersheimer, and according to Neumark, prevented his son from becoming blind (Neumark, 1982, p. 71). Igersheimer also conducted the world's first keratoplasty (cornea transplantation) procedure in Turkey. Blindness was an often met phenomenon in Turkey, and while there was demand for the procedure, there was the issue that some patients would shy away after learning that the procedure involved transplanting a piece from a dead eye. Thirty-four keratoplasties were applied during Igersheimer's stay in Turkey, which was far a smaller number than what Igersheimer would have wanted, but according to Bengisu, their options were limited due to a lack of fresh cadavers to obtain corneas from (Namal & Reisman, 2007, p. 9).

It should also be noted that Igersheimer was also the target of intrigue during his stay in Turkey. According to Arthur Robert von Hippel, upon his arrival, Igersheimer found himself embroiled in what could only be described as a tragicomedy. Hippel should be quoted fully for the full impact of the situation's absurdity:

“(Igersheimer) had initially found that his waiting room was always empty. At last he discovered that his predecessor had hired a beggar to sit in front of the office entrance to tell approaching prospective patients that they would be made blind. After this obstacle was removed, the hospital flourished and a few months later Igersheimer was asked to do a cataract operation on a minister of the Gazi (Atatürk). Just when the stage was set, however, Igersheimer's predecessor appeared and claimed that the minister would become blind. A Government committee was set up, hearings held and the claim that Igersheimer had never done a cataract operation before was refuted. The operation proceeded at last successfully but Igersheimer collapsed afterwards. A poisoning attempt by his predecessor had misfired. He recovered fast and again we could breathe a sigh of relief” (Hippel, 1988)

After the situation was dealt with, Igersheimer's popularity skyrocketed. Word spread that Igersheimer was a “miracle worker” and his clinic was soon flooded with patients from all

¹⁰⁸ Naci Bengisu (1901 – 1978) was a 1924 graduate of the Faculty of Medicine. He practiced at Gülhane Medical Academy, governmental medical offices at Beytüşşebap and Çölemerik, and Gureba Hospital. Bengisu was sent abroad to study in France, and received his habilitation in 1931. After his return, he was influential in the establishment of Siirt Hospital, becoming its chief physician and specializing in ophthalmology. In 1935, he was assigned to the clinic of ophthalmology at Istanbul University, where he became an associate professor two years later. After Igersheimer's departure, Bengisu inherited the directorship of the clinic, becoming a professor in 1942 and an ordinarius professor in 1952. Bengisu was among the *147'likler*, but like many others, returned to active teaching some years later, in his case, 1963. He retired in 1973. Bengisu is credited with around 150 publications in both national and international journals, the establishment of the journal *Autoneuroophthalmology*, books and conferences on ophthalmology (Kılıçlıoğlu, Araz, & Devrim, 1969).

over the country, with people practically camping in the front yard. Even so, despite his success (or perhaps *because* of his success), coworkerly envy continued to haunt Igersheimer. Politics soon became too embedded in his work, and an attitude towards refugee physicians as ‘unwanted guests’ gradually became prevalent in the Ministry of Health that the hospitals were tied to (Namal & Reisman, 2007, p. 14).

Towards the end of the 1930s, it became obvious that the efforts towards full-scale war in Central Europe were escalating. Nazi Germany’s oppressive influence was looming, and the Turkish government, for political, sentimental, and commercial reasons, was not severing communications. Another threat to the refugee scholars was the possibility of their contracts not being renewed. Also, in 1939 the Turkish government closed possibilities for family reunifications and disallowed entry permits to the *heimatlos*. With a daughter in England and a son incarcerated by the British as an enemy alien in Canada, Igersheimer felt that he was running out of options. While attending a conference in the United States, after the break-out of the war, Igersheimer wrote a letter to the Istanbul University rectorate, stating that he would not be returning, on the grounds that it was impossible for his family to reunite in Turkey (Reisman, 2006, p. 185).

Igersheimer spent the rest of his life in the United States, opening a practice and later taking a position at Tufts College. He remained grateful to Turkey throughout the rest of his life, and indirectly continued to contribute to Turkish ophthalmology by publishing his articles in Turkish medical journals. He died in Boston in 1965.

Karl Hellmann (1892 Würzburg – 1959 Haifa) was a German otolaryngologist. Born and based in Würzburg, Hellmann received all his education in his home city, including his medical degree, which he earned in 1920. Between the years of 1912 and 1919, he served in the German army as a medical officer. Specializing in the treatment of the ear, Hellmann was an ENT (Ear-Nose-Throat) doctor, and worked in the related clinic of the University of Munich from 1924 to 1928, being made chief of the clinic in 1928. In 1930, he returned to his hometown Würzburg, and continued to work at the University of Würzburg as the chief of its ENT clinic and a teaching professor (Reisman, 2006, pp. 182-183).

Hellmann was removed from his post at the University of Würzburg in 1935. He opened up a personal practice, and continued to work in Würzburg for a time, but came to the conclusion

that things were soon to get out of hand. Hellmann contacted the University of Istanbul, sending in his curriculum vitae and list of publications. The previous chief of the ENT clinic at the University of Istanbul, the non-refugee émigré Austrian professor Ruttin, had vacated his position because he was not able to earn enough support for the modernization of the University of Istanbul's ENT clinic, and had returned to Austria. Hellmann arrived in his place. He came to Istanbul in 1936 with his family.

Hellmann was more successful in modernizing the ENT clinic than Ruttin was. He managed to get the clinic moved to a newer building, caused a visible increase in the number of visiting patients, and even invented a new technique that allowed him to conduct laryngectomies in a much more efficient and timely manner (Widmann, 1999, p. 141).

Being in Turkey allowed Hellmann to save several of his family members from the Nazis. He managed to relocate a portion of his family into Turkey, including his brother Bruno, whom he had removed from the *Buchenwald* concentration camp.

Hellmann's contract was not renewed when it ended in 1943. According to Widmann, he also had troubles with his Turkish colleagues. Hellmann left Turkey for Palestine in the summer of 1943.

*Berta*¹⁰⁹ *Ottenstein* (1881 Nuremberg – 1956 Concord) was a German dermatologist. Born the youngest child of a merchant family, Ottenstein was educated at a girls' school and later studied science at the University of Erlangen, receiving a doctorate in chemistry in 1914. Following her graduation, she worked at a variety of institutions as an assistant; she was head assistant to the dermatology clinic at the University of Munich, an assistant at the Kaiser Wilhelm Institute of Biochemistry, and was also the department chief of colloid chemistry at the chemistry laboratory at the University of Jena. In 1928, she became an assistant at the University of Freiburg and worked under the renowned dermatologist Prof. Georg Alexander Rost. Rost's laboratory, focused on physiological chemistry, was managed by Ottenstein, a job which provided ample opportunity for her to conduct research. Around this time, Ottenstein was also studying medicine at the University of Munich, and earned her medical sciences degree. Ottenstein studied the relation between dermatological diseases and the metabolism, in particular syphilis. Following various research experiments on carbohydrates,

¹⁰⁹ Often spelled *Bertha* in Turkish literature.

lipid metabolisms, problems of acidity and basicity, and so on, Ottenstein received her habilitation in dermatology in 1931, with a thesis titled *Untersuchungen über den Gehalt der Haut und des Blutes an diastatischem Ferment und dessen biochemische Bedeutung bei Hautkrankheiten* (Studies on the Content of the Skin and Blood on Diastatic Ferments and its Biochemical Significance on Skin Diseases). Earning her habilitation meant that Ottenstein was recorded into the *venia legendi* of the University of Freiburg, and she also became the first woman to become a *dozent*, i.e. associate professor, of dermatology in Germany. Ottenstein lectured at the University of Freiburg until 1933. Üstün notes that Ottenstein laid out the foundation for dermatologic sweat bath therapy after researching the changes in blood and perspiration in sweat lodges (Üstün, 2012).

Following the *Machtergreifung*, Ottenstein was forced out of her position due to her Jewish heritage. Ottenstein left Germany immediately. Renowned in her field, she found an assistantship position at the dermatological clinic of the University of Budapest, and worked there from 1933 to 1935. An invitation to work at Istanbul University was extended to Ottenstein by Hulusi Behçet,¹¹⁰ and Ottenstein arrived in Istanbul to take over and direct the laboratory belonging to the Dermatology clinic of the University of Istanbul, which she did from 1935 to 1945, in addition to lecturing at the Faculty of Medicine. Ottenstein also worked at the laboratory of the Physiopathology Institute.

Ottenstein joined a variety of experimental research in both dermatology and physiopathology during her ten-year stay in Turkey, authoring at least fourteen publications. At the physiopathology laboratory, she worked with Refik Satı Eser¹¹¹ and Güzin Eser¹¹² on the etiology of pemphigus, the chemical structure of the skin, and the observation of dialysable

¹¹⁰ Hulusi Behçet (1889 – 1948) was a Turkish dermatologist. He is known in international medicine literature after the disease named after him, Behçet's Disease (Morbus Behçet), an immune-mediated systemic vasculitis. Behçet was the first person to ever earn the title of professor in Turkish academia. Born to an Ottoman official posted at Damascus, Behçet was educated first in Damascus and later studied medicine at *Gülhâne Seririyat Hastanesi* (Gülhane Teaching Hospital), graduating in 1910. Following his graduation, Behçet focused his research and practice on dermatology and sexually transmitted infections. He served during World War I in Edirne, as an expert on skin diseases. After the war, he went to Budapest, then to Berlin, to study further. Behçet was the author of 140 articles published in Turkey (51 of which were also published internationally), 17 translated articles, 2 books (*Frenge Dersleri* (Lectures on Syphilis) and *Klinikte ve Pratikte Frenge Teşhisi ve Benzeri Deri Hastalıkları* (Diagnosis of Syphilis in the Clinic and in Practice and Similar Skin Diseases)), as well as 12 monographs. Behçet's complete bibliography can be found in (Satar, 2009, pp. 113-127). Behçet was a pioneer of academic journalism in Turkey and was responsible for the publication of the journal *Turkish Archives of Dermatology and Syphilology*. The émigré scholar Philipp Schwarts is quoted to have spoken about Behçet, saying that he was “a scientist who was known everywhere except his own country”, as “you could never find him in Turkey because he was always abroad presenting his findings,” (Bang, Lee, & Sohn, 2001, p. 2004).

¹¹¹ Refik Satı Eser (? – 2010) was a Turkish professor of internal medicine. He lectured at Istanbul University.

¹¹² Güzin Eser (1914 – 2015) was a Turkish doctor. Refik Satı Eser and Güzin Eser were married.

and non-dialysable calcium in the blood (Efe, 1996/1997). At the dermatology clinic, Ottenstein worked with Hulusi Behçet and became a close coworker of the Turkish dermatologist Cevat Kerim İncedayı. Together with İncedayı, Ottenstein conducted research on the subject of carbohydrates, lipoids, and mineral metabolisms in psoriasis. *Deri Hastalıklarında Metabolizma Bozuklukları* (Metabolism Disorders of Skin Diseases), published in Turkish and German, was a joint effort by Ottenstein and İncedayı, as was *Dermatolojide Diyet Tedavisi* (Diet Treatments in Dermatology), and thirteen additional publications for journals and books (Üstün, 2012, pp. 31-32). In addition to her work at the clinic and the university, Ottenstein was also a member of the Cancer Research Institute directed by Siegfried Oberndorfer.

In 1945, Ottenstein began to receive invitations from her old coworkers and mentors to come work in the United States. Settled and accustomed to working in Turkey, Ottenstein did not accept the offers immediately, but later took a position as a research fellow at Harvard University. She moved to the United States later in the same year, she began to work at the New England Medical Center. Ottenstein received her professorship from Harvard University later in her career. She received American citizenship in 1951, and in the same year, was made an honorary professor at the University of Freiburg as part of the compensation movement. Ottenstein maintained contact with her colleague İncedayı, and the two continued to exchange ideas on the subject of dermatology until her death. When Ottenstein died of a sudden heart attack in 1956, İncedayı compiled her life story and bibliography to publish in the Istanbul University Journal of the Faculty of Medicine, lamenting her loss and the exchange of her sound, reliable scientific ideas.

3.2.1.3 Dentistry and Pharmacy

The University of Istanbul also included a Faculty of Dentistry and a Faculty of Pharmacy. The Faculty of Dentistry was situated in the Beyazıt Square and was considered an extension of the Faculty of Medicine. The Faculty of Pharmacy, on the other hand, from 1933 until 1944 was under the Faculty of Sciences and Letters.

The Faculty of Dentistry included the émigré refugee Alfred Kantorowicz in its roster. The Faculty of Pharmacy employed the foreign professors Leopold Rosenthaler, Kurt Bodendorf,

and the French Pierre Duquénois, however, they were not refugees, and for reasons previously presented will not be examined here.¹¹³

Alfred Kantorowicz (1880 Posen – 1962 Bonn) was a German dental surgeon. He received his dentistry degree in 1900, and worked in the Koch and Virchow institutes in Berlin before setting out to receive a degree in medicine from the universities of Munich and Freiburg, which he accomplished by 1906. Later, he worked at the University of Bonn, and was awarded a full professorship in dentistry by 1923. Prior to his forced emigration, Kantorowicz was a leading name in his field in Germany, particularly renowned for his development of the ‘Bonn Model’, which revolved around the application of public health dentistry, especially pediatric dentistry. He had developed programs for children’s awareness for dental hygiene with a preventive focus, suggested that school dentists perform routine check-ups and treatment for school students, and established mobile clinics for dental medicine. He was widely respected for his efforts in pre-Nazi Germany, especially by his fellow dental surgeon experts (Reisman, 2006, p. 186).

Despite his success in the field, his innovative personality, and contributions to German society, Kantorowicz was the very model of an undesirable as far as the Nazi government was concerned. On top of being politically opposed to the Nazi party as a deputy representative of the Social Democrat Party in Bonn’s town council, and often being vocal in his opposition to the NSDAP, he was also Jewish. This resulted in his immediate arrest after the *Machtergreifung* in 1933.

Taken into alleged ‘protective custody’, Kantorowicz remained in a prison in Bonn for four months. He was also sent to concentration camps, and actually saw two during this period. At first, he was sent to the Börgermoor concentration camp, where he was put in a peculiar position in the infirmary, medically advising two untrained SS men who were acting as camp doctors. Kantorowicz’s indirect duty was to examine prisoners to see whether or not they were fit for work, and according to Wünschmann, he often incurred the wrath of his fellow prisoners for not attesting that the prisoners he examined were indeed incapable of work (Wünschmann, 2015, pp. 89-90). Under the watchful eye of the Gestapo, SA, and SS, which

¹¹³ A note by Konuk informs that Kurt Bodendorf, who arrived in Turkey in 1935 and directed the Pharmaceutical Chemistry Institute of the Pharmacy School until 1939, was sent by the Nazi German Ministry of Science and Education to teach at Istanbul University as well as gather information about the activities and teachings of the refugee scholars (Konuk, 2010, p. 246).

were in command of the camp, doing so would have likely put Kantorowicz under considerable risk. Regardless, this duty caused him to take a relatively isolated position among the prisoners, and he eventually lost this ‘job’, and was sent to the peat bog for work. He was later relocated to the Lichtenburg concentration camp, which was full of known socialists, intellectuals, and Jews.

Kantorowicz was later extradited from the concentration camp. There are several accounts on how this was accomplished. According to the testimony of Hans Reichenbach, a fellow refugee scholar, Kantorowicz was freed due to the pressure from prominent authorities in Scandinavian countries. However, as Reisman points out, this hardly seems the only factor in Kantorowicz’ extradition (Reisman, 2006, p. 198). A letter written by Philipp Schwartz to the European Bureau of the Rockefeller Foundation cites a (rather personal) request to Lauder W. Jones to ask Nazi German officials to have Kantorowicz removed from the concentration camp. The letter includes Schwartz’s words speaking of an already signed contract between Kantorowicz and the Turkish government for a position in the Faculty of Dentistry, and that the Turkish government can aid the foundation in the task of freeing Kantorowicz. While the exact situation seems unclear, either way it led to the same result: Kantorowicz being extradited from concentration camp and arriving in Istanbul in 1933.

At the University of Istanbul, Kantorowicz took a leading position in the development of the Faculty of Dentistry. He initially worked as a professor of dental prosthetics, later became the director of the courses given by the Faculty of Dentistry, and was instrumental in modernizing the education of dentistry in Turkey. Before Kantorowicz’s changes to the program, dentistry in Turkey was a three-year, post high school program that was based on the French educational model. Kantorowicz increased the program’s duration to four years, separated dental surgery from general dental practice, included lectures and surgery practices on facial aesthetics (such as cleft palates and palatial surgery) from the Faculty of Medicine in the curriculum of the Faculty of Dentistry as well as general orthodontics. According to Reisman, Kantorowicz was attempting to create a department to match its American counterparts, and was highly successful in doing so (Reisman, 2006, p. 199). He published several books on dental medicine in Turkey, which were translated into Turkish by his students and assistants

Pertev Ata¹¹⁴ and Lem'i Belger¹¹⁵, such as *Diştabebeti İmtihanı İçin Repetitorium* (Repetitorium for the Test of Expertise in Dentistry).

According to Neumark, Kantorowicz was also among the first to discover Uludağ as a location for skiing (Neumark, 1982, p. 72). Uludağ became a favorable pastime for the group of refugee scholars and eventually led to the popularization of the area as a resort destination.

Kantorowicz worked in Turkey from 1933 to 1948, retiring at 58 years of age. In 1950, he returned to Germany, where he took a position in the University of Bonn and continued his research on dentistry and resumed campaigning for preventive, awareness raising practices.

3.2.2 Medicine in Ankara

In addition to Istanbul, refugee scholars of medicine were also employed in Ankara, the new capital of the Turkish Republic. While Ankara largely lacked a university or a Faculty of Medicine until the establishment of Ankara University in 1945, there still existed a number of medical institutions in Ankara that were under the direct control of the Ministry of Health. These institutions were the *Numune Hastanesi* (Numune Hospital), *Gülhane Askeri Tıp Akademisi* (Gülhane Military Academy of Medicine), and the government-owned *Hıfzısıhha Enstitüsü* (Public Hygiene Institute). Excluding the military academy, the Numune hospital and the Institute employed a number of refugee scholars.

3.2.2.1 Numune Hospital

Eduard Melchior (1883 Dortmund – 1974 Switzerland) was a German surgeon. Not much is known of his life prior to the emigration. Melchior was a teaching professor and chief surgeon at the Wenzel-Hancke hospital in Breslau, and came under duress after the *Machtergreifung* due to his 'not being of the Aryan race' (Widmann, 1999, p. 248).

Melchior was removed from his post at the Wenzel-Hancke hospital in 1935. In 1936, he took up an offer from Ankara Numune Hospital to direct the Department of Surgery. After the establishment of Ankara University in 1945, Melchior was legally transferred to the Ankara University Faculty of Medicine, where he founded the 2nd Surgical Clinic (with the 1st Surgical Clinic founded by Turkish colleague Kamil Sokullu). Melchior worked at the Ankara

¹¹⁴ Pertev Ata (? - ?) was the first dentistry practitioner in Turkey to receive a medical degree from the Faculty of Medicine. Following Kantorowicz's departure, he was the director to the School of Dentistry. When the Faculty of Dentistry was established, Ata became a teaching professor there, and served as its dean from 1955 to 1957.

¹¹⁵ Lem'i Belger (? - ?) was a Turkish dentist. He also had a doctoral degree in medicine.

University Faculty of Medicine as a teaching professor from 1946 to 1954. He learned Turkish quickly, and carried out his lectures in Turkish. Through his stay in Turkey, Melchior earned the admiration of many of his students, and was responsible for the training of several generations of Ankara-based Turkish surgeons.

One of Melchior's students, Nezihe Yener¹¹⁶, has written an extensive biography of Melchior, commended his efforts for the development of surgery in Turkey, and listed his academic work and publications (Yener, 1961, pp. 14-16). In her article, she commends Melchior's skill in medical diagnosis, his scientific courage in surgical applications, and unflinching neatness, considering him a perfect role model as a surgeon.

Melchior retired in 1954 when his contract was not extended by the Turkish government. He moved to Germany and settled in Jugenheim, and later moved to Switzerland in 1966. He passed away peacefully in 1974.

Albert Eckstein (1891 Ulm – 1950 Hamburg) was a German pediatrician. Born and raised in Ulm, he studied medicine in Freiburg. Much like many other German medical students of his generation, he was called in to serve Germany as a medical officer in World War I, pausing his education. For his service, Eckstein was awarded the German medal of honor, the *eisernes Kreuz* (Iron Cross), after the war. Upon his return to academia, Eckstein worked at the Physiology Institute of the University of Freiburg. In 1920, he moved to the University Hospital for Children and worked under the renowned pediatrician Carl T. Noeggerath. In 1923, he became a senior lecturer. He moved to the Children's Hospital at the Academy of the University of Düsseldorf in 1925, and earned his professorship in 1926. He married another pediatrician, Erna Schlossmann, daughter of the renowned pediatrician Arthur Schlossmann, and took over Arthur's position as the Chief of the Department of Pediatrics in the University of Düsseldorf after his death (Reisman, 2006, p. 171).

Despite being Jewish, having a Jewish family, and working at a senior position in a government institution, Eckstein did not immediately incur the wrath of the Nazi Party. He was overlooked during the first wave of expulsions from German universities as per the Nazi *Berufsbeamtengesetz*; the *eisernes Kreuz* he had earned in World War I had rendered him

¹¹⁶ Nezihe Yener (? - ?) was an operator doctor of surgery working under Eduard Melchior. She was the chief to the external surgery department.

difficult to go after as the law had an article considering veterans exempt from immediate dismissal. His persecution was delayed, but only for so long. In 1935, a letter delivered to Eckstein's Düsseldorf clinic, labeled 'personal', read: "in the name of the Reich, I relieve you of your duties in service of the Prussian Government by June 1935 based on the orders dated 12 June 1935." It was signed, "Adolf Hitler, Hermann Goring". Eckstein had lost his job (Moll, 1995).

Through the communications of the *Notgemeinschaft*, and Philipp Schwartz's suggestions to the Turkish government, Eckstein received an offer to work at the Ankara Numune Hospital. Though he had also received two other offers, to work in the UK and the USA, the Ecksteins considered Turkey to be the safer, more certain option, and accepted the offer.¹¹⁷

The Eckstein family arrived in Ankara in 1935. The day following their arrival, the Ecksteins visited the Turkish minister of Health and Social Services, Refik Saydam. According to Reisman, at some point during the conversation, Albert Eckstein set aside his written contract and asked what Saydam, and Turkey, expected of him. Saydam's response was telling:

"I (also) want you to prepare a report on child health and diseases in Turkey. Your report will allow my ministry to determine our future policies for children's health. We believe that the government's foremost duty is to provide an environment where our children can grow up healthy... though frankly, I would like you to not write your report with a German point of view. An approach that would be suitable for Germany may not be suitable for our country. Nevertheless—go visit Anatolia, study it, and come to me with your suggestions" (Akar, 2008, pp. 39-40) (Translation mine.)¹¹⁸

The Ecksteins set to work. Albert Eckstein, together with his new Turkish assistant Selahattin Tekand, set out on his first research journey in July 1937. They traveled to thirteen different provinces in middle and southern Anatolia, with the intent of examining Turkish people's health in rural areas. Their report subjects were children's health and mortality rates, as well as women's health and fertility rates. According to Reisman, Eckstein's first journey was the

¹¹⁷ For the purposes of the deliberation on Albert Eckstein, Erna Eckstein's situation needs to be clarified. Despite being a capable pediatrician in her own right, Erna Eckstein was not officially employed by the Turkish government as an émigré scholar. Invitations to work in Turkey were largely made only towards scholars in academic positions, and Albert Eckstein fit the bill as he had previously held a professorship at the University of Düsseldorf. Non-academics, such as Erna Eckstein, were not legally allowed to practice their profession in Turkey, as she was considered a 'foreign doctor' as opposed to 'foreign academic'. Even so, Erna Eckstein aided her husband in his research, and followed him on his trips throughout Turkey, helping cure sick children and writing much-needed reports on the state of children's health, and as such, was instrumental to her husband's success. Hence, it is proper in most cases to refer to Albert Eckstein and Erna Eckstein as a team, i.e. as 'the Ecksteins'.

¹¹⁸ Nejat Akar has penned an extensive biography of Albert Eckstein and his work in Turkey: (Akar, 2008)

first attempt to determine the health and demographic statistics of a large part of the Turkish population—which, in 1937, was at least 90% rural (Reisman, 2006, p. 173).

Albert and Erna Eckstein delivered their first report on the health of the Turkish rural populace later in 1937. Their report included the topics “Obtained Results, The Consumption of Fish, The Nutrition Situation, Battle with Trachoma and Diarrhea, Skin Diseases, Women’s Fertility and Infant Mortality, Child Mortality Rate, Villages and Poor Classes in Ankara.”¹¹⁹

Satisfied with the Ecksteins’ first report, the Ministry of Health and Social Services next tasked the pediatrician family to report on the inland regions of Isparta, Burdur, Antalya, Denizli, Muğla, Aydın, İzmir, Manisa, Balıkesir, Bursa, Kocaeli, and Bolu. Albert Eckstein was again joined by his wife Erna in this voyage, with Tekand in tow. The next report delivered by the Ecksteins included topics such as the number of people in a household, female and male population percentages, the incidence of malaria or intestinal diseases, the availability of water resources and the presence of schools in the regions. Tekand, as a firsthand witness of the Ecksteins’ hard work, remembers Albert Eckstein fondly and comments on his extracurricular activities:¹²⁰

“(Eckstein) would adapt quickly, even to the most difficult situations. He’d warm up to the villagers immediately, joke with them, eat their food. He never refused to go anywhere. When we reached Afyon, he immediately reached for his camera, and we climbed up the Afyon hill... he took photos. He took hundreds of photos. The German Archeology Institute in Istanbul has them now. One of them, that he took in the village of Bümük in Bolu, was printed on the 10 lira bill. It was the first picture of a woman to ever appear on Turkish money. Another photo he took was displayed in the 1939 World Fair in New York, in the Turkish pavilion” (Reisman, 2006, p. 176) (Translation mine.)

Behçet Tahsin Kamay, a previous student of Eckstein, also offers a fond remembrance:¹²¹

“He visited the deepest corners of Anatolia, walked every step in the country. He’d go to villages and meet up with villagers, visit them in their homes. He was a doctor of the people, a friend of the Turks; everywhere he visited, he’d eat the food served by the villagers, drink the ayran they gave him, and learn about their health situation, their communal problems. He was brave enough to teach each and every one of his students, his university community, the municipality and government officers how to

¹¹⁹ Sections of the Ecksteins’ report available in Akar, op. cit.

¹²⁰ Selahattin Tekand (? - ?) was a pediatrician most known for his practice and work with Albert Eckstein. He did not advance his academic career, perhaps due to the intensity of his practice throughout Anatolia.

¹²¹ Behçet Tahsin Kamay (? - ?) was a forensic professor and scientist. He was assigned to the directorship of Forensic Medicine at Ankara University Faculty of Medicine when it was first established in 1945. His 723-page tome on forensic medicine, in two volumes as *Adli Tıp* have been republished several times, and has been the foundation of many Turkish forensic specialists.

treat the diseases he discovered, with his writing, lectures, and conferences” (Bahadır, 2008).

During their travels in Anatolia, the Ecksteins also met a young doctor by the name of İhsan Doğramacı.¹²² According to Reisman, it was the Ecksteins who set Doğramacı on the path of academics and a specialization in pediatrics. Doğramacı recalls Eckstein’s words to him:

“If you would like, come with us to the villages. I would appreciate if you would assist us in our research. Becoming a pediatrician might be of interest to you. Turkey needs young, dynamic pediatricians like yourself. One in three infants die in their first year, and it is possible to prevent these deaths with basic precautions. We need educated people to distribute these precautions around Anatolia,” (Reisman, 2006, pp. 177-178) (Translation mine.)

The Ecksteins remained in Turkey for 15 years, and nurtured a generation of Turkish pediatricians. In addition to Tekand, Doğramacı and Kamay, in Ankara Numune Hospital, Albert Eckstein was also assisted by Bahtiyar Demirağ¹²³ and Sabiha Özgür (nee Cura).¹²⁴ Demirağ would take over Eckstein’s role in Ankara Numune Hospital after his departure.

¹²²İhsan Doğramacı (1915 – 2010) was a renowned Turkish pediatrician, entrepreneur, philanthropist, educationalist and college administrator. The son of the Ottoman mayor of Erbil and later senator from Baghdad, Doğramacızade Ali Pasha, and grandson to the Kirkuk Ottoman parliamentary member Mehmet Ali Kırdar, İhsan Doğramacı was brought up in Erbil, studied in the International College of Beirut American University, and earned a medicine degree through study in the University of Baghdad and later the University of Istanbul. He worked at Ankara Numune Hospital in Turkey, and later moved to the United States where he worked at the Boston Children’s Hospital (Harvard University) and St. Louis Children’s Hospital (Washington University). Upon his return to Turkey, he earned an associate professorship at Ankara University in 1949, and a professorship in 1954. In 1953, he established Hacettepe Children’s Hospital, as well as Hacettepe Children’s Institute, which would later be transformed into Hacettepe University. In his academic career, he was rector to Ankara University and the founding rector to Hacettepe University, a member of the Middle East Technical University (METU) Board of Trustees, and founder to Bilkent University. As an educationalist, Doğramacı was a board member of the Club of the Rectors of Europe (CRE) and the International Conference on Higher Education (ICHE). He was also chairman of the UNICEF executive board, executive director and president of the International Pediatric Association, and the first president and chairman of the Board of Trustees in the World Health Organization (WHO). In Turkey, Doğramacı was also the founding president of the Council of Higher Education in Turkey after the military coup of 1980, which gained him considerable notoriety. Doğramacı has been the recipient of a total 27 national and international awards, prizes and decorations (Bilkent University, 2010).

¹²³ Bahtiyar Demirağ (? – 1981) was a Turkish pediatrician. Given an associate professorship in pediatrics at Ankara University Faculty of Medicine in 1941, he inherited the position of director of the pediatrics clinic following Eckstein’s departure in 1949. He became a professor in 1951, and held his position until his death in 1981. He is credited with the establishment of an independent pediatrics clinic in Cebeci.

¹²⁴ Sabiha Cura/Özgür (1922 – 2011) was a 1945 graduate of the Istanbul University Faculty of Medicine. She became an assistant at the pediatrics clinic in Ankara in 1946, where she studied and practiced under the tutelage of Albert Eckstein, and received her doctorate in 1949, moving on to become an associate professor in 1952. In 1953, she went abroad to France, where she studied social pediatry and nutrition. After her return, Cura was transferred to İzmir in 1957, where she established Ege University’s pediatrics clinic and also became the university’s chair of Child Health and Disease. By 1958, she was a professor. Cura’s contributions to Turkish medicine extended not only to pediatry but also nutrition and nursing. She obtained an additional specialty in nutrition in 1974, and directed Ege University’s Nursing School from 1974 to 1976. In 1986, she established the İzmir branch of the Turkish National Pediatrics Association, and was also the leader of the Association from 1990 to 1992. She retired in 1989 after receiving a TÜBİTAK service award. (Sosyal Pediatri (Social Pediatrics), 2016)

Tekand would establish the İzmir Children's Hospital, Doğramacı the Hacettepe Children's Hospital, and Cura the Pediatrics Service of Ege University.

Additionally, Eckstein's publications were of massive importance in the development of Turkish pediatrics. His "Çocuk Sağlığı Ders Kitabı" (Textbook of Pediatrics) was published directly by the Turkish Ministry of Health and distributed widely to children's doctors throughout Anatolia. In 1938, Eckstein held the first Turkish Pediatrics Congress in Ankara. Two pediatrics reports Eckstein presented during the congress, such as *Türkiye'de Nüfus Siyaseti* (Population Policy in Turkey) and *Normal Türk Meme Çocukları* (Normal Breastfed Turkish Infants) were later published as books (Eckstein, 1939) (Eckstein, 1947). During his time in Turkey, Albert Eckstein accumulated 28 international publications, 8 articles in Turkish, and 4 other series of articles for popular consumption (Akar, 2008, pp. 201-204).

Eckstein delivered his lectures in Turkish, his field work making it absolutely necessary to keep a firm grasp on the language.¹²⁵

In Anatolia, Eckstein was directly responsible for putting an end to the oro-facial gangrene disease *noma* (cancrum oris), which was prevalent in undernourished young children in all provinces of Turkey, especially the east.¹²⁶ Reisman comments that the disappearance of the disease, which was achieved through hygiene, nourishment and proper antibiotics, must have seemed to the illiterate poor populace as some sort of miracle (Reisman, 2006, p. 179). Another topic of Eckstein's research was malaria in children. An edict he distributed on the topic of malaria was effective in increasing awareness about the disease.

Eckstein was a proponent of preventive medicine, a mentality he instilled in his students in the Ankara Faculty of Medicine. According to Reisman, his observations about breastfed infants are reminiscent of the modern suggestions towards breastfeeding, as opposed to the previous decades' advocacy of formula feeding.

Eckstein intended for the establishment of a children's hospital in Ankara, and would insist on it in his publications, in his given seminars, and to his students: a children's hospital with '300 beds'. His proposed project to build one was delayed due to the outbreak of World War II, and after the end of the war, a budget of two million Turkish liras was set aside for it.

¹²⁵ According to Sabiha Özgür, Eckstein had the habit of ending all his lectures with the phrase "Ben eski tavşan," (Me, the old rabbit) which is probably a reference to the children's tale *The Tale of Peter Rabbit*... an inside joke among pediatricians, perhaps.

¹²⁶ Noma is currently only prevalent in the poorest countries of Africa, as well as poor regions of Asia and South America.

However, the project was cancelled, so much to Eckstein's disappointment and outrage that he decided to leave Turkey (despite the fact that he had repeatedly turned down offers from the Universities of Giessen, Leipzig, Freiburg, Würzburg and Münster prior to the cancellation of the project). A lengthy letter Eckstein sent to the dean of the Faculty of Medicine expresses his disappointment on the matter, and urges the dean to make his best efforts to find the resources for the much needed project.¹²⁷ As if to rub salt in the wound, before his departure, Eckstein chanced to reside over the associate professorship jury of an Istanbul Technical University architect, Ali Kızıltan, whose project entailed the architectural design of the very same hospital building Eckstein had wanted built.

The Eckstein family returned to Germany in 1949, with Albert Eckstein taking up the offer of a professorship in the Pediatrics department of Hamburg University's Faculty of Medicine. After his departure, he received a letter from the Students' Association of the Ankara University Faculty of Medicine that expressed the students' enormous gratitude for his efforts in Turkey and decreed him to be the Second Honorary Member of the community's Honor List. Eckstein fell ill shortly after his return to Germany. He passed away in June 18, 1950 of a sudden heart attack. His wish to establish a children's hospital in Ankara was granted posthumously by his student İhsan Doğramacı, who built the Hacettepe Children's Hospital later that year, staying true even to Eckstein's specific numbers of '300 beds'.

Alfred Marchionini (1899 Königsberg – 1965 Munich) was a German dermatologist of East Prussian origin. He studied medicine in the universities of Königsberg, Leipzig, and Freiburg am Breisgau. Drafted into serving in World War I as a sanitation officer, Marchionini was sent to the Balkans. After the war, he received his doctorate from the University of Freiburg in 1922, and went on to work at the universities of Freiburg, Leipzig, Heidelberg and Kiel, where he became famous for directing a physiochemical research project that later became the foundation of the discovery of the 'acid mantle' on the surface of human skin. Marchionini's research was applauded for combining the disciplines of biochemistry, physical chemistry, and physiology in functional dermatology. His later research also recorded influences of other sciences such as climatology and anthropology in dermatology. Marchionini became known for his research into specific dermatologic issues such as atopic eczemas, skin diseases triggered by lupus, serological functions, the effects of cosmetics and proper personal care

¹²⁷ A full transcript of Eckstein's letter to the dean can be found in Akar, 2008, pp. 166-170.

(Scholz & Burgdorf, 2005). He earned the title of professor in 1934, and was working at the University of Freiburg am Breisgau until his departure.

After the *Machtergreifung*, Marchionini became a target of increasing political pressure for a number of reasons. He was a member of the *Sozialdemokratische Partei Deutschlands* (SPD), though he could not be legally dismissed. However, Marchionini's wife Mathilde, who was a neurologist, had been forced to close her practice due to having a half-Jewish father. Feeling the political pressure mounting, the Marchionini family saw an invitation by the Turkish government as an opportunity to get out of the country. They emigrated to Ankara in March 1938.

Initially signing a 3-year contract, Marchionini took over the dermatology department, which was considered to be 'very small and not even the slightest bit modern'. According to the testimony of Richard Richter, a succeeding head of the dermatology department after Marchionini's departure, Marchionini was successful in developing the aforementioned small department using little other than friendly cooperation with colleagues in other departments. Given command of what was little more than a simple clinic, Marchionini was particularly successful at getting the department accepted by the Turkish community, as evidenced by a yearly increase of 24,000 patient admissions from locals who were typically conservative, suspicious of innovation, and often prejudicial, according to Richter (Richter, 1954, p. 518). Marchionini's ability to conduct deep academic research despite not having a laboratory of his own was also commended. Marchionini continued to produce academic publications during his stay in Ankara. His work included research on the climatophysiology and pathology of the skin, depictions of skin diseases, and new treatments for dermatological complications in subtropical temperatures (Widmann, 1999, p. 251). When the University of Ankara was established in 1946, Marchionini took on the title of the first professor and head of the dermatology department in the Faculty of Medicine. Marchionini's Turkish students and colleagues included Lütfi Tat, who took over his position as the head of the department of dermatology at the University of Ankara after Marchionini's and later Richter's return to Germany. The Turkish dermatologists Şadan Talat Ural and Kemal Turgut were also among Marchionini's students, but were not directly employed in academia.

According to Şen, in addition to his clinical duties, Marchionini spent a substantial amount of effort trying to help the refugee community in Turkey and those still in Germany. Marchionini was in close contact with the German embassy in Turkey because he was the employed doctor

for most of the personnel working there, and ambassador Franz von Papen became one of Marchionini's patients as well when he arrived. Marchionini used his proximity to the embassy to gather information about how the war was progressing and divulged this information to fellow refugees. He also attempted to save scholars who were still in Germany, such as the ancient languages philologue Franz Kranz, by getting him a position in Turkey, though he ultimately failed in this endeavor. Marchionini asked Franz von Papen's favor for help, and eventually, the Nazi party members at the embassy realized—with great anger—that Marchionini was not 'one of them' despite the fact that he was a 'pure-blooded Aryan'. The Nazis turned on Marchionini, demanding that he be denaturalized on the grounds that he had "always acted liberally and extended his contract with Turkey intentionally... eventually he would not even greet Germans anymore, and only spoke Turkish," (Şen F. , 2008, pp. 194-195).

Marchionini was denaturalized in 1944, which was announced on the radio. According to Şen, the Marchionini couple tried to keep as many refugee scholars as possible in Turkey, even if it meant that they would be interned; a rumor that it would be necessary to obtain Turkish citizenship to remain free outraged Marchionini to the point that he chose to be interned in Kırşehir (Şen F. , 2008, p. 195). Nevertheless, he was not—the Turkish government's need for medical experts resulted in Marchionini being considered an exception. After the war, Marchionini received an invitation from the University of Hamburg in 1948, and he returned to Germany within the year. He testified in the Nuremberg trials in favor of his patient Franz von Papen, and claimed that he had prevented Jews from being sent to concentration camps. Fellow refugee Ernst Reuter, however, contested this mindset, and argued that Marchionini's close working relationship with von Papen clouded his judgment and that Marchionini "failed to draw a difference between von Papen's political purpose and his amiable personality," (Möckelmann, 2013, p. 154). German foreign affairs archives prove that Marchionini had, indeed, been objectively wrong (Şen F. , 2008, p. 195). Later in his life in Germany, Marchionini worked at the University of Munich, and was elected rector in 1954. He passed away peacefully in 1965.

August Laqueur (1875 Strasbourg – 1954 Ankara) was a German physiotherapist. Laqueur was born in Strasbourg in Alsace, France, to a Jewish family, though he had later converted to Protestantism. While not much is known about him, Laqueur's history includes his work as an

assistant of hydrotherapy in Berlin University and his employment as a doctor at the Rudolf Virchow Hospital in Berlin from 1906 through 1933 (Şen F. , 2008, p. 186).

Laqueur lost his job at the German hospital for antisemitic reasons in 1935. Around the same time, his name was suggested to the Turkish government, and an invitation was sent for him for a position in Ankara, which he accepted. August Laqueur was employed in the hospital in Ankara from 1935 until 1945, working as the director of the department of physiotherapy. It should be noted that upon his arrival in Ankara, Laqueur was already over 60 years old. He eventually retired from the hospital, some time before the establishment of the Ankara University Faculty of Medicine.

After the war, as a retiree at an old age, and with his family already rooted in Ankara, Laqueur did not choose to return to Germany. His son, Kurt Laqueur, was employed in the Istanbul School of Foreign Languages from 1946-1952. August remained in Ankara until his death in 1954.

Max Meyer (1890 Berlin – 1954 Würzburg) was a German otolaryngologist. Born as the son of a known ear doctor, Meyer studied medicine at the Kaiser Wilhelm University of Strasbourg and the Ruprecht Karl University of Heidelberg. His medical education was temporarily interrupted as he was drafted into serving in World War I, and worked as a battalion doctor in a Jäger unit for three years, during which he was wounded twice. After the war, he resumed his medical training in otolaryngology. He earned a *Privatdozent* title in Würzburg University, initially teaching independently as a habilitated academic without holding an official professorship chair. He was later officially given a professorship, and was a professor extraordinarius by 1927, well renowned as both an operator and a scholar.

Meyer was ousted from his teaching position at the University of Würzburg in December 1935 due to his Jewish descent. As with many other refugees, the fact that Meyer had converted to Protestantism did not help. Meyer was invited to work in Ankara at the Numune Hospital through the suggestion of Albert Eckstein. At the hospital, Meyer worked as an otolaryngology specialist in Ankara for around five years. According to Widmann, he was notable for his unflinching German nationalism despite his Jewish heritage and experience with the Nazi regime (Widmann, 1999, p. 252).

Meyer was offered a professorship of otolaryngology by the University of Tehran and left Turkey in 1939. He remained there until 1947 and returned to Germany after the war, where he chose his home, the University of Würzburg, out of four different professorship positions that were offered to him. He died in a car accident in Würzburg in 1954.

Ernst Magnus-Alsleben (1879 ? – 1935) was a German internist. Unfortunately, not much is known about him except that his institution of origin was Würzburg University, like Max Meyer. At Würzburg, Magnus-Alsleben was a full professor and lecturer of internal medicine. He later lost his position at Würzburg University due to ‘problems with his heritage’.

Magnus-Alsleben was invited to work at Ankara Numune Hospital and did so for a very short while between 1935 and 1936. According to Widmann, Magnus-Alsleben could hardly withstand the injustice done to him by the Nazi regime in Germany. He suffered complications with his health, possibly brought on by his severe depression, and passed away in 1936 (Widmann, 1999, p. 252).

3.2.2.2 Hıfızışhha Enstitüsü (Institute of Public Hygiene)

Paul Pulewka (1896 Elbing – 1989 Tübingen) was a German-speaking pharmacologist of East Prussian origin. After his gymnasium education, Pulewka was drafted into serving in World War I as an infantryman and later as a medical orderly. After the war, he studied at the University of Munich and graduated from the Prussian Faculty of Medicine in Königsberg (Kaliningrad) in 1923, and earned a doctorate on pharmacology and toxicology at the same university in 1927. Pulewka’s academic career continued as an assistant professor at the University of Tübingen starting from 1929. He became a professor extraordinarius in May 1933, with his academic expertise in toxicology of poisonous gases. Pulewka was eventually elected a senate member at the University of Tübingen (Reisman, 2006, p. 240).

Pulewka soon became aware of the rapidly changing political climate in Germany. Pulewka’s wife, the pediatrician Käte Fürst, was of Jewish descent, and Pulewka himself was considered ‘politically unreliable’. Pulewka gave an example of his ‘unreliability’ in one of his lectures: Pulewka criticized a statement given by the Nazi party as to how ‘the German people would only ever be healed by German herbalistic drugs, and that synthetic drugs were all invented by Jews to poison the German people’ (Pulewka, 1980). It is unclear whether Pulewka

resigned from his position at the University of Tubingen as a pharmacology professor or was forcibly removed, but the end result was that the Pulewka family found their way to Turkey in 1935, through the intervention of an anti-Nazi official in the German Embassy in Turkey.

Pulewka was initially employed by the *Hıfzısıhha Enstitüsü* in Ankara. When his contract was not renewed in 1940, Pulewka remained unemployed for a while, but became the director of the Ankara University Institute of Hygiene when it was established in 1946. Pulewka was the founder of the Refik Saydam Hıfzısıhha Institute and the Department of Pharmacology in Ankara University. Additionally, he led the *Materia Medica* Institute, and was a member of the Turkish Codification Commission.

According to Reisman, the best quality of Pulewka's pharmacological research was that it was applicable to local and national problems encountered in Turkey. One subject of his research was the toxic quality of a particular honey consumed by locals in the Black Sea region. Poisonings due to the consumption of honey occurred regularly in the region, and a widespread belief among the local villagers was that the honey made by bees who fed on yellow azaleas (*rhododendron luteum*) was poisonous, leading that honey to be called *deli bal* (crazy honey). Samples sent to Pulewka's laboratory at the University of Ankara proved that the toxic quality of the honey was not merely caused by the andromedotoxins found in the flower, but also other materials which had been considered non-toxic until Pulewka's research. Pulewka's tests identified the exact amount of toxins present in the honey, and Pulewka suggested that the honey be mixed with an amount of vinegar or citric acid and boiled to fix the problem (Pulewka, 1949).

In his nineteen years in Turkey, Pulewka raised a substantial number of Turkish pharmacologists. According to Şükrü Kaymakçalan, who was one of his students, Pulewka was the mentor to many doctors who graduated from the Ankara University Faculty of Medicine.¹²⁸ Kaymakçalan lists himself, Dündar Berkan, İzzet Kandemir, Remziye Erkmen, Sami Bağlum, Aziz Yeğinsoy, Haydar Saatçı, Handan Kiper, Saip Ragıf Atademir, Eyüp Canat, Remziye Hisar, Perihan Çambel and Mustafa Suner as known students of Pulewka

¹²⁸ Şükrü Kaymakçalan (1923 – 1984) was a 1946 graduate of Ankara Faculty of Medicine. He became an assistant in pharmacology at *Hıfzısıhha* Institute in 1952 after several years of practice at an organization combating malaria. To further his academic career, Kaymakçalan went to the United States, where he studied morphine addiction. Upon his return to Turkey in 1962, he became the Chair of Pharmacology at Ankara University. Kaymakçalan was the founding secretary for the Medical Group at TÜBİTAK, the 2nd Chairman to TÜBİTAK from 1965 to 1973, and was a founding member of both Ege and Hacettepe Universities. Kaymakçalan was noted in Turkey for his efforts to define and combat drug addiction, receiving a Sedat Simavi Foundation Medical Sciences award in 1980 (Kayaalp, 1994).

who owe him their expertise (Kaymakçalan, 1966). Kaymakçalan commends Pulewka's open-hearted manner and his pedagogical attitude, as well as his academic seriousness, discipline, and patience, which he instilled in his students.

Pulewka was the author of *Farmakoloji Ders Kitabı* (Lecture Notes on Pharmacology), a popular textbook for students of pharmacology and general medicine, which was translated by his colleague Saip Ragıp Atademir. Pulewka was also responsible for the creation of various Turkish journals, such as *Türk Hijyen ve Tecrübi Biyoloji Dergisi* (Turkish Journal of Hygiene and Applied Biology), *Ankara Üniversitesi Tıp Fakültesi Mecmuası* (Journal of the Ankara University Faculty of Medicine), and *Medica*, a Turkish journal on international medical literature.¹²⁹

Upon an invitation after the war, Pulewka went to Tübingen as a visiting professor in 1954. He returned to Germany permanently sometime later that year, and founded Germany's first toxicology institute. He retired in 1964, and passed away peacefully in 1989 at 93 years of age.

Stefan Baecher (? - ?) was an Austrian serologist. While details on his life and work in Turkey are minimal, Baecher is known to have arrived in Ankara in late 1938, after having been forced out of Austria, where he had previously been working as a consultant for the government. In Ankara, Baecher was the director of the serology department of *Hıfzısıhha Enstitüsü*. He remained in Turkey throughout World War II, and returned to Vienna several years after the conclusion of the war (Widmann, 1999, p. 256).

3.2.3 Conclusion

In the framework of the study of medicine, the 1933 university reform was responsible for a revolution. The work of the refugee scholars, together with the efforts of their followers and the state's patronage, led to considerable developments in Turkish medicine, both in the short and long run. In fact, the advancement in Turkish medicine was so successful that it could be considered exemplary of the spirit of the 1933 reform.

¹²⁹ *Türk Hijyen ve Tecrübi Biyoloji Dergisi* was later renamed to *Acta Medica Turcica* in 1938.

To truly evaluate the accomplishments of the reform in medicine, both the immediate and the gradual effects it caused need to be observed. The short-term results of the refugee scholars' service were immediate and obvious. Turkey was a country recovering from a long, hard road of warfare: in its last few decades, it had borne significant defeats in series after series of conflicts. The Ottoman Empire had left behind a devastated legacy after the Balkan Wars in 1912, and the Italo-Turkish Wars in 1912-1913, and then after World War I in 1914-1919. The new Republic, too, was languishing from its War of Independence in 1919-1923. After taking so much damage over such a long period of time, Turkey's need of a structured healthcare service was great—and urgent. By employing the skills, abilities, and experiences of world-renowned refugee doctors, this was accomplished. Hospitals, clinics and laboratories were established in vital areas and left in the care of capable directors, receiving all possible resources from the state and sometimes even from the refugees themselves—it wasn't uncommon that the refugees delivered not only human capital but also material capital by bringing in their books, publications, equipment, machinery, and appliances. Additionally, the established medical facilities were also filled with Turkish assistants and doctors, both young and old, who would learn by the refugees' example and hone their crafts under their direct tutelage, leading the country to produce a large number of skilled practitioners in a very short amount of time. In the short term, Turkey recovered from its injuries, tended to its immediate needs, and readied itself for a strong future.

The long-term effects of the reform came by slowly, but all were built on the foundation laid out by the refugee scholars, their students, and their academic legacy. The restructuring of the teaching of medicine resulted in increased productivity: Turkey graduated far more capable doctors after the reforms than it ever had before. Students of medicine were instilled with an academic outlook and urged to develop their own research. Academic productivity increased considerably: journals were conceived, publications were promoted, textbooks were written. Seminars and conferences were held with international standards. Promising students were funded to study abroad and join research projects. The quality of Turkish medical academia increased, and soon enough, as the professors taught by the refugee scholars raised their students and every student stood on the shoulders of the professor that came before them, Turkey became capable of not only fulfilling its own needs, but also gained the chance to research and develop its human capital further. Technology was transferred and built upon, accomplishing the academic vision of the 1933 reform.

However, the successes experienced in the field of medicine in Turkey through the reform did not come without difficulties, failures, or casualties. The reform caused the expulsion of many previous Turkish scholars of medicine, leaving them unutilized and causing them to quietly disappear from the academic timeline. In other areas, great opportunities were lost; chances to develop further could not be taken due to the simple lack of available technology, particularly in the fields of medicine where technology was key. Being on the receiving end of technology transfer, and not at the level of the country it was drawing its technological resources from, Turkey simply could not meet the demands of some refugee scholars or utilize them to their full potential because it could not supply them with an adequate surrounding for their work. The considerable discrepancy in technological aspects, such as the availability of research laboratories, technical equipment, or plain old medical literature, meant that the more research-and-development-minded scholars would experience inevitable hardships, oftentimes causing them to become disheartened and choose to move on.

The difficulties faced in the trying times of the reform, however, should never overshadow the considerable improvement the 1933 reform caused in Turkish medicine, both in the short run and the long run. Even now, the success of the 1933 university reform in medicine is demonstrated in the vast array of conceived journals, academic publications, textbooks, established clinics, hospitals and laboratories, and most importantly, the almost neverending list of Turkish medical students, who can still track their academic lineage to the refugee professors if they look back a few generations.

3.3 Formal and Natural Sciences

The study of Formal and Natural sciences during the 1933 Reform had its headquarters at the University of Istanbul. The Faculty of Sciences of Istanbul University was formally established in 1933 as part of the reform movement, restructuring the departments previously within Darülfünun: the departments of Mathematics, Astronomy, Physics, Chemistry, Geology, and Botany and Zoology (as branches of Biology) were retained from the previous *Fünun Medresesi* (Science Faculty¹³⁰) and reformed into the Faculty of Science. This allowed the Faculty of Science to largely maintain the previously-established structure, though with a reformed leadership and with new directors (İshakoğlu, 1995).

The Faculty was initially wholly situated at *Zeynep Hanım Konağı* (Zeynep Hanim Mansion), but with the construction of *Kandilli Rasathanesi* (Kandilli Observatory) in 1935 and a Botany Institute building in 1936, started to branch out, and the fire of 1942 which resulted in the complete burning of Zeynep Hanim Mansion necessitated the construction of another faculty building, which was finished in 1952.

In addition to the education of natural sciences, the Faculty of Sciences at Istanbul University also had the responsibility for pre-med courses taken by Medicine, Dentistry and Pharmacology students. This division was abbreviated FKB i.e. *Fizik Kimya Biyoloji* (Physics, Chemistry and Biology, abbreviated P.C.N.) and, upon Friedrich Breusch's establishment of a specified division for the pre-med students' and chemistry minors' education, took on the name *II. Kimya Enstitüsü* (2nd Chemistry Institute). The refugee scholars employed at the Istanbul University Faculty of Arts and Sciences whole were as follows:

¹³⁰ *Fünun Medresesi* could be translated as *Science Medrese*, but it is important to note that, as it was a branch of Darülfünun, it did not function as, or was seen as, a medrese (an Islamic school). It is more likely that the word *medrese* was used simply for the familiarity and for lack of a better equivalent.

ISTANBUL UNIVERSITY FACULTY OF ARTS AND SCIENCES		
REFUGEE SCHOLARS		
Mathematics		
NAME	CHAIR / FIELD	DURATION OF STAY
Richard Edler von Mises	Mathematics, Applied Mathematics, Mechanics	1933-1939
Wilhelm Prager	Mathematics	1934-1941
Hilda Geiringer	Mathematics	1933-1939
Astronomy		
Erwin Finlay Freundlich	Astronomy	1933-1937
Hans Rosenberg	Astronomy	1938-1940
Wolfgang Gleissberg	Astronomy	1948-1958
Physics		
Harry Dember	Experimental Physics	1933-1941
Arthur Robert von Hippel	Electro-physics	1933-1934
Chemistry		
Fritz Arndt	General Chemistry	1933-1955
Hans Dietrich Kroepelin	P.C.N. Chemistry	1934-1936
Richard Weiss	P.C.N. Chemistry	1938-1939
Friedrich Ludwig Breusch	P.C.N. Chemistry	1937-1971
Reginald Oliver Herzog	Industrial Chemistry	1933-1935
Philip Gross	Industrial Chemistry	1936-1939
Biology		
André Naville	Zoology	?-1937
Curt Kosswig	Zoology	1937-1954
Alfred Heilbronn	Pharmacobotany and Genetics	1933-1960
Leo Brauner	General Botany	1934-1955

Source: (Dölen, 2010b, p. 503)

3.3.1 Mathematics

The study of mathematics in Turkey can be traced back to the *medrese* education system, in the forms of the courses *hendese* (geometry) and *riyaziye* (mathematics). However, the *medrese* schools eventually went into decline, which was both the cause and effect of the overall decline of the Ottoman Empire. According to Taşköprülüzade Ahmet, the Ottoman Empire's first epistemologist and encyclopedian, controversial theology, philosophy, and mathematical discourse started losing their importance in the *medrese* system as early as the 1540s as the Ottoman Empire began to stagnate (Türkiye Diyanet Vakfı (Turkey Diyanet Foundation), 2001). Over the centuries, as the Ottoman Empire went into decline, religious dogmatism took over scientific progress until inevitably any form of philosophical science was unwelcome at the *medrese*. By the end of the 17th century, subjects like mathematics, medicine and geography, which were considered incompatible with religious sensibilities, had been removed from *medrese* curricula entirely.

When the Ottoman Empire became aware of its decline, however, immediate modernization became a necessity. Attempts to reintroduce the science of mathematics into the Empire were made (which, unsurprisingly, stemmed from a need to reform the military). According to İshakoğlu, the reintroduction of mathematics to Ottoman schools first occurred at *Hendesehane* (lit. "House of Geometry", 1734), then at *Mühendishane-i Bahri-i Hümayün* (Imperial School of Naval Engineering, 1773) and *Mühendishane-i Berri-i Hümayün* (Imperial School of Land Engineering, 1795), this time out of pure necessity, in the 18th century (İshakoğlu, 1995, p. 227). The establishment of these schools was succeeded with the establishment of *Darülfünun* in 1863, which as a model Ottoman higher education institution, taught its students more of the natural sciences that had previously been removed from the *medrese* education system. Within *Darülfünun*, the department of *Ulum-ı Tabiiye ve Riyaziye* (Natural Sciences and Mathematics) existed for the teaching of *Cebr-i Alâ* (Higher Algebra), *Riyazat-i Umumiye* (General Mathematics), *Hendese-i Tahliliye* (Analytical Geometry), *Tahlili Riyaziye* (Mathematical Analysis), *Mihanik-i Riyazi* (Mathematical Mechanics) and *Hisab-ı İhtimâliyat* (Probability), among others (Gökdoğan, Undated). This course program continued until 1933, then it was restructured by the University Reform.

For the reform of mathematics education at Istanbul University, the Institute of Mathematics was remodeled after the recommendations of the Prussian mathematician Richard Courant,

who, with nobel laureates James Franck and Max Born, visited Turkey shortly before the reform and prepared a report for the Ministry of Education on the education of mathematics at *Darülfünun* (Eden & Irzık, 2012). In his report, Courant emphasized the fact that mathematics is vital to the education of teachers and suggested that the new Institute of Mathematics be modeled after that of the University of Göttingen and the careful observation of the work of its director, Felix Klein. This leads Eden and Irzık to conclude that Courant envisioned an Institute of *Applied Mathematics* at Istanbul University, which also resonated with the intentions of the Turkish reformers, who saw education as a means to both human and material development—a vital step in their quest to reach the level of “contemporary civilization”. Courant’s report also commended the work of Kerim Erim¹³¹, a renowned *Darülfünun* faculty member (one of the few Ottoman professors that would survive the restructuring of *Darülfünun* alongside Ali Yar¹³²), considering him “the nucleus” for the restructuring. Courant’s report insisted that the Institute of Mathematics invite “renowned scholars” every year for seminars and lectures in order to establish and maintain connections with European academia. Courant’s report also included notes on the infrastructure necessary for the reestablishment, such as classrooms and libraries, and eventually came to the conclusion that everything should be built from scratch (Eden & Irzık, 2012, p. 434). Following this report, the Turkish government extended an invitation for the directorship of the Institute of Mathematics to Courant himself, but he ultimately refused, citing the difficulty of the restructuring effort, especially the Turkish officials’ insistency that it become comparable to a European university within a few years, and the lacking of funding and foundation to make that a possibility.¹³³ Nevertheless, the Turkish officials did not give up,

¹³¹ Kerim Erim (1894 – 1952) was a Turkish mathematician. Educated in *Hendese-i Mülkiye* and later *Yüksek Mühendis Mektebi* (College of Engineering), he was sent abroad to study mathematics at Berlin University, later becoming the first Turkish mathematician to receive a doctorate, which he earned from the Friedrich-Alexanders University at Erlangen in 1919. Following his return to Turkey, he taught at *Yüksek Mühendis Mektebi*, and became an associate professor in 1929. Erim served at the council that oversaw the 1933 University Reform, and was transferred to the Istanbul University Institute of Mathematics in the same year the reform began, though he still kept teaching at *Yüksek Mühendis Mektebi*. In 1940, following Mises’ departure, he was made the director of the Institute of Mathematics and remained so until his passing in 1952. He was twice dean to the Faculty of Sciences at Istanbul University (Akbaş, 2003, pp. 49-52).

¹³² Ali Yar (1884 – 1965) was a Turkish mathematician. Graduating from *Mekteb-i Sultani* (today’s Galatasaray High School) in 1908, Yar was sent to study mathematics and physics at the University of Sorbonne. After his return to Turkey, he taught mathematical analysis and higher algebra at *Darülfünun* from 1915, and was appointed first as a *muallim* and then as *müderris muavini*. During the 1933 University Reform, Yar was elevated to a professor ordinarius at Istanbul University. He was the dean of the Faculty of Sciences from 1933 to 1938 (Özemre, Galatasaray Mekteb-i Sultânî’sinde Sekiz Yılım (My Eight Years at Galatasaray High School), 2006).

¹³³ Courant did not take the Turkish government up on their offer, realizing the lack of resources and adequate funding in Turkey with considerable prescience. Instead, he moved to the University of New York in 1936, and saw his vision of an exemplary institute for mathematics realized in the United States. The Courant Institute of Mathematical Sciences is one of the most respected research centers for applied mathematics.

and restructured the Institute of Mathematics with the invitation and arrival of refugee mathematicians such as Richard Edler von Mises and Wiliam Prager (Eden & Irzik, 2012, p. 434).

*Richard Martin Edler von Mises*¹³⁴ (1883 Lemberg – 1953 Boston) was a German mathematician and philosopher of science. Richard was the second son of the Jewish Mises family, which had been elevated to the Austrian nobility in the 19th century. Richard's older brother, Ludwig von Mises, was also a renowned scholar.¹³⁵ He was born in Lemberg, then part of Austria-Hungary but now part of Ukraine. Educated in the Viennese gymnasium in Latin and mathematics until 1901, Richard von Mises later attended the Vienna University of Technology, where he studied mathematics, physics and engineering until 1905. He pursued an academic career, becoming an assistant to the mathematician Georg Hamel at the Technical University of Brunn. In 1908, he received a doctorate from the Technical University of Vienna, with a dissertation on “the determination of flywheel of masses in crank wheels”, entitled *Theorie der Wasserräder* (the Theory of Waterwheels), by which he became a *privatdozent* at the University of Brunn (Vogt, 2007). The following year, he became a professor extraordinarius in applied mathematics at the University of Strasbourg. At the University of Strasbourg, Mises began to popularize the concept of applied mathematics and lectured on aircraft design. Mises' academic career was later interrupted by World War I; he joined the Austro-Hungarian army and served as a test pilot before being recalled from frontline service to work as a technical advisor, organizer, and instructor of flight theory to German and Austrian officers, and also to engineer a military aircraft. The *Mises-flugzeug* (Mises aircraft) was developed for the Austrian army in 1916, but never saw battle. After the war, Mises returned to teaching, moving to Germany and taking a position as the chair of hydrodynamics and aerodynamics at the Technical University of Dresden. Later in 1919, he

¹³⁴ It should be noted that the *Edler* in Mises' name is not another middle name but a title; *Edler* was the lowest rank of nobility in Austria-Hungary and Germany until its abolishment in 1919.

¹³⁵ Ludwig von Mises (1881 – 1973) was a prominent economist belonging to the Austrian School. He attended the University of Vienna where he studied law, later becoming interested in economics after being influenced by Eugen von Böhm-Bawerk. He was the chief economist for the Austrian Chamber of Commerce and an economic adviser to Austrian governments prior to the *Anschluss*. In exile, Ludwig von Mises initially moved to Switzerland with his family, but later emigrated to the United States on a grant by the Rockefeller Foundation, where he became a professor at New York University from 1945 to 1969 until his retirement. In the United States, Mises was a staunch proponent of classical liberalism. Mises was a friend and mentor to names such as German chancellors' advisors Wilhelm Röpke (who was, in turn, at the University of Istanbul introducing classical liberalism to Turkish economics) and Alfred Müller-Armack, Charles de Gaulle advisor Jacques Reuff, Harvard professor Gottfried Haberler, LSE professor Lionel Robbins, Italian president Luigi Einaudi, and nobel laureate Leonid Hurwicz. Mises was also a founding member of the Mont Pelerin Society (Mises Institute, 2016).

was appointed professor and director of the newly-created Institute of Applied Mathematics at the University of Berlin, and remained there until his emigration.

In 1933, after the *Machtergreifung* and the *Berufbeamtengesetz* that followed, Mises was not immediately displaced like other Jewish German scholars, quite possibly due to a number of reasons which included his conversion to Catholicism, his service in World War I, and the influence he carried for being the member of a previously ennobled family. Nevertheless, Mises did not fall into the strict Nazi category of 'Aryan'. Feeling that it would be undignified to remain in a rapidly changing Germany, Mises himself requested that his appointment at the University of Berlin be terminated before the Nazis had the chance to do it. Mises requested compensation for his twenty-four years of service to the University of Berlin upon his departure. The Nazi Theodor Vahlen promised Mises this compensation, in return for Mises' support towards Vahlen's directorship at the Institute of Applied Mathematics (which Vahlen desired despite very limited academic ability, according to Reisman) (Reisman, 2006, p. 250). Mises helped Vahlen be appointed as his successor as the director to the Institute of Applied Mathematics, only to be conveniently forgotten; Mises received the news that all his rights as a former academic at the University of Berlin had been revoked, and his monetary compensation ostensibly denied later in 1934, when he had already arrived in Istanbul. This betrayal upset Mises greatly, and he was still writing letters to the post-war German government as late as 1954 in a vain attempt to have his rights and compensation returned to him. The case resulted in Mises' favor only posthumously in 1957; the testimony of his colleagues at the University of Berlin revealed too late that there had been significant intrigue at the Institute to deny Mises his retirement money (Şen F. , 2008, p. 200).

At the University of Istanbul, Mises took over the direction of the Institute of Mathematics, and was highly respected due to his international renown. According to Nissen, he was the most experienced and venerated of all the refugee scholars (Nissen, 1969, p. 212). Aided by fellow refugee colleagues Wilhelm Prager and Hilda Geiringer, Mises built the foundation of the Institute of Mathematics, and divided teaching duties between scholars clearly. Mises taught courses on "mathematics and probability" and "differential and integral calculus", and later devised a course he named "analysis" where he covered ordinary and partial differential equations, complex analysis, calculus of variations, and potential theory. Prager, in turn, took over the teaching of general mechanics, and Geiringer, more basic courses. In his lectures, Mises taught in German or French, as he experienced some difficulty learning the language

and could only lecture in Turkish by himself in his fourth year.¹³⁶ Mises typically chose to lecture in French, since the translator-assistants at the Institute of Mathematics, namely Cahit Arf¹³⁷, Ratip Berker¹³⁸ and Ferruh Şemin¹³⁹, had all been educated abroad in France. Mises' lectures were successful and well attended, but he is not considered to have been as approachable as some other refugee scholars had been (Widmann, 1999, p. 148). Arf is quoted recounting some regrets about these lectures with Mises:

¹³⁶ According to Eden and Irzik, the difficulty Mises faced was not only caused by how different the Ural-Altaic language Turkish was compared to Indo-European languages, but also because of changes in the language (Eden & Irzik, 2012, p. 440). The Turkish *Dil Devrimi* (Language Revolution) was a campaign started in 1932 by Atatürk himself to purify the language from words and grammar rules borrowed from Arabic and Farsi, which Ottoman Turkish had a tremendous amount of—in most cases, Ottoman Turkish is nearly incomprehensible to a native speaker of modern Turkish. The language revolution happened to make its greatest changes between 1933 and 1938, which coincided directly with Mises' attempts to learn the language. With so many words and grammar rules changing and the language being reinvented from scratch, Mises must have felt beleaguered trying to learn a language that was difficult enough to begin with.

¹³⁷ Cahit Arf (1910 – 1997) was a renowned Turkish mathematician, commemorated for his work on the Hasse-Arf theorem, Arf semigroups, Arf rings, and the Arf invariant, the latter of which can be found (in part) on the Turkish 10-lira bill, next to his portrait. Receiving his primary education in İzmir, he was granted a scholarship by the Turkish Ministry of Education to study mathematics abroad in France, and graduated from the Parisian École Normale Supérieure. After his return to Turkey, he taught mathematics at Galatasaray High School, and later joined Istanbul University's Institute of Mathematics when it was reformed in 1933 in a bid to become an associate professor. In 1937, he went to the University of Göttingen, and received a doctorate in 1938. After his second return to his home country and Istanbul University, he became a professor in 1943, and a professor ordinarius in 1955. He stopped teaching at the university in 1963, and taught at Robert College for a year before going to the United States, where he conducted research at the Princeton Institute for Advanced Study (IAS) and later worked as a guest professor at California University. After a third and final return in 1967, he was appointed to the Middle East Technical University (METU), where he worked until his retirement in 1980. Arf was hugely influential in the foundation of TÜBİTAK (Scientific and Technological Research Council of Turkey), and was its first appointed director in 1964. Between 1983 through 1989, he was the chair of the Turkish Math Society. Arf was the recipient of an İnönü Award and a TÜBİTAK Science Award, honorary doctorates from Istanbul Technical University, Karadeniz Technical University, and METU. Additionally, various international and national summits on mathematics were held in his honor, with a METU conference on math, also in his honor, taking place annually (TÜBİTAK, 2016).

¹³⁸ Ratip Berker (1909 – 1997), a Turkish mathematician, was educated abroad in France in mathematics at the universities of Nancy and Lille. After returning to Turkey, he was appointed to the University of Istanbul Institute of Mathematics as an assistant in 1932. In 1934, he moved to Istanbul Technical University. In 1936, he received his doctorate from the University of Lille, and returned to Istanbul Technical University as an associate professor, receiving a full professorship in 1939. He was the director of *Istanbul Yüksek Öğretmen Okulu* (Istanbul Teachers' College, currently *Çapa Anadolu Öğretmen Lisesi*) from 1939 to 1942. In 1943, he returned to Istanbul University, and also worked at *Yüksek Mühendis Mektebi* (College of Engineering) as dean to the Faculty of Machinery from 1944 to 1948, serving two terms. Berker also served as the chair of the UNESCO Middle East Science Cooperation Office from 1949 to 1951 and 1952 to 1954, also serving two terms. He became a professor ordinarius in 1954. He was a guest professor at the universities of Indiana, Bloomington, Lille, Paris, and also lectured at Bosphorus University before retiring in 1979. He was the recipient of TÜBİTAK Science and Service awards, held honorary doctorates from Hacettepe University and Istanbul Technical University, and a French *Legion d'honneur* (TÜBİTAK, 2016).

¹³⁹ Ferruh Şemin (1908 – 1985) was a Turkish mathematician. He graduated from the mathematics department of Grenoble University in 1933, and upon his return to Turkey started an early academic career at the University of Istanbul as an associate professor of higher algebra and mathematics. He also taught geometry at *Yüksek Mühendis Mektebi* (which would later become Istanbul Technical University) in 1939. Şemin was a professor by 1944 after defending his professorship thesis “Regle Yüzeylerin Diferansiyel Geometrisi” (The Differential Geometry of Regle Planes). His particular area of interest was the geometry of planes, and he had a number of translations and original publications on the subject of geometry (Gökdoğan, Undated, p. 3).

“We [Arf, Berker and Şemin] the young mathematicians did not learn much from these early professors. (...) We could have learned from him [Mises] but could not because both he and we had too much pride. We could not establish a rapport with him easily, and besides we were not interested in his areas of research. (...) Caricaturing, I can say that we attended Mises’ and Prager’s lectures, translated them, but devoted our attention to the errors made and criticizing them. The real benefit we got from these foreign professors was that they showed us by example that scientists should do research and be creative.” (Eden & Irzik, 2012, p. 440) (Translation by Eden and Irzik).

As an academic, Mises was heavily oriented towards research. During his stay in Istanbul, he made a large number of publications. He wrote the large bulk of his book *Positivism* in Istanbul, quite possibly taking advantage of the relative isolation of exile in Istanbul, which gave him the opportunity to ponder (Eden & Irzik, 2012, p. 441). According to Geiringer, who kept a detailed biography of Mises’ publications, he had produced thirty publications during his stay, 17 on the topic of probability, 6 on mechanics, and some more on practical analysis and geometry (Siegmond-Schültze, 2004). Mises was also a contributor to the multi-language *Revue de la Faculté des Sciences l’Université d’Istanbul* (Journal of the Faculty of Sciences of Istanbul University). He also refereed articles submitted to the journal, which drew international contributions due to his considerable international prestige, contributing immensely not only to the development of mathematics in Turkey, but also providing it an international direction (Eden & Irzik, 2012, p. 441). Mises also invited guest professors from the United States to Istanbul University. This conformed with Courant’s suggestions (and the Turkish government’s wishes) as to how the newly established Institute of Mathematics should operate.

Mises’ research-oriented outlook reflected on his students. He favored publications and other academic work, and would often promote good students toward academic careers, and was a reliable source of constructive, if often blunt, criticism. During his time at Istanbul University, Mises supervised the first few Ph.D. theses completed at the Institute of Mathematics. Yomtov Garti¹⁴⁰ and Terenzio Consoli received their Mises-approved Ph.D.s in 1939, and

¹⁴⁰ Yomtov Garti (1915 – 2011) was a Jewish Turkish mathematician. Educated in Saint Joseph High School, he graduated from Istanbul University with a degree in Mathematics and Physics. (Garti recounts in his autobiography that he had wanted to study engineering at *Yüksek Mühendis Mektebi*, but had chosen otherwise due to anti-semitism at the school, which led to him being highly relieved to see Jewish émigrés at Istanbul University.) On the suggestions of Mises, Garti received a doctorate with a thesis on statistical functions. He taught mathematics at Galatasaray High School, Saint Joseph High School, and Notre Dame de Sion High School for a cumulative of over 56 years, as well as at the Jewish High School and Boğaziçi University. Garti was responsible for the Garti Theorem. “Monsieur Garti” was the oldest member of the Turkish Math Society, and passed away at 96 years of age (Matematik Dünyası (World of Mathematics), 2011).

Hermine Kalutsyan¹⁴¹ in 1941, with additional supervision from Wilhelm Prager. Mises attended doctoral dissertations regularly, whether they be his field or not.

Mises left Turkey in 1939 after the Turkish government refused to extend his contract. The often fogged-over reasoning for not extending Mises' contract was the administration's disapproval of his romance with Hilda Geiringer (whom he married shortly after their arrival in the United States) (Dalaman, 1998, p. 135). He was invited to Harvard University in the United States, becoming its Gordon-McKay Professor of Aerodynamics and Applied Mathematics a few years later and pursuing an even more successful academic career. He was given honorary titles from various universities around the world, including an honorary doctorate from Istanbul University. Honorary memberships to various academies, foundations and institutions were awarded to Mises. He was also to be awarded by honorary membership by the Science Academy of East Germany in 1950, but seeing that it was the McCarthy period in the United States and East Germany was run by a communist regime, Mises had to refuse on the grounds that his acceptance would be considered a political statement (O'Connor & Robertson, Richard von Mises, 2000). Later in life, Mises also worked as an advisor to the US Navy, the National Aeronautics and Space Administration (NASA) and the National Advisory Committee for Aeronautics (NACA)¹⁴². Mises passed away in 1953, leaving Geiringer to chronicle, prepare, and publish his unwritten works after his death.

Wilhelm Prager (1903 Karlsruhe – 1980 Zurich) was a German mathematician. Born in Karlsruhe, he received his *Diplom-Ingenieur* (Engineering Degree) from the Technology Institute of Darmstadt in 1925 and his *Doktor-Ingenieur* (Doctorate in Engineering) in 1926. Assigned as the director of the Applied Mechanics Institute at Göttingen University at a young age of 26, and given a professorship in Technical Mathematics only three years later, Prager was the youngest professor in Germany at the time. Prager's research subjects included applied mathematics, mechanics, elasticity, and plasticity theory. He received worldwide renown, with almost 30 publications and a book by the age of 31.

¹⁴¹ Hermine Kalutsyan (1914 – 1989) was an Armenian Turkish mathematician. Educated abroad at the Parisian Lycée Fénelon, she graduated from Istanbul University and received a doctorate with a thesis titled *Représentation conforme et mouvement d'un plan sur un plan* (the representation and consistent movement of a plane on a plane). She was the director of the Armenian Esayan School, and taught mathematics at Galatasaray High School (Riddle, 2016).

¹⁴² NACA was dissolved in 1958.

Prager was forced out of his professorship after the *Machtergreifung* due to ‘undesirable’ Jewish origins in his family. He emigrated to Turkey in 1934, where he would hold the professorship of Theoretical Mathematics. Prager did not leave Germany without a fight, however. He took his case to the German courts, and—surprisingly, according to O’Connor and Robertson—won, taking the back pay offered to him by the court to cover his losses after being forced out of his professorship (O’Connor & Robertson, 2005). He was also even given permission to return and retake his job, but refused.

At the Institute of Mathematics, Prager was a professor of applied mathematics and mechanics. Prager and Mises divided their educational labor very clearly. Prager taught the required courses in mathematical mechanics and geometry, tensor analysis, and descriptive and projective geometry. Prager’s contract allowed him four years to learn Turkish to teach in the language, but two proved sufficient. After two years of lecturing in German and French while supported by capable translators such as Cahit Arf, Ratıp Berker and Ferruh Şemin, Prager started teaching in Turkish, and wrote four textbooks on mathematics for his students, such as *Tersim-i Hendese* (Space Geometry) and *Pratik Hesap* (Practical Calculation), as well as a book on introduction to mechanics. Prager also continued his academic research in Turkey, publishing papers and articles in German, French, English, and Turkish. He is credited with thirteen publications during his stay in Turkey.

Following Atatürk’s death in 1938, the refugee scholars at the Institute of Mathematics started to worry as to whether their lives in Turkey would remain the same, especially with the threat of World War II looming over them. As the *Wehrmacht* advanced throughout Europe, Prager became convinced that it would be safer to emigrate to the United States. He left Turkey in 1940, taking up a professorship at Brown University, where he worked to install the understanding of applied mathematics at Brown and the United States. He passed away in 1980 as Brown’s professor emeritus of Engineering and Applied Mechanics.

Hilda Geiringer (1893 Vienna – 1973 Boston) was an Austrian mathematician. Showing talent and interest for the science at a young age, she was educated in mathematics at the University of Vienna. Geiringer received her doctorate in mathematics from the same university in 1913 with a thesis on Fourier series in two variables, titled *Trigonometrische Doppelreihen* (Trigonometric Double Rows). Pursuing an academic career, she later moved

to Berlin and the Institute of Applied Mathematics where she became an assistant to Richard von Mises in 1921. Though she had been formally trained as a pure mathematician, Mises' influence made Geiringer pursue applied mathematics, and her field of research became statistics, probability theory, and mathematical plasticity. She became a *privatdozent* at the University of Berlin and taught mathematics (Friedenreich, 2009). Her research work achieved some popularity; she drew the attention of Albert Einstein, and the two remained in contact in matters of both academia and Geiringer's emigration to the United States.

Geiringer's academic career was halted immediately following the *Machtergreifung* due to her Jewish heritage. At the Institute of Mathematics, her right to teach was revoked, her pending appointment as a professor extraordinarius at the University of Berlin stopped in its tracks. The thesis she had submitted to qualify for her habilitation was refused. Eventually, she was removed from the university entirely. She moved to Brussels and worked at its Institute of Mathematics before following her mentor Mises to Istanbul in 1934.

At the University of Istanbul, Geiringer was tasked with teaching courses on general mathematics as a contracted lecturer. She learned Turkish in order to do so and, according to a letter quoted by Reisman, she had shouldered the majority of general mathematics courses at the Istanbul University Institute of Mathematics (Reisman, 2006, p. 253). A mathematics curriculum without her as a lecturer would be unimaginable, and as such, extending her contract was of paramount importance. In addition to her teaching, Geiringer was also a responsible researcher, and focused mainly on general mathematics, statistics, and the theory of probability, especially the application of Mises' theory of probability. During her time in Istanbul, Geiringer eventually became interested in the principles of genetics as formulated by the Augustinian friar Gregor Mendel, becoming a pioneer in the fledgling field of genetics. According to Reisman, Geiringer was not received with as much prestige as she deserved, in part due to her research being published mainly in Turkish journals such as the *Journal of the Faculty of Sciences* (Reisman, 2006, pp. 253-259).

Geiringer left Turkey for the United States in 1939. The reasoning given for Geiringer's departure is mainly that, like most of the other refugee scholars, she feared that the political situation of Jewish refugees in Turkey would change after the death of Atatürk in 1938. Geiringer had lived a difficult life: she was a female academic in the 1930s, a single mother, thrown in exile with her young daughter to a country so fundamentally different from her

own, and there was judged (despite her best efforts in her work) on the basis of her personal relationships—and her troubles only continued in the United States. She followed Mises to the United States, but not to the university he was employed in, because “Harvard would not even contemplate hiring a woman” (Reisman, 2007, pp. 10-11). On top of being a Jewish academic—which gave most academics enough trouble getting a job at the universities in the United States—Geiringer was a woman. Colleagues like Oswald Veblen of Princeton University and Einstein tried to get Geiringer a position at Queens College in New York, but failed, mainly for the same sexist reasons; Geiringer could only find an initially unpaid job at a women’s college in the United States, Bryn Mawr Women’s College. One response she got to her many applications to other American universities is quoted by Richards:

“I am sure that our President would not approve of a woman. We have some women on our staff, so it is not merely prejudice against women, yet it is partly that, for we do not want to bring in more if we can get men” (Richards, 1987).

Another refugee scholar to the United States, Jerzy Neyman of Berkeley, had this to say of Geiringer, explaining explicitly where he expected Geiringer’s station to be:

“Whether she is to be considered outstanding in ability or not depends on the standards of comparison. Among the present day mathematicians there are few whose names will remain in the history of mathematics (...) As for the newcomers to this country, I have not the slightest doubt that Mises is one of the men of such calibre. (...) There will perhaps be a dozen or perhaps a score of such persons all over the world. (...) and Mrs Geiringer does not belong in this category. But it may be reasonable to take another standard, that of a university professor of probability and statistics, perhaps an author of the now numerous books on statistical methods. In comparison with many of these people Mrs Geiringer is an outstanding person and I think it would be in the interests of American science and instruction to keep her in some university” (O’Connor & Robertson, 2000).

Geiringer therefore remained in ‘some’ American university and moved from Bryn Mawr to lecture at Brown University, but was never permanently employed by Brown.^{143,144} Her first legally employed position was at Wheaton College as a professor and the chair of its mathematics department, and she moved to Massachusetts after marrying Richard von Mises in 1943. In the meantime, she longed to do research, writing that “I have to work scientifically, besides my college work. This is a necessity for me; I never stopped it since my

¹⁴³ Elizabeth Leduc was the first woman professor to be fully employed by Brown in 1953.

¹⁴⁴ Reisman also ironically notes that Brown University took full credit for Geiringer’s “mimeographed notes” on her lecture of the geometrical foundations of mathematics; despite not formally employing her, the work was presented as a Brown University publication.

student days, it is the deepest need of my life” (O'Connor & Robertson, 2000). Geiringer took on classified work for the National Research Council—and while her contribution to applied mathematics in engineering helped in the war effort, Geiringer kept on receiving polite refusals for her applications. After Mises’ death in 1953, she took on the task of completing or preparing his unpublished work for publication at Harvard, and only then was awarded a temporary research job at the university (as “Hilda von Mises”, ironically enough, despite the fact that she was known as Geiringer in academic circles). Geiringer wrote that she hoped for future generations of women to face better conditions, but that in the meantime, she would go on as well as possible. She passed away in 1973 in California.

3.3.2 Astronomy

The study of astronomy in Istanbul University had its foundations in an astronomy course present in *Darülfünun*. The course, called *ilm-i heyet* in Ottoman Turkish, included teachings on spherical astronomy, and was taught to students of mathematics by Fatin (Gökmen) Bey¹⁴⁵, an Ottoman astronomer and the founder of the still active Kandilli observatory. The 1933 reform saw the arrival of German refugee scholars Erwin Finlay Freundlich and Wolfgang Gleissberg, the former of displacing Fatin Gökmen as the director of the Institute.

Erwin Finlay Freundlich (1885 Biebrich – 1964 Wiesbaden) was a German astronomer. Born to a Scottish mother and a German father in Biebrich, he received his doctorate from Göttingen University in 1910 working under the renowned German mathematician Felix Klein, with a dissertation on analytic function theory.¹⁴⁶ He later became an assistant at Berlin

¹⁴⁵ Mehmet Fatin (Gökmen) (1877 – 1955) was a Turkish astronomer, meteorologist, and religious scholar. Born the son of an Islamic scholar, he received his primary education in Akseki and Alanya, and received training on astronomy and calendar preparation from the *Muvakkithane* (lit. “House of Timekeeping”) in the Istanbul Sultan Selim Mosque. Due to his interest in the subject, he was sent to the newly established *Riyaziyyat Medresesi* (Faculty of Mathematical Sciences). After graduation, he taught mathematics, probability and astronomy in various schools, and eventually became a *müderriis* at Darülfünun. In 1910, he was given the task of directing *Rasadhane-i Amire* (Royal Observatory), which had been active since 1868, but had been severely damaged by fires and riots. Fatin (then Bey) concluded the reconstruction of an observatory on İcadiye Hill, taking the Royal Observatory of Belgium as a model and ordering the required equipment from abroad, with a particular Zeiss telescope taking him 15 years of effort to procure. The observatory and equipment Fatin Bey had brought laid the foundations of Kandilli Observatory, and the observatory was active in meteorological observations from 1911, even though the state of warfare highly limited its functions. Fatin Bey was also highly interested in politics, and was one of the founding members of the *İttihat ve Terakki Cemiyeti* (Committee of Union and Progress), as well as a member of parliament for Konya in 1950 (İhsanoğlu, 1977).

¹⁴⁶ Felix Klein (1849 – 1925) was a German mathematician and educator of mathematics. Renowned in academic circles for his work in group theory, complex analysis, non-Euclidian geometry, and the connection between geometry and group theory, Klein is also remembered for his Erlangen program, which classifies

Observatory, and was responsible for routine measurements. Felix quit this routine job in 1911, enthusiastically responding to a call from the astronomer Leo Wenzel Pollak who, in response to a publication by the young Albert Einstein, was looking for astronomers to help him research the influence of gravity on the propagation of light as part of general relativity theory. Freundlich joined the ranks of astronomers in the Charles University in Prague, becoming acquainted with Einstein, and researched this topic for two years, publishing the negative results of a failed experiment in 1913. Despite the allegedly failed experiment, Freundlich still received acclaim in German circles for his research and the results it produced. In 1914, he went to Russia to observe a solar eclipse for his research. When World War I broke out, he was interned, and his project was dismantled. Upon his return to Germany, Freundlich devoted himself to the construction of a solar observatory in Potsdam, the ‘Einstein Tower’. This observatory housed a solar telescope designed by Freundlich himself, and conducted experiments to prove (or disprove) its namesake’s relativity theory. The observatory was a part of the Einstein Institute, which was directed by Freundlich.

In 1933, Freundlich was removed from his position as the director of the Einstein Institute through the *Berufsbeamtengesetz*, deemed undesirable due to a Jewish maternal grandmother, and threatened due to his Jewish wife. Suggested to Turkish authorities by Albert Malche, Freundlich was invited to take a position as the director of the Institute of Astronomy in the reformed Istanbul University. He arrived in Istanbul in 1934, together with fellow refugee scholar Wolfgang Gleissberg, who would become his assistant.

At the University of Istanbul, Freundlich taught celestial mechanics and astrophysics, with his lectures translated by Paris Pişmiş¹⁴⁷ and Nüzhet Toydemir.¹⁴⁸ Freundlich’s Institute of

geometries by their underlying symmetry groups and is alleged to have much influence on the synthesis of contemporary mathematics. Klein was a very popular mathematician and educator; he was the president of the International Commission on Mathematical Instruction and the International Congress of Mathematicians, earned medals from the London Mathematical Society and Royal Society, and was *Geheimrat* (Privy Councillor) to Germany (Halsted, 1894).

¹⁴⁷ Paris Marie Pişmiş (1911 – 1999), born Mari Sukiasyan, was a Turkish astronomer of Armenian descent. Born to a wealthy family, she was fluent in English, French, Turkish and Armenian by the end of her primary schooling, and learned German later in life. She graduated from Üsküdar American College and entered the mathematics department of Darülfünun in 1931, receiving her degree from the reformed Istanbul University in 1933, and was the first female student to have graduated from the mathematics department. She later became Erwin Finlay Freundlich’s assistant, and received her doctorate working with him in 1937. In 1939, she moved to the Harvard University observatory, and conducted her research there for several more years before the breakout of World War II. She married a Mexican student of modern astrophysics in 1941, and moved to Mexico, where she aided the foundation of Tonantzínla Observatory. While she made incursions to Princeton University, the University of Chicago, Middle East Technical University, Ege University and NASA (two times a year) later in her academic career and visited Turkey regularly, she remained largely based in Mexico. Pişmiş

Astronomy was initially located at the Zeynep Hanım Mansion—an institute occupying two rooms. Naturally, this was not satisfactory, and plans to construct an observatory soon came underway. In 1936, a small observatory was constructed in the Beyazıt campus, and small-scale technological research began. An astrograph was ordered from Germany in 1934, and after two years, arrived in Istanbul and was mounted in the observatory tower. During the academic year of 1936-37, the Department of Astronomy began to register its students in the new building.

The efforts for the construction of the observatory, coupled with the dearth of resources available in Turkey, taxed Freundlich greatly. His budget was limited, and his room for movement constricted. Nevertheless, Freundlich tried his best, and also set on the task of establishing astronomy literature in the Istanbul University library, adding Harvard and Yale publications to the library and updating the preexisting collection.

Freundlich had considerable difficulty adapting to the ‘managerial culture’ in Turkey. Rightfully stifled, he was among the first of the refugees to choose to leave the country, which he did as soon as the construction of the observatory was completed. He left Turkey in 1937 on bad terms, during the mounting years of World War II, and found a position for himself in Prague, which was threatened with the looming Nazi annexation. Thankfully, Freundlich managed to escape to Scotland in 1939, very shortly before the Nazi invasion of Prague. He died in 1964 in Wiesbaden.

worked for the National Autonomous University of Mexico, and raised many Mexican astronomers, becoming Mexico’s representative in the International Astronomical Union and publishing Mexico’s Journal of Astronomy and Astrophysics. She passed away in Mexico City in 1999 at 88 years of age (Yılmaz, 2017).

¹⁴⁸ Hatice Nüzhet Toydemir (Gökdoğan) (1910 – 2003) was a Turkish astronomer. One of the first female Turkish academics, she was the first female Turkish astronomer and the first female dean. After graduating from high school, Gökdoğan was sent to France to study mathematics and physics on a government scholarship in 1928. She returned to Turkey in 1933, having completed degrees in both fields, from the Universities of Lyon and Paris respectively, and with the experience of an internship at Paris Observatory. She was the first Turkish academic to be appointed to Istanbul University’s Institute of Astronomy, where she also aided in the establishment of the observatory on the campus grounds. In 1936, she was appointed to *Yüksek Mühendis Mektebi* as a *müderis muavini*, becoming the first female scholar at that institution. In 1937, she finished her doctoral degree at the Istanbul University Faculty of Sciences (her thesis was numbered “1”, as it was the first doctoral thesis submitted to the Faculty). By 1940, she was an associate professor, and by 1948 a professor. In 1948, she was one of the founding members of the Turkish Mathematical Society, in 1949, the Turkish Women’s Association, and in 1954, the Turkish Astronomical Society. She was the chair of both the Women’s Association and the Turkish Astronomical Society for some time. In 1954, she was also elected the dean of the Faculty of Sciences, and from 1958, remained the Chair of Astronomy for 22 years. She retired in 1980 after serving a second term as dean, and passed away in 2003 (Matematik Dünyası (World of Mathematics), 2003).

Hans Rosenberg (? – 1940 Istanbul) was a German astronomer. While not much is known of his early life, and literature on him is minimal, Rosenberg was unique among the refugee scholars due to the country he emigrated from: unlike many others, who came from Germany, or German-speaking countries in Europe, Rosenberg came to Turkey from the United States. In 1932, he had previously moved to the United States from Germany, going from the University of Kiel to the University of Chicago, which had filled its Astronomy roster with many astronomers of European origin (Reisman, 2006, p. 229). Despite the general unease towards refugee Jewish scholars in the 1930's United States, Rosenberg had found his Chicago University position, mainly due to the liberal beliefs of the Chicago University rector. Yet Rosenberg chose to move to Turkey in 1938. The reasons behind his emigration are not very clear, but Reisman points towards two possible explanations: funding, and the fact that the University of Chicago had already filled a supposed 'quota' of German Jewish scholars. According to Reisman, Rosenberg's stay at Chicago University was dependant on the funding received from primarily Jewish sources, which eventually saw complications, such as the indecision regarding Rosenberg's salary (which was \$4000, while Albert Einstein at the California Institute of Technology received \$15000), the costs of moving his furniture, the works of art he owned, and the astronomy equipment on top of the customs taxes they would entail. Eventually, the funding for Rosenberg at Chicago University began to run dry. Reisman also draws attention to a communications within the Rockefeller Foundation (assisting the funding of German scholars), where a letter by the foundation's Natural Sciences director Warren Weaver wrote, "If we manage to invite Rosenberg, he will become our fifth German professor, and for the time being, this is all we can afford," which points towards an attitude by Chicago University that it no longer wanted to be seen as a 'refugee center' (Reisman, 2006, p. 383).

Perhaps due to the complications he faced in the United States, Rosenberg chose to emigrate to Turkey. The salary offered by Istanbul University was high, especially when compared to the lower costs of living in Turkey, and might have seemed a safer option, because it was completely funded by the state. Additionally, at the time of Rosenberg's emigration, Turkey had already developed a reputation for housing German refugee scholars, so perhaps Rosenberg chose the Turkish option for that reason as well.

At the University of Istanbul, Rosenberg headed the Institute of Astronomy, replacing Erwin Finlay Freundlich and also becoming responsible for the observatory Freundlich had built.

Unfortunately, details on his academic activity at the University of Istanbul are quite lacking, because Rosenberg passed away due to a heatstroke in 1940, two years after his emigration to Turkey.

Wolfgang Gleissberg (1903 Breslau – 1986 Oberursel) was a German astronomer. While not much is known of his life prior to his emigration to Turkey, it is known that Gleissberg was an assistant at the observatory of the University of Breslau, with stellar interiors as his subject of research. Gleissberg was dismissed from his position later due to his Jewish heritage. He arrived in Turkey alongside Erwin Finlay Freundlich in 1934.

In Istanbul, Gleissberg worked as Freundlich's assistant and set on the task of building a curriculum for the Institute of Astronomy. At the Institute, Gleissberg taught spherical astronomy. Gleissberg's courses were initially translated by Paris Pişmiş, but as he remained in Turkey, the refugee scholar soon became fluent in Turkish and carried out his lectures on his own. In 1937, sometime prior to Freundlich's departure from the country, Freundlich and Gleissberg produced a textbook on astronomy for their Turkish students, titled *Astronomi* (Astronomy), which was translated by their then *müderriis muavini* colleague Mustafa Fahir Yeniçay.¹⁴⁹ As Gleissberg became more proficient in Turkish, he became the member of a language commission tasked with discovering (and often inventing) Turkish equivalents to Arabic astronomical terms, and was the only foreigner in the commission (Şen F. , 2008, p. 168).

Gleissberg remained in Turkey for twenty-five years in total, becoming the director of the Institute of Astronomy in 1948. While he held the position of director in short bursts during

¹⁴⁹ Mustafa Fahir Yeniçay (1902 – 1988) was a Turkish physicist. He was a graduate of the French Saint Joseph high school, and later graduated from the Physics-Chemistry department of Istanbul University in 1925. In 1927, he went to France, and earned his doctorate in physics studying under the tutelage of Jean Baptiste Perrin. Yeniçay is credited as being the first Turk with a physics doctorate. In 1930, upon his return to Turkey, he was made an assistant at the department of physics at Istanbul University. The following year, he was an associate professor, and succeeded the French professor Marcel Fouche on the chair of general physics. Yeniçay then became the first scholar to teach particle physics in Turkey. In 1938, he became a professor, and from 1939 to 1948 was the dean of the Faculty of Sciences, as well as rector to Istanbul University from 1953 to 1955. In 1954, Yeniçay took on the newly-established chair of Atom and Particle Physics and held this position until his retirement in 1970. Following his retirement, he was the director of the Çekmece Nuclear Research and Education Center. Yeniçay was highly influential on the entry of nuclear physics into Turkey, and was responsible for the establishment of laboratories and the acquisition of equipment for research on the subject. He was also responsible for the start of night classes at Istanbul Higher Teachers' College. Yeniçay is credited with many valuable publications, including *Fizik Manipülasyonları* (Manipulations of Physics), *Atom Fiziği* (Atom Physics) (2 vols.), *Çekirdek Fiziği* (Particle Physics) (2 vols.), *Elektrik Problemleri* (Issues in Electricity), and *Fizik-Mekanik Problemleri* (Issues in Physics and Mechanics). Additionally, he translated the French physicist Georges Bruhat's books on optics, thermodynamics, and physics mechanics (filozof.net, 2016).

1937-38 (replacing Freundlich) and 1940-42 (replacing Rosenberg), he was not able to take this position permanently earlier because he had not received his doctorate before his arrival in Turkey. When he first came to the University of Istanbul, Gleissberg, was initially employed as an assistant to Freundlich. However, throughout his stay, Gleissberg found the opportunity to advance his academic career, receiving his doctorate and later becoming a full-fledged professor ordinarius. He authored sixty-nine publications published both in Turkish and international journals of acclaim, and found three uncharted planets during his observations; a minor planet discovered in 1937 by Karl Reinmuth at Heidelberg was named ‘Ankara’ on Gleissberg’s suggestion.¹⁵⁰ And as Gleissberg climbed up the academic ladder, so did his Turkish students: Gleissberg raised many Turkish astronomers during his lengthy stay, including Nüzhet Toydemir (Gökdoğan). According to Gleissberg himself, his students and colleagues produced a very harmonious environment of scholarly cooperation in a friendly atmosphere (İlgım, 2011).

Gleissberg brought his European university mentality with him to Istanbul. Perhaps feeling closer to students than most other refugee scholars due to his age and station, Gleissberg was very concerned with getting the students to be more involved in and aware of university workflow. According to an interesting anecdote by İlgım, Gleissberg was very persistent in demanding that the curricula for the Faculty of Sciences be printed out and distributed to the students before each academic semester, which was probably considered a strange practice (and quite possibly, a waste of resources) at the time (Widmann, 1999, p. 346). Allegedly, Gleissberg made this request from the dean every year without fail, but was unable to get his wish granted for many years, and the year he succeeded in convincing him was the year that Zeynep Hanım Mansion burned down—along with the Institute of Astronomy and every hard-earned printout of Gleissberg’s curriculum. This led the flustered dean to remark that “not even God was happy with (the curriculum)”, but nevertheless, Gleissberg was successful in reforming the curriculum for Astronomy, as well as distributing it to his students as necessary.

Outside of academic pursuits, Gleissberg was a founding member of the Turkish Astronomical Society, which was established in 1954. The society, which was led by his student and colleague Nüzhet Toydemir, was responsible for a publication called *Gökyüzü*

¹⁵⁰ (1457) Ankara was discovered on August 3, 1937 by Heinmuth from an observatory at Heidelberg. It can be found listed in the Dictionary of Minor Planets (Schmadel, 1997, p. 186).

(The Skies) and conferences open to the public, the first of which was given by Gleissberg in the form of a lecture on artificial satellites. Gleissberg was given the title of “Honorary President” of the society in 1958.

Gleissberg held the position of director of the Institute of Astronomy until his departure. In 1958, he returned to Frankfurt, where he worked as a professor of astronomy at Frankfurt am Main University. He passed away in 1986 in Oberursel.

3.3.3 Physics

The study of physics was introduced to the Ottoman Empire through *Darülfünun*. When *Darülfünun* was first established, it functioned primarily as an open school conducting public seminars. Primordial *Darülfünun*'s ‘curriculum’ included lectures on the subject of physics, and the first instance of it being taught was in 1863, where the chemist Mehmet Emin Derviş Pasha introduced the concept of electricity via demonstration experiments. In 1885, he published the first book to examine physics, *Usul-u Hikmet-i Tabiiye* (Introduction to the Philosophy of Nature), which became a foundation in the education of the study (Yinilmez Akagündüz, 2013).¹⁵¹ *Darülfünun* always had courses on physics, most commonly under the name *Fizik ve İlmi Ahval-i Cevviye* (Physics and Meteorology). Physics was part of *Fenler Şubesi* (Sciences Department) and later the Faculty of Sciences.

The Faculty of Sciences employed a large number of foreign scholars at its Institute of Physics following *Darülfünun*'s restructuring in 1925. The large majority of foreign scholars invited to teach at the institute were French, and named among them were Pierre Fleury, Raymond Hovasse, François Duscio, Marcel Cau, and Marcel Fouche. After the 1933 reform, the Institute of Physics at Istanbul University traded its foreign French influence for German influence, as all French scholars (except Marcel Fouche) left the university and were replaced by German émigrés.

Harry Dember (1882 Deimbach – 1948 New Jersey) was a German physicist. Born in Deimbach, he was educated at the *gymnasium* in Mansfeld, and studied physics at the University of Berlin, the Technical University of Göttingen and the Technical University of

¹⁵¹ Literally, *Usul-u Hikmet-i Tabiiye* would be “Method in Physical Science”. Akagündüz translates the book as “Introduction to the Philosophy of Nature”.

Dresden. He began his academic career at the Technical University of Göttingen, working as an assistant, and received his *Habilitation* in 1906 working under the physicist Wilhelm Hallwachs. In 1909, he became a *privatdozent*. In 1914, he went to Australia for a research project, having been selected by the United German Academies to head a research group for studies in atmospheric optics and atmospheric electricity on Teneriffe. He could not leave the country until 1918 due to the outbreak of World War I. In 1923, he became the dean of the Faculty of Mathematics and Physics at the Technical University of Dresden, succeeding his mentor Hallwachs. Dember's field of research was the photoelectricity of crystals, and the Dember Effect or Photo-Dember in physics are the names given for his discoveries, in 1925.¹⁵²

Dember came under fire after the *Machtergreifung* in 1933, due to both his and his wife Agnes' Jewish heritage. He was immediately removed from his position at the University of Dresden. The Dember family emigrated to Turkey in the same year, with Harry being offered a professorship at the Institute of Physics of the University of Istanbul. After they left, the Dembers' home in Dresden was seized and sold.

At the University of Istanbul, Dember taught experimental physics as well as general introductory to physics for the students of FKB, the Physics, Chemistry and Biology division in charge of teaching pre-med students and associated minors. Later on, when experimental physics became an Institute in itself, Dember took on its direction. According to Eugen Merzbacher, who was a student of Dember, Dember's courses were styled in "a typical European fashion" (Reisman, 2006, p. 267). Dember's lectures attracted around a thousand students in a large lecture hall. According to Merzbacher, Dember had the habit of rehearsing every one of his 9 AM lectures early in the morning for an hour with his assistant Thomas Mendelssohn, whom he had brought with him from Dresden, and his two Turkish assistants, one of whom was the then associate professor Nusret Kürkçüoğlu.¹⁵³ This habit must have

¹⁵² The photo-Dember effect, in semiconductor physics, is the formation of a charge dipole in the vicinity of a semiconductor surface after ultra-fast generation of charge carriers.

¹⁵³ Nusret Kürkçüoğlu (1910 – 1989) was a Turkish physicist. Educated in the Henry IV Lyceum in Paris, he received a degree in physics from the University of Sorbonne and was certified also for minors in chemistry and mathematics. After returning to Turkey, Kürkçüoğlu started working in Balıkesir as a physics teacher before being appointed an associate professor of physics at the University of Istanbul as per the request of Mustafa Kemal Atatürk himself in 1933. He was later appointed at *Mühendis Mektebi*, which would eventually become Istanbul Technical University, where he led the establishment of its *Temel Bilimler Fakültesi* (Faculty of Fundamental Sciences) and its Faculty of Mining. He served as the dean of the Faculty of Mining and was also the director of the Experimental Physics department under the Faculty of Fundamental Sciences. Kürkçüoğlu was a founding member of the Turkish Physics Society and represented Turkey in the European Physics Society

seemed to Dember's Turkish colleagues as an interesting practice indeed, for prior to Dember there was no example of such behavior in the history of the University of Istanbul. However, if one considers the sheer amount of students Dember's lectures attracted, coupled with the value he put in his work and his desire to pass on his knowledge of physics to his students in the best way possible, this 'peculiar' habit should be understandable. Additionally, Dember transferred to the University of Istanbul not only his determined approach to teaching but also a technological marvel commonly used in Europe: in his lectures, Dember made the use of projectors, to allow easy observation of his demonstrative course. In addition to his lectures (which happened three times a week), Dember also held mandatory laboratory courses, which Merzbacher claims were quite oppressive—Dember would go around from one experiment station to another, probing his students with questions which demanded answers of pinpoint accuracy.

According to Widmann, Dember did not produce much in the way of publications or textbooks during his stay in Turkey (Widmann, 1999, p. 152). One collection of his lecture notes were published by his assistant Kürkçüoğlu, aptly titled *Fizik Hulasası* (A Summary of Physics). Nevertheless, Dember continued his research on the photoelectricity of crystals while in Turkey, becoming more of an authority on the subject despite the limited resources and the help of no one other than his assistant Mendelssohn.

Dember left Turkey in 1940 for the United States, where he took on a professorship at the University of New Brunswick. His assistant Mendelssohn stayed in Istanbul, but passed away in 1942 at 32 years of age. Dember himself passed away in New Jersey in 1948.

Arthur Robert von Hippel (1898 Rostock – 2003 Boston) was a German physicist and materials scientist. Unique among the refugee scholars for his longevity, Hippel was born in Rostock in Germany on October 19, 1898. He graduated from the University of Göttingen with a degree in physics, and trained under many renowned German physicists, the most famous of whom was the Nobel laureate James Franck, who was his thesis supervisor. In 1924, Hippel received his doctorate in physics with a dissertation on a patented Themomicrophone, and moved on to a promising academic career after becoming an assistant

twice. Kürkçüoğlu was a professor to many important Turkish officials, such as Presidents Turgut Özal, Süleyman Demirel, Kenan Evren, and Prime Minister Necmettin Erbakan, as well as the academic Halil İnalçık (Akdeniz, 2015, p. 80).

lecturer to Max Wein at the Institute of Physics of the University of Jena. At the University of Jena, he developed a mercury vapor lamp called the “Hippel Lamp” which was produced by the company Schott-Jena until 1991. After the death of his first wife Marianne, he married his mentor James Franck’s daughter, Dagmar Frank, in 1930.

The Hippel family was targeted by the Nazi government for two reasons: Dagmar’s Jewish heritage, and Arthur’s outspoken political stance against the Nazi regime at the University of Göttingen as well as in the press. Hippel was extended an invitation to join the Institute of Physics of the University of Istanbul, and came to Turkey in 1933.

Upon his arrival in Istanbul, Hippel set on the task of establishing a modern physics laboratory, starting from scratch with almost no equipment or resources. Twenty boxes of equipment were ordered from abroad by Hippel and the deliveries thankfully arrived on time (unlike in most other cases, where shipments would be delayed by the war). The delivery was nonetheless delayed by impervious Turkish customs officials, and this annoyed Hippel greatly. With his equipment held hostage at the border and university management’s pressure to build his laboratory as soon as possible looming, Hippel had to build the laboratory with what resources he could procure. In Hippel’s own words, these resources ended up being the oddest of materials—with their options so limited, Hippel and his technician Rieger ended up procuring things they could dismantle from warship wreckage and the like (Widmann, 1999, p. 263). Though their methods were unconventional, Hippel’s laboratory was the first one prepared for the students at Istanbul University—and von Mises personally commended Hippel for this success.

Hippel led his newly established Institute of Electrophysics only for a year, however. In December 1934, he left for the United States, where he would go to Cambridge and work for the Massachusetts Institute of Technology. Hippel was unhappy with his experience in Turkey, citing the political climate, international intrigue, and a clash with Middle Eastern culture and civilization as factors that made his stay in Turkey very difficult (Widmann, 1999, p. 152). According to Reisman, Hippel’s departure from Turkey was a lost opportunity, and equivalent to letting slip the goose that laid golden eggs—as Hippel later made astounding discoveries in the fledgling field of nanotechnology at MIT (Reisman, 2006, p. 266).

3.3.4 Chemistry

The study of chemistry at Istanbul University, and its historical foundations are very different from other arts and sciences improved and/or established throughout the 1933 reform. In fact, Widmann considers the field of chemistry to be the best example of the effects of the reform (Widmann, 1999, pp. 307-311). Widmann's reasoning for this is as follows: firstly, the field of chemistry received the most prolonged attention from German-speaking refugee scholars, with its reformation starting in 1915, almost two decades earlier; secondly, German-speaking chemistry professors and their work were held in especially high regard by the Turks; and lastly, Turkey had the most resources in the field of chemistry by comparison to other fields.¹⁵⁴

For the study of chemistry, an Institute for General and Technical Chemistry was established in Istanbul between the years of 1915 and 1918. This institute was itself related to the 'German Education and Culture Institute' that was established in Istanbul shortly after the Ottoman Empire's inclusion in World War I, and entailed a German-influenced education reform through the appointment of German scholars in Ottoman schools, with the goal of establishing a German university in Turkey as well. Completed with the efforts of a large group of Turkish and German professors like Fritz Arndt (Anorganic Chemistry), Kurt Hoesch (Organic Chemistry) and Gustav Fester (Industrial Chemistry), this institute's initial goal was to raise a generation of Turkish chemists for industrial development.¹⁵⁵ It was situated in Yerebatan in Sultanahmet, and tools and equipment resources were brought in from Germany, forming the capable Yerebatan Chemistry Institute. When the German Education and Culture Institute was shut down due to obvious political reasons after World War I, the German scholars had to vacate the country as per the Mudros armistice, and education continued through the efforts of Turkish professors. In 1926, a culture pact signed between France and the Ottoman Empire introduced a French approach to the study with the arrival of Michel Faillebin and Gabriel Valensi.

¹⁵⁴ According to Dölen, Widmann's statements are true, but need some revision. While he agrees that Turkey did have a considerable amount of academic resources devoted to the field of chemistry (especially in proportion to other sciences), Dölen considers the regard for German-speaking chemistry professors to be largely based on the magnetic personality of reform forerunner Fritz Arndt, and the unflinching admiration he received from his colleagues Muvaffak Seyhan and Baha Erdem (who were educated abroad in Germany and would, apparently, often speak and write enthusiastically about him). While he acknowledges Arndt's popularity, Dölen remains dismayed that Widmann disregards the French and British scientists who were working in the field of chemistry during the same reform years (Dölen, 2010b, p. 423).

¹⁵⁵ It may be worth mentioning that a large number of the Turkish professors working at the Institute were also educated abroad, often in Germany.

In 1933, the reform decreed that the Institute of Chemistry would be reorganized in three institutes. Fritz Arndt (who had returned to Turkey, though this time as a refugee fleeing Nazism) held the directorship of General Chemistry, Reginald Herzog the directorship of Industrial Chemistry, and Gabriel Valensi the directorship of Physical Chemistry.

Fritz Arndt (1885 Hamburg – 1969 Hamburg) was a German chemist. He was among the scientists who had previously been invited to work at the *Darülfünun* in 1914; according to Neumark, he was the “only exception among the refugees... being the only one who wasn’t a complete stranger to the country” (Neumark, 1982, p. 42). After returning to his post at the University of Breslau, Arndt was among the first to lose his job after the *Machtergreifung* and the *Berufsbeamtengesetz* that followed. After spending a year at Oxford University, Arndt was invited to take the position of chair at the newly instated department of Chemistry in the University of Istanbul in 1934. Later in his life, Arndt would be hailed as “the man who brought modern chemistry to Turkey”.¹⁵⁶

Arndt’s international publications previous to his work in Istanbul University included his chemistry textbook *Kurzes Chemisches Praktikum für Mediziner und Landwirke* (Short Practice of Chemistry for Agriculture and Medicine) (1912), and *Über aromatische Isothioharnstoffe und Orthothiokohlensäureester* (On Aromatic Isothioureas and Orthothiocarbonic Esters) (1912). It was especially fortunate that, as he had previously spent time teaching in Turkey, Arndt was no stranger to the Turkish language. In fact, he strongly advocated the refugee scholars to teach the Turkish students in their native language, and never opted for translator-assistants. In his own words, Arndt considered this method to be preventive of all interpersonal relationship building between the teacher and the student, claimed that it was impossible to ascertain whether or not the translator was doing a good job, and noted on the nonsensicality of a translation being given as background noise while the

¹⁵⁶ Emre Dölen, who is known as being among Turkey’s most prominent historians of science (and also has a foundation in chemical engineering), offers a counterpoint to this widely-known title, and offers a scathing criticism of Arndt and his work during and after the 1933 reform. Dölen claims that the “Golden Age of Chemistry” in the reform was not a golden age at all, and altogether takes issue with what he considers the “Arndt Myth” (Dölen, 2010b, pp. 451-463). While too lengthy to elaborate in much detail, Dölen’s criticisms of Arndt are of: an insistence towards teaching branches of chemistry he was not altogether proficient in, animosity towards French professors and students who had been raised in French-influenced circles, deliberate prevention of Turkish students from achieving doctorates, and a focus on linguistics work (due to his skills in the Turkish language) as opposed to chemistry.

professor conducted experiments that required the student's complete attention (Dölen, 2010b, pp. 83-84).

For his Turkish students, Arndt translated his chemistry textbook as *Kısa Kimya Tatbikatı* (A Short Practice of Chemistry) (Istanbul 1934), and later continued to publish more chemistry textbooks in Turkish, such as *Gayri Uzvi Kimyadan İlk Tatbikat* (First Practice of Inorganic Chemistry) (Istanbul 1935), eventually collaborating with his Turkish students in *Anorganik Kimya Başlangıç Laboratuvarı* (Inorganic Chemistry Startup Lab) (Istanbul 1945-46, with Dr. Lütfi Ergener and Melike Ergener), *Yeni Denel Organik Kimya* (New Experimental Organic Chemistry) (Istanbul 1950, with Asst. Prof. Lütfi Ergener). Arndt collaborated with Turkish scholars on many other papers and publications (Universität Hamburg, 2013).

Arndt's fellow scholar, the associate professor Lotte Loewe, also came to Istanbul from the University of Breslau with emigrant status and worked alongside him until 1954.

The department of chemistry that Arndt led eventually produced the following Associate Professors: Remziye Hisar, Ayşe Saffet Rıza Alpar¹⁵⁷, Tahsin Rüştü Beyler, Tarık Artel, Ali Rıza Berkem and Turhan Şeşbeş.¹⁵⁸ The chemistry department also listed scholars such as Cemil Dikmen, Baha Erdem, Muvaffak Seyhan and Raşit Tolun, and awarded doctorates and teaching positions to alumni such as Emin Ulusoy, Haldun Nuzhet Terem, Lütfi Ergener, Ertuğrul Ayça, Reşat Ün, Sacide Baykut, Mualla Tuğtepe, Emin Dikman, Fikret Baykut, Turgut Artun, Talat Erben and Turgut Noyan.

Together with several colleagues and other *Heimatlos*, Arndt founded a private academy, and upon request from the Turkish education ministry worked to translate and replace old Arabic chemistry symbols with internationally acknowledged ones. Arndt left Turkey in 1955.

¹⁵⁷ Ayşe Saffet Rıza Alpar (1903 – 1981) was a Turkish chemist. One of the first female chemists in Turkey, Alpar was the daughter of Hasan Rıza Pasha, who was an Ottoman military general and statesman. Alpar graduated from the Institute of Chemistry at Istanbul University, and became a teaching assistant to Reginald Herzog as well as Philipp Gross. She earned an associate professorship, and later professorship, from Istanbul University, focusing on industrial chemistry. Alpar later moved to Karadeniz Technical University, where she became the dean of its Faculty of Chemistry in 1972-74, and later became its rector, effectively becoming Turkey's first female rector (Kurun, 2015).

¹⁵⁸ Perhaps it is worth noting here that Prof. Dr. Mehmet Doğan, who himself is a third-generation scholar from the Istanbul University chemistry department, notes with pleasure that two of the aforementioned associate professors were women.

Hans Dietrich Kroepelin (1901 Berlin – 1993 Braunschweig) was a German professor of chemistry. Born as the son of a wealthy banker and part-time writer, Kroepelin received his primary education through homeschooling, attended gymnasiums in Waren and Wilmersdorf, and studied Physics, Chemistry and Mathematics at the University of Freiburg in Breisgau. Setting his career goals in academia, Kroepelin furthered his education at the Technical University of Berlin with a focus on physical chemistry. He later entered the Kaiser Wilhelm Institute of Physical Chemistry in Berlin and researched chemical kinetics and thermodynamics while being employed as a teaching assistant. In 1926, he received his doctorate with a thesis on the “Interpretation of the Second Law of Thermodynamics”. He later moved to Erlangen and became a research associate at the chemistry laboratory there, studying the structures of colloids such as caoutchouc solutions (natural rubbers) and researching flow and viscosity behaviors in liquids (Schügerl, 1994). Later on, he moved his research to Göttingen, and received his *Habilitation* in 1930 with a post-doctoral thesis on “The flow of colloids that show resistance anomalies”. He continued to work on colloid chemistry, this time on the reactivity of atomic hydrogen.

Persecuted for his Jewish descent, Kroepelin moved to Istanbul in 1935, having been contracted by the Turkish government to work as a professor of general chemistry at the University of Istanbul. Meanwhile, the Nazis were striking his name out of Göttingen University’s *venia legendi*. In Istanbul, Kroepelin worked for the Physics, Chemistry, and Biology education division for pre-med students, and was also responsible for Chemistry minors. These students, who numbered roughly around a thousand, were too much for the previous director, Fritz Arndt, to handle (as Arndt had other responsibilities in general chemistry). Kroepelin shortly held the position of director of this division to alleviate these responsibilities.

In an interesting decision, Kroepelin returned to Germany in 1944, with intentions to head the main laboratory of the Braunkohle-Benzin AG (BRABAG) in Schwarzheide (Schügerl, 1994, p. 186).¹⁵⁹ The reasoning behind Kroepelin’s employment at BRABAG—a Nazi military

¹⁵⁹ Braunkohle-Benzin AG, often coined BRABAG, was a German firm that operated from 1933 to 1945. It was an industrial cartel closely supervised by the Nazi regime, and its main purpose was to supply commodities vital to German military forces, such as aviation fuel, diesel fuel, gasoline, lubricants, and paraffin wax, produced from brown coal (‘Braunkohle’) and gasoline (‘Benzin AG’). BRABAG was assigned a significant quota of slave labor, with an estimate of 13000 concentration camp laborers. It was among the targets of the oil campaign of World War II, and was bombed strategically by the United States Air Force to cut off

supply company—is uncertain. However, it appears that Kroepelin started working at BRABAG out of his own volition, if his arrest, which occurred shortly after his return, is of any indication. Kroepelin was abducted by the Gestapo almost immediately after returning to Germany and starting his job at BRABAG, and was given to slave labor. The fact that he was arrested after taking a position as the head of a military laboratory suggests that he was not placed at this relatively important position BRABAG involuntarily—not to mention that it would be bizarre for the Nazi government to place a known Jew in such a position in the first place. It may have been possible that Kroepelin attempted to fly under the Nazi radar with poor results. Fortunately, Kroepelin was freed from slave camp in 1945, and after the war, was given a position in Erlangen University as the director of Applied Chemistry.

Richard Weiss (? - ?) was an Austrian chemist. Available information on Weiss is minimal, but it is known that Weiss was a refugee professor from Vienna. He arrived in Istanbul in 1938, and was a colleague to Kroepelin in handling Physics, Chemistry and Biology and its pre-med/minor focus on Chemistry. According to Widmann, he remained in Istanbul for a very short while, leaving Turkey in 1939 for Manila on an exile's journey (Widmann, 1999, p. 66).

Friedrich Ludwig Breusch (1903 Baden – 1983 Basel) was a German biochemist. Born in Baden in Profzheim, Breusch was educated in a gymnasium in Freiburg and later studied chemistry at the universities of Munich, Freiburg, Giessen and Vienna. Between 1927 and 1929, Breusch worked with nobel laureate Hermann Staudinger, and from 1930 until 1935 led the Chemistry department of the Institute of Pathology at Freiburg University.

Breusch became a refugee in 1935. The reasons behind his exile remain uncertain, as Breusch was a member of the so-called 'Aryan race'. Dölen draws attention to the vagueness of Breusch's reasons for exile in the literature concerning the German-speaking refugees, and says that Baha Erdem, at some point, had told him that Breusch had been a partisan of Ernst Röhm, who was the targeted Sturmabteilung (SA) leader that Hitler had executed during the Night of the Long Knives (among, of course, others) (Dölen, 2010b, p. 475). Dölen claims that Breusch fled Germany on the 29th of June, just one day before the Night of the Long Knives actually began.

petroleum/oil/lubrication facilities supplying Nazi Germany, sustaining substantial damage and dissolving the company after the war.

Breusch evaded the Nazis by moving first to Switzerland, then to Hungary, where he worked with the nobel laureate, Szent Györgyi at Szegeed University. Eventually, he settled in Istanbul in 1937. Breusch was initially employed by the Faculty of Medicine of Istanbul University, working with Felix Haurowitz in the Institute of Biochemistry. Breusch later established a new institute which would be nicknamed “the 2nd Chemistry Institute”, out of the Physics, Chemistry and Biology pre-med and minor courses previously taught and handled by Arndt, Kroepelin, and Weiss. He became the director of this institute.

In the 2nd Chemistry Institute, which remains to this day, Breusch took on the lengthy task of educating a new generation of Turkish chemists, working as both an active teaching professor and director for 31 full years from 1940 to 1971. During this period, Breusch provided a platform for intensive academic study, and in his own research took on the subjects of homologous series and organic isomers, producing 110 publications (Dölen, 2010b, p. 474). Among these publications were Breusch’s textbooks prepared for his Turkish students, such as his popular *Genel Anorganik Kimya* (General Inorganic Chemistry), which was published in 1942 after being translated by the then associate professor Rasim Tulus. Breusch also oversaw the preparation and defenses of many doctorate and associate professorship theses.

In addition to his academic work at the 2nd Chemistry Institute, Breusch also devoted himself to German culture in Istanbul. According to Widmann, the German High School in Istanbul should give thanks to Breusch for being able to open its doors again so quickly after World War I (Widmann, 1999, p. 154).

Breusch retired in 1971 at age 68, the legal retirement age in Turkey. After his retirement, he went to Basel, Switzerland, where he lived out the rest of his life. He received an honorary doctorate from Istanbul University in 1973, and passed away, peacefully, in 1983.

Reginald Oliver Herzog (1878 Vienna – 1935 Zurich) was an Austrian physical chemist. Born as the son of a journalist, he began his studies in chemistry in the Technical University¹⁶⁰ of

¹⁶⁰ Herzog graduated from the *Technische Hochschule* in Vienna. A *Technische Hochschule* would have been considered the equivalent of an Institute of Technology, i.e. a university with a focus on engineering studies. Most German *Technische Hochschule* changed their names to *Technische Universität* in the 1970s. A Turkish equivalent would be *Teknik Yüksek Okulu* (Technical Schools). However, the Turkish technical schools typically connoted high schools rather than the university level. Some of these schools were capable of graduating

Vienna, graduating in 1901 with a doctorate. After working at the Technical Universities of Karlsruhe and Berlin, he became a professor at the Technical University of Prague in 1912. He later became a member of the Kaiser Wilhelm Society for the Advancement of Science, and worked at its Institute in Berlin-Dahlem. Herzog spent a considerable amount of time researching during World War I, working together with a group of scientists on the material for gas masks and later taking over the management of the Institute of Fiber Chemistry to resolve issues related to the scarcity of textiles faced by Germany during the war. Herzog's field of research was physical analysis methods and, during his time examining textile fibers, he was the first to discover the crystalline structure of cellulose, using techniques of powder and fiber diffraction.

Herzog had to emigrate from Germany in 1933. Herzog's reason for being pushed out of his position as a researcher was somewhat unique—he was removed from his post due to being 55 years of age, which the *Berufsbeamtengesetz* considered too old for service. Herzog chose to leave. In Istanbul, Herzog directed the Institute for General and Technical Chemistry, which had been previously established inside the Yerebatan Institute during World War I. With him, Herzog brought the chemist Bruno Rabinovitsch, who also worked at Istanbul University as an academic aide.

Herzog's stay in Istanbul was very short. Having been depressed for a long time after learning that his textile research institute in Germany had been shut down due to financial issues, he committed suicide in Zurich in 1935 during a vacation. His aide Rabinovitch also left for the United States in 1938.

Philipp Gross (1899 - ?) was an Austrian chemist. While information on Gross is scarce at best, it is known that he originated from the University of Vienna, where he was a *privatdozent* and the head of the chemistry laboratory of the Theoretical and Physical Chemistry.

Gross chose to leave his position in Vienna due to both his own and his wife's Jewish heritage. Though he didn't practice Judaism, and his wife was a converted Catholic, Gross

engineers, and were raised to university level and renamed as a result. For example, *Yıldız Teknik Okulu* (Yıldız Technical School) graduated engineers with its Technical School title, but later became *Yıldız Teknik Üniversitesi* (Yıldız Technical University). Similarly, *Maçka Teknik Okulu* was graduating engineers, and was then dissolved into the Istanbul Technical University, becoming its Faculty of Engineering and Architecture.

became aware of the mounting pressure, and emigrated to Turkey shortly before the *Anschluss* in 1938.

In Istanbul, Gross replaced Reginald Oliver Herzog as the director of the Institute of General and Technical Chemistry. As a professor, he produced a textbook in chemical engineering, *Kimya Mühendisliği Dersleri* (Lectures on Chemical Engineering), which were translated by his Turkish students and assistants Ayşe Saffet Rıza Alpar and Jülide Deymer. Also, in 1938, an assistant arrived in Istanbul for Gross, the chemist Hersch, who later left for the United States.

Gross left Turkey for England in 1939, where he became active in industry rather than academia.

3.3.5 Biology

The study of biology at the University of Istanbul has its foundations in the *Tabiiye* (Natural Sciences) department of the *Darülfünun*. Biology in the *Darülfünun* was taught in the form of courses on plants and animals within the *Tabiiye*. These courses were, however, not very extensive, and could be considered an underbranch of the study of medicine in *Darülfünun*. Hekimbaşı Salih Efendi, a graduate of the *Mekteb-i Tıbbiye-i Şahane* and the chief medical physician for the Sultan, was responsible for most biology education in *Darülfünun*, having been appointed to *Darülfünun* as an instructor of botany.

The department of Biology was largely restructured and reestablished during the 1933 reform. After the reform, the department was split into three institutes. Two of them were based on botany (Pharmacobotanics and Genetics, Systematics and Physiological Botanic) and the other based on zoology. The department of Biology was initially situated at the Zeynep Hanım mansion with the rest of the Faculty of Science, occupying three rooms in the mansion. The department later moved to a new building near the Süleymaniye Mosque in 1937, after rightful complaints from the refugee professors on the mansion's insufficiency. These departments held considerable refugee scholar influence, as the refugee professors established them upon their arrival.

André Naville (? – 1937 Istanbul) was a Swiss zoologist. Information on Naville is extremely limited, but it is known that Naville came to the University of Istanbul from Switzerland, where he had been hiding alongside Leo Brauner and Alfred Heilbronn (who would eventually join him at the University of Istanbul). According to Widmann, Albert Malche was likely responsible for the negotiations that led to Naville's arrival, through the Emergency Committee for German Scientists Abroad (Widmann, 1999, p. 157).

Naville was tasked with the directorship of the Institute of Zoology at Istanbul University. While not much is known of his academic activities within the institute, Naville is credited with the 1935 establishment of the Museum of Zoology belonging to the Institute, alleged by some to be the first Zoology Museum of Turkey.¹⁶¹ Initially, it occupied the same floor as the Department of Biology at the Faculty of Sciences. The Zoology Museum nevertheless held a number of zoological samples, e.g. singing birds brought with their cages from Yıldız Palace, and would eventually have room to grow. The museum also received birds as gifts from Germany and France.

Naville did not have the chance to stay in Istanbul for very long, hence the limited information on his life and activity. He died of typhus in 1937, and Curt Kosswig took his place as director of the Institute of Zoology.

Curt Kosswig (1903 Berlin – 1982 Hamburg) was a German zoologist. Widely renowned in Turkish academic circles as the “Father of Turkish Zoology”, Kosswig was born in Berlin and spent his early life there, graduating from a *gymnasium* in Schöneberg in 1922. He later entered Berlin University, where he received education in philosophy and natural sciences, with a focus on zoology and genetics. After receiving his doctorate in 1927, he entered academic life as an assistant at the University of Münster, and was an associate professor at the Zoology Institute of the same university by 1930. In 1933, he was appointed as an extraordinary professor in the department of General Biology and Zoology at Braunschweig Technical University. By 1937, he was appointed as the head of the Natural History Museum in Braunschweig (Bluepoint, 2006). In Germany, Kosswig was considered an authority not only on the subject of zoology but also in genetics and cancer research. His subjects of research included taxonomy, sex determination mechanisms, irreversible and constructive evolution,

¹⁶¹ Incidentally, the French Saint Joseph High School had a museum for Anatolia's zoologic and botanic history since its establishment in 1870. Therefore, Naville's museum may not be *the* first zoology museum in Turkey.

genetics of domesticated animals and cancerous growths, as well as the history of fauna and zoogeography. Kosswig was also renowned for his trademark systematic approach in his research.

Kosswig was not targeted by the Nazis like most refugee scholars for racial, religious or political purposes, at least not initially. He was neither of undesirable heritage nor openly opposed to National Socialism. In fact, while he had been *parteilos* (not a party member) during the time of his appointment as professor at Braunschweig Technical University in March 1933 (during the time of the *Machtergreifung*), he was made a member of the Schutzstaffel (SS) later in November of the same year. For several years, he also worked as an instructor for the SS-led *Rasse-und Siedlingsamt* (Race and Resettlement Office) led by Richard Walther Darré, and was expected to teach *Rassenkunde* (Racial Theory) and *Gesellschaftsbiologie* (Societal Biology) to students, other party members, and the general population (Larink, 2008).¹⁶² Kosswig, however, had qualms about doing so, as well as his working for National Socialism. He left the party in 1936, and with doubts concerning Kosswig's commitment mounting, the National Socialist Ministry of Education launched an investigation on Kosswig in 1937 on the grounds that he refused to cut off contact with his displaced academic colleagues. The party descended on Kosswig for keeping his undesirable friends and associating with Jews, and his refusal (or plain hesitation) to fire his Jewish employees eventually warranted a direct ultimatum from the *Reichsminister* of Education. In the same year, an invitation to take up the directorship of the Institute of Zoology at Istanbul University reached a very stifled and threatened Kosswig, and he readily accepted the offer, only to be withheld by the Nazi authorities at the door.¹⁶³ He had to resign and flee to Istanbul alone, leaving his family behind in Germany. Kosswig's wife Leonore and their children were temporarily trapped in Germany as Nazi officials revoked their passports following his emigration; they could only follow Kosswig into Istanbul towards the end of 1937.

¹⁶² Richard Walter Darré (1895-1953) was the *Reichsminister* of Food and Agriculture from 1933 to 1942. He was one of the Nazi regime's most prominent *Blut und Boden* (Blood and Soil) ideologists, an SS-*Obengruppenführer* (Senior Group Leader), and the seventh most senior officer of the SS. By the end of World War II, he was second only to Heinrich Himmler and the four SS-*Oberst-Gruppenführer* (Supreme Group Leader(s)). After the war, he was one of the 21 ministers tried at the Nuremberg Trials, and was sentenced to seven years at Landsberg Prison. He was released in 1950, and later died in 1953 of liver cancer.

¹⁶³ There is information in some literature on Kosswig to the effect that Herbert Scurla, the Nazi official who authored the famous Scurla report on the émigré scholars in Turkey, asked the Nazi government for Kosswig's denaturalization after observing him in Turkey. According to Şen, this issue suffers from misinformation. He claims that Kosswig was never denaturalized by the Third Reich, and that this ironically makes the 1943 call to arms issued to him (and all able-bodied male German citizens both in-country and abroad) legally sound. Kosswig, obviously, refused this call; Şen expresses surprise at how Kosswig *wasn't* denaturalized for doing so (Şen F. , 2008, p. 183).

Kosswig settled into his new life in Istanbul quite easily. Taking over the Institute of Zoology, Kosswig directed his department with diligence and success, and became regarded as a prominent authority on the subject of zoology. He quickly became fluent in the Turkish language, lecturing students of biology and pre-med in natural sciences without the aid of translators within two years.¹⁶⁴ Kosswig then set out to publish textbook after textbook on zoology, which were targeted at both university and high school levels. His first textbooks, *Hayvanat Notları* (Lecture Notes on Zoology) and *Hayvanat Hulasası* (Summary of Zoology) were published in 1937 and 1938 respectively. Later, he published his popular textbook *Umumi Zooloji* (General Zoology) in 1941 with assistance from Melahat Çağlar and Saadet Ergene, which was republished five times, the last two co-authored with Atıf Şengün. A textbook on genetics, *Principia Genetica*, which he co-authored with Alfred Heilbronn in 1947, was also the first genetics textbook in Turkey. Also, for the consumption of the general public, Kosswig established the journal *Biyoloji* (Biology), and published more articles in the journals *Balık ve Balıkçılık* (Fish and Fishery) and *Hidrobiyoloji* (Hydrobiology), both of which also had his hand in their making. According to Widmann, many of the zoology professors and associate professors in Istanbul, İzmir and partially Ankara are the academic legacy of Kosswig (Widmann, 1999, p. 158). His known students include Melahat Çağlar, Saadet Ergene, Atıf Şengün, Fazıla Şevket Giz (who succeeded Kosswig following his departure), Fahire Battalgil, Saadet Bayramoğlu, Bedia Bozkurt, Neriman Konuralp, Melekper Öktay, Saime Özarslan, Nezihe Öztan, Salahattin Okay, and Füzüzan Sözer, among others.

Kosswig's contributions to the study of zoology in Turkey accumulated over time. During his seventeen years of service in Turkey, he contributed a great many things to the study of zoology in Turkey. Undisputedly, however, his most famous contribution was his discovery of the Manyas *Kuş Cenneti* (Bird Paradise), now a National Park in Balıkesir. On a field trip with his students (and his wife Leonore Kosswig, who was also a biologist and an aide in his research) in 1938, Kosswig discovered that the delta around the Sığırcı stream to be a habitat for many species of migratory birds. Shocked to find out that the local villagers had hired hunters to keep the birds away from their trees, Kosswig devoted himself to the protection of

¹⁶⁴ In memoirs given in the 2nd Turkish-German Medical Relations Symposium, Kosswig lamented the fact that while most emigrants had learned the Turkish language after some time, none of them could properly acquire a Turkish accent. Apparently, in Kosswig's case, he would immediately be recognized as "Professor Kosswig" after speaking but a simple greeting into his phone.

the area. After some observation, Kosswig found that the migratory birds were responsible for the consumption of parasitic insects in the trees and were therefore beneficial. He relayed this information to the villagers, and also informed not only locals but also officials in Ankara about the region, writing reports on his findings in the area and delivering them directly to Ankara. Although it happened slowly, Kosswig's efforts bore fruit eventually. Manyas *Kuş Cenneti* was kept in its natural state, and Kosswig's Institute of Zoology built a research station in the area in 1952, before finally being given a National Park status by the Ministry of Forestry in 1959. According to Widmann, Kosswig's efforts with Manyas resulted in a general acceptance in Turkey of the idea of untouchable nature reservation areas and national parks (Widmann, 1999, p. 158).

In addition to this famous discovery, Kosswig made many other contributions to the development of zoology in Turkey. During his years of service, Kosswig was a natural contributor to the Zoology Museum at the Faculty of Sciences of Istanbul University, and made a great number of additions to expand its inventory (Özuluğ, Dökümcü, & Kaya, 2013). In 1949, Kosswig established the Turkish Biology Association alongside Hans Winterstein, Leo Brauner and Alfred Heilbronn. In 1950, Kosswig expanded the Institute of Zoology, adding an Institute of Hydrobiology, which would become a research center for fishery, situated in Baltalimanı, with modern laboratories, an expansive library, and three research boats (which were admirably named *Gezer*, *Görür*, and *Bulur* – “(She) Travels”, “(She) Sees”, “(She) Discovers”).¹⁶⁵ The Institute remains to this day under the name *İstanbul Üniversitesi Deniz Bilimleri ve İşletmeciliği Enstitüsü* (Istanbul University Institute of Marine Sciences and Management), and the R/V *Arar*, a research boat previously used by Kosswig, remains in the possession of the institute. With fishery as a favorite subject, Kosswig was responsible for introducing new species of fish to various Turkish rivers and lakes, as well as the identification and classification of species already present.

Kosswig also went on many research trips around the country, more than as is evidenced by his *Kuş Cenneti* discovery—he traveled Anatolia almost in its entirety, and was even given special leave to go and research beyond the Euphrates river.¹⁶⁶ On his research trips, Kosswig also studied Anatolian biogeography and taxonomy, identifying new species and classifying

¹⁶⁵ If the boats in question were named after Kosswig to honor his many travels through Turkey, surely it would be more apt to refer to them in the masculine... however, this is uncertain.

¹⁶⁶ Following the Sheikh Said rebellion in 1925, trips further east of the Euphrates region by non-Turkish nationals were disallowed.

them. A photo Kosswig took of the Anatolian leopard in 1949 is claimed to have been the first live sighting of the species.¹⁶⁷ Eventually, one of his research projects led him to find a bigger research project on the zoogeography of not only Anatolia, but the entire Middle Eastern region. He directed his students towards the subject, invited international experts on taxonomy groups, and negotiated for a UNESCO-supported symposium, which was held at Istanbul University in 1954. Reisman commends Kosswig's ability to make this possible in a time of great political tension in the Middle East (Reisman, 2006, p. 92).

After the war, Kosswig was extended an invitation by the University of Hamburg in 1955. Accepting a professorship there, he moved back to Germany with his family and held an ordinarius professorship position in Hamburg for fourteen years before retiring. He did not stay in Germany permanently, however. Having become quite attached to Turkey, he returned in 1970, and even worked as a guest professor at Erzurum Atatürk University for some time. Later, he took on an advisory position to his former Institute of Zoology and Hydrobiology at the University of Istanbul. He received the title of Dr. Honoris Causa from Istanbul University for his contributions to zoology in Turkey, as well as his rearing of more than one generation of Turkish zoologists. He lived out the rest of his retirement at his home in Bebek. And while he passed away in Hamburg in 1982, he returned to Turkey again—as per his wish. Curt Kosswig is interred at the Aşiyen Cemetery in Bebek, together with his wife Leonore.

Alfred Heilbronn (1885 Fürth – 1961 Münster) was a German biologist. Born to a wealthy industrialist family in Fürth, he received his secondary education in Nürnberg before moving on to Ludwig-Maximilian University in Munich, where he studied natural sciences. He received a doctorate in botany, physics and chemistry in 1909, and continued a career in academia in the same university, with some incursions made to Münster and Monaco. After receiving his *Habilitation* in 1914, Heilbronn took a directorship position at the University of Münster, leading the department for Botany, as well as its botanical garden. He was appointed an associate professor in 1921.

Like some other refugee scholars, Heilbronn was deemed undesirable for more than one reason. He had been a member of the German Democratic Party and was politically opposed to national socialism, and although he had converted to Protestantism, was born to a family of

¹⁶⁷ The photo, along with other photos of Kosswig and an overview of his contributions to the University Reform can be found at (Özer, 2015).

Jewish origin.¹⁶⁸ After the *Machtergreifung*, Heilbronn was the target of protests and boycotts at the University of Münster. He was promptly removed from his post on grounds of the *Berufsbeamtengesetz* and his name was struck from the *venia legendi* of the university.

Heilbronn was invited to Istanbul University in 1933. He arrived the same year, coming from Switzerland, and established the Institute of Pharmacobotany.¹⁶⁹ At Istanbul University, Heilbronn learned Turkish relatively quickly, soon becoming fluent enough to teach his lectures in the language. Aided by capable student-assistants like Sara Akdik, Heilbronn authored textbooks on the study of botany and pharmacology, such as *Nebat Biyolojisi* (Plant Biology) and *Botanik ve Genetik'e Giriş* (Introduction to Botany and Genetics), among others. His known students, other than Akdik, were Nebahat Yakar-Olgun and his assistant Mehpare Başarman (whom he married in 1948 after the death of his first wife). Akdik replaced him at the Institute of Biology after his departure.

Heilbronn's biggest contribution to the study of botany at the University of Istanbul was the establishment of a Botanical Garden at Süleymaniye. In an interview to the Turkish medical journal, *Tıbbiyeli*, Heilbronn noted the difficulties he faced when he took on the leadership of his fledgling department of Pharmacobotany. In his own words, Heilbronn recounts that he found himself directing an institute that was only as big as the three rooms he was given, despite having almost a thousand students, whom he lectured daily at the hippodrome of the Zeynep Hanım mansion (Widmann, 1999, p. 156). Heilbronn's complaints reached the government, and he was given permission to build a new Institute, as well as a botanical garden. The botanical garden was a joint effort by fellow biologists André Naville, Leo Brauner and the architect Egli, and was planned by Walter Stefan. The construction of the institute building and its garden was completed—perfectly, in Heilbronn's own words—by 1937. It was filled with samples of plants and flora from all over Turkey (some of which Heilbronn collected himself, as he is reported to have been particularly fond of traveling and researching around the Marmara Region and especially Uludağ). The botanical garden remains to this day, having been given the full name *İstanbul Üniversitesi Alfred Heilbronn Botanik Bahçesi* (Istanbul University Alfred Heilbronn Botanical Garden) in 2003. It is

¹⁶⁸ It should be noted that members of the Jewish community were not allowed to take teaching positions in German universities before 1918, and according to Herbert Scuria, Heilbronn was considered for a position at the University of Münster only because he had converted to Protestantism (Şen F. , 2008, p. 170).

¹⁶⁹ Also according to Scuria, Heilbronn's employment at the University of Istanbul was promoted by German officials on the grounds that it would be competitive against French influence at the University of Istanbul.

comprised of the two-story building constructed in 1937 and its 15000 square-meter garden, seven greenhouses, 23 pools and dozens of parcels, where it houses samples of plants found in Turkey and in the world. It receives up to 25000 visitors a year, and is still used by the Istanbul University Department of Biology (Today's Zaman, 2010).¹⁷⁰

Heilbronn was denaturalized by the Nazi government in 1941. After being *Heimatlos* for five years, he applied for Turkish citizenship in 1946, which he was given. Heilbronn had settled quite easily into life in Turkey, and worked at his Institute of Botany until his retirement in 1956. He returned to Germany at nearly 70 years of age, teaching in retirement at the University of Münster as an Emeritus. He passed away in 1962.

Leo Brauner (1898 Vienna – 1974 Munich) was an Austrian biologist with a focus on botany and plant physiology. While not much is known of his early life, Brauner is known to have originated from the University of Jena. At the University of Jena, Brauner had been a professor with many years of experience under his belt, and before his exile, was soon to become an ordinarius professor.

Brauner was removed from his position at the University of Jena due to antisemitic reasons. He moved to Oxford University in the same year, taking on a visiting professorship in the boundaries of a research project. An invitation from Istanbul University reached Brauner in October 1933, and he emigrated to Turkey with his family, including his wife Marianne, who was also a botanist, and his elderly parents.

At the University of Istanbul, Brauner took on the direction of the Institute of Systematics and Physiological Botany. During his time in Turkey—which spanned twenty-two years—Brauner became highly respected for his devoted attitude, success in both teaching and research, and his many years of service. Brauner is credited with the rearing of many young

¹⁷⁰ The allocation of the Botanical Garden to the Istanbul Mufti's Office was considered in 2013, which sparked controversy. According to the Head of Religious Affairs, the garden is situated in an area that belonged to the Shaykh al-Islam in Ottoman times, and Recep Tayyip Erdoğan, who was the Prime Minister at the time, was reported as wanting to revive history there. The idea was heavily criticized, with academics marking that the garden has been used by the University for over sixty years, and construction in the area would cause irreversible damage to the botanical samples stored and maintained inside—in addition to the criticism that the prospective construction project would likely involve privatization for a hotel, residence or mall project based on the area's high land value of the area (due to its view of the Golden Horn and Bosphorus). Currently, the garden has been legally allocated to the Mufti's Office (leading the current manager of the garden to criticize the fact that its entrance reads "Mufti's Office" when it really is a botanical garden), but no construction project has been started (Demirezen, 2013).

Turkish biologists and botanists, which include names such as Lütfiye Irmak,¹⁷¹ Mürüvvet Hasman, Yusuf Vardar, Necmi Zeybek and Nimet Arslan. Over the years, a variety of textbooks were written by Brauner for his Turkish students. His textbooks on plant physiology, such as his *Nebatların Metabolizma Fizyolojisi* (Metabolic Physiology of Plants) and *Nebatların Büyüme ve Hareket Fizyolojisi* (Growth Rate and Movement Physiology of Plants), as well as his textbook on cryptograms, *Kriptogramların Sistematiği ve Evrimi* (The Systematics and Evolution of Cryptograms) were translated by Lütfiye Irmak. With Mürüvvet Hasman, Brauner also wrote *Tohumla Bitkilerin Sistematiği* (Systematics of Seeds and Plants). Hasman also took over the Institute of Botany after Brauner's departure (though this occurred quite some time later).

Ernst Schneider, a biochemist and botanist, was another refugee who worked with Brauner. He arrived in Istanbul from Breslau in 1934 after being removed from his post due to his Jewish wife. He moved to the United States in 1936. Schneider was replaced by another assistant, the Swiss Kurt Aulrich, who moved back to Switzerland in 1942. Brauner was also aided in his research projects by his wife Marianne, who—similar to the spouses of other refugee scholars—was not in possession of a work permit in Turkey, but was a competent botanist nonetheless. Marianne Brauner later took on a position teaching science (physics, chemistry, botanics and biology) at the English and German High Schools in Istanbul (Koptagel-İlal, 2009-2010).

Alongside his colleagues Heilbronn and Naville, Brauner was one of the biologists that headed the development of the Süleymaniye Botanical Garden.

¹⁷¹ Lütfiye Irmak (1910 – 1963) was a Turkish plant physiologist. A graduate of the Arnavutköy American Girls' High School (which was later merged into Robert College in 1971), Irmak entered the Istanbul University Faculty of Sciences and studied natural sciences while also teaching biology at her old high school. She became an assistant at the Botany department of Istanbul University in 1933, and in 1938 earned her doctorate with a thesis titled "Canlı Nebat Hücrelerinin Şeker Permeabilitesi Üzerine İyonların Liotropik Tesiri" (Liotropic Effect of Ions on Sugar Permeability of Live Plant Cells). The academic work she presented for her associate professorship degree was on the temperature coefficient of water permeability. In 1946, Irmak was sent to the University of Missouri to become a research associate, and in 1947, she started to research at the plant physiology laboratory at Yale University. Irmak's promising career was interrupted, however, and she returned to Turkey after being diagnosed with complications with her kidney. She later went to Munich for treatment in 1950, where she joined the laboratory of the pathology institute at the University of Munich. When she returned, she published her findings, and continued her work at Istanbul University. She had to retire due to health issues in 1961, and passed away in 1963 from Wilson's disease. Irmak was a prolific translator, having translated Brauner's textbooks during her assistantship, and also other plant physiology articles from international literature. She also published an original work, *Botanik Çalışmaları Kılavuzu* (Guide to Botany Studies) with coauthor and former classmate Sara Akdik. Irmak's articles were published in the Istanbul University Journal of the Faculty of Sciences, *Biologi* and the Turkish Biology Journal. Irmak was Turkey's first female plant physiologist (Cumhuriyet, 2011).

Brauner's elderly parents passed away in Istanbul during his time working there. In 1941, Brauner was denaturalized by the Nazi Government, sharing the fate of many other refugees. He was given a professorship at the University of Munich in 1954. The Brauner family moved to Germany in 1955, and Leo Brauner passed away in 1974.

3.3.6 Geology

Institute of Geology of the University of Istanbul was established in late 1934 after negotiations with the geologist Wilhelm Salomon-Calvi, who at the time was employed by the Yüksek Ziraat Enstitüsü (Higher Institute of Agriculture) in Ankara. These negotiations were spurred on through the suggestion of the French professor Ernst Chaput, who was a professor at the institute, as well as its chair. The negotiations did not conclude with the appointment of Salomon-Calvi as the director of the institute as was planned, however; the Minister of Agriculture held on to Salomon-Calvi and refused to send him to Istanbul. In his place, the accomplished Turkish geologist, Hamit Nafiz Pamir was appointed as the director. As such, the Institute of Geology held no German-speaking refugee scholar among its members.

3.3.7 Conclusion

The reestablished Faculty of Sciences employed a very large number of refugee scholars, with almost all institutes being led by them. This is a testament to the technology transfer observed during the 1933 reform, as well as its focus on westernization, in line with Atatürk's reformist ideology. A particular quality of Atatürk's ideology was his positivist approach to natural sciences, which held that natural sciences were the foundation of all science and should therefore be taught and operated objectively—and as Atatürk and his followers saw it, the western world was the role model of the right approach to natural sciences. The positivism and rationalism that were cultivated in Europe during the Age of Enlightenment was what helped Europe achieve its technological, economic, and socioideological superiority, and the new Republic of Turkey wanted to emulate that, in turn starting its own Age of Enlightenment. Transferring the western approach to modern technology and adopting the western understanding and practice of these sciences was the ideal, and the reform saw their implementation into academia. Allowing westerners to take over the direction of its first

higher academic institution, the newly reformed University of Istanbul, and particular its Faculty of Science, in line with Atatürk's approach to positive science, was a sure step towards that goal.



3.4 Liberal Arts

Istanbul University Faculty of Liberal Arts, or Faculty of Letters¹⁷², traces its roots to *Darülfünun*'s first attempt, where it was initially heralded as one of its three separate departments and established under the name *Hikmet ve Edebiyat Bölümü* (Department of Philosophy and Literature) in 1870. This department, however, suffered the same fate as *Darülfünun* throughout the second half of the 19th century and was opened, closed and reorganized several times—five in the case of *Darülfünun* and four in the case of the Faculty of Letters. The first attempt of the Faculty of Letters, i.e. *Hikmet ve Edebiyat Bölümü*, was closed three years after it was established, without ever admitting any students or functioning as an educational institution. The second opening of *Darülfünun* was in 1874, and the department was then named *Edebiyat-ı Âliye Mektebi* (College of Literature). This school, though it also did not admit students, would prove to be slightly more successful in that it would later form the core of the Faculty of Letters at *Darülfünun* and Istanbul University. When *Darülfünun* was reorganized for a fourth time again in 1900, the school was officially called the Faculty of Letters, admitting its first students at the turn of the 20th century: twenty-five students were admitted for a two-year program, though at the end of these two years only seven of them had graduated. The various departments at the Faculty were literature, philosophy, history and geography, and the faculty became an institution where the understanding of national history, culture, and discourse began to take shape. The Faculty was reorganized again in 1911, and in the following academic year admitted 226 students. By 1915, it had graduated 289 students in total (Widmann, 1999, p. 161). In 1915, the *Darülfünun* also admitted female students in a separate school called *İnâs Darülfünunu* (Women's College); by 1919, it was declared that the female students could attend courses at

¹⁷² *Faculty of Letters* is a direct translation from the Turkish name of the faculty, *Edebiyat Fakültesi*. Literally meaning “Faculty of Literature”, this translation of the term is widely used and accepted by Turkish universities nationwide, though it is rare to see this terminology elsewhere in the world (with the exception of a few Japanese universities). A typical Faculty of Letters is mainly focused on subjects usually attributed to the social sciences found within the *liberal arts*. For example, Istanbul University's current Faculty of Letters includes departments for History, Geography, Philosophy, Language and Literature, Archeology, History of Art, Sociology, Psychology, and so on. Faculties of Letters can also be conjoined with Faculties of Science as Faculties of “Science and Letters” (*Fen ve Edebiyat Fakültesi*), which include departments that directly adhere to the traditional definition of liberal arts, with the inclusion of formal and natural sciences. It should thus be noted that the Turkish education system can, organizationally, either split liberal arts education (as a Faculty for “Sciences” and a Faculty for “Letters”), or keep them together (as a Faculty for “Sciences and Letters”)—this is simply a matter of organizational preference that denotes the institution's educational focus. In the case of Istanbul University during the 1933 reform, liberal arts education was split into two multiple faculties, as the Faculty of Sciences and the Faculty of Letters; the same organization continues in Istanbul University today. The author's home university, Yeditepe University, by contrast, has a singular Faculty of Sciences and Letters.

the Faculty of Letters along with the males. Between 1915 and 1922 the Faculty once again became desolate and could only graduate 45 students in seven years, with absolutely no graduates during the years of World War I. Additionally, there was a considerable contrast to the number of students and academic staff at the Faculty of Letters: for example, in 1917, the faculty consisted of 69 total academics—at least half of which were very successful scholars in various fields—in contrast to only around a hundred students during the same year. It can be concluded that the overall success and productivity of the Faculty of Letters—as well as its predecessors—was very low, especially considering its long history and strong academia.

The Faculty saw a final reform in the University Reform of 1933, and its organizational scheme continues to this day. After the reform, the Faculty of Letters employed a number of refugee scholars in its ranks. The various departments at which the refugee scholars worked were as follows:

ISTANBUL UNIVERSITY FACULTY OF LETTERS		
REFUGEE SOCIAL SCIENTISTS		
NAME	CHAIR / FIELD	DURATION OF STAY
Hans Reichenbach	Philosophy	1933-1938
Ernst von Aster	Philosophy	1936-1948
Walther Kranz	Philosophy	1944-1952
Leo Spitzer	Romanology	1933-1936
Erich Auerbach	Romanology	1936-1947
Wilhelm Peters	Psychology and Pedagogy	1937-1952
Clemens (Mehmet Emin) Bosch	Ancient History	1939-1955
Fritz Rudolf Kraus	Archeology	1937-1950
Karl Süsseim	Orientalism and Turcology	1941-1947
Helmut Ritter	Orientalism	1926-1949
Walter Gottschalk	Librarianship	1940-1954

Source: (Dölen, 2010a, p. 505)

3.4.1 Social Sciences at the University of Istanbul

3.4.1.1 Philosophy

The academic study of philosophy in Turkey is not easily traced to a single source. According to Kaynaradağ, prior to the Tanzimat movement in the Ottoman Empire, philosophy in the region was almost completely dependent on religious dogma, spirituality, and Islamic thought adapted to Turkish tradition—for the most part, it was not subject of academic study or debate as it was simply folklore and culture (Kaynaradağ, 1982). Turkish interest in the Western understanding of philosophy simply did not exist, and the great works of generations of philosophers, from the Ancient Greeks to Renaissance reformers and 17th and 18th century developments, were disregarded well into the 19th century. The *Tanzimat* reform movement, however, led to an interest in the Western world and its academia. On the matter of philosophy, *Tanzimat* thinker Ahmed Midhat Efendi is quoted as saying “It is necessary to put enlightened thoughts into people’s heads, instead of nonsensicalities from old Persian fairy tales”. When the *Darülfünun* replaced the religious *madrassa* school, scientific and philosophical thought from the Western world started to transfer into the Ottoman Empire. The first recorded instance of this, according to the department of Philosophy at Istanbul University, was the introduction of the course *Hikmet-i Tarih* (Philosophy of History) at *Darülfünun* in 1865 (Istanbul University Department of Philosophy, 2015). Translations of various Western philosophical works began around this time, and interest in philosophy slowly increased—interestingly, in the case of some Greek philosophers, their “Anatolian identities” were played up by the translators of their works to make them seem less foreign to Turkish audiences. By 1900, courses on philosophy were extended and included discourse on psychology and sociology within *Darülfünun* under the umbrella of the course *Hikmet-i Nazariye* (Theory of Knowledge). During this time, various philosophical schools of thought took hold in Turkish circles studying philosophy, such as materialism and positivism. The University reform of 1933 and the arrival of actual Western philosophers, however, was what served to solidify the incursion of Western philosophy into Turkey.

Hans Reichenbach (1891 Hamburg – 1953 Los Angeles) was a widely renowned philosopher of science, known for his logical empiricism and learning in various fields including education, mathematics, physics, probability, dialectics, and history, and was considered a ‘syntheser of knowledge’ (Reisman, 2006, p. 269). Reichenbach, in the field of philosophy,

was best known for his establishment of the Berlin Circle of logical positivism.¹⁷³ Born in Hamburg, Reichenbach initially studied civil engineering at the University of Stuttgart, and went on to study various topics in physics, mathematics, and philosophy at the Universities of Berlin, Erlangen, Göttingen and Munich. He received his degree in philosophy from the University of Erlangen in 1915 with a dissertation on the theory of probability, which he published in 1916. Like many other refugee scholars at the time, Reichenbach was called to the German Army during World War I, and served on the Russian front, pausing his academic studies for the duration of his service. He returned to Berlin in 1917 when he was removed from active duty due to an illness. In 1920, he became a *Privatdozent* at the University of Stuttgart, where he would go on to publish books on the philosophical implications of the theory of relativity and its *a priori* notions, and where his field of interest became the philosophy of science. In his academic life, Reichenbach enjoyed the company of many renowned philosophers and scientists, including nobel laureates such as Max Planck, Max Born and Albert Einstein. In 1926, Reichenbach became an assistant professor in the physics department of the Humboldt University of Berlin. In this position, Reichenbach developed as an educator, and as a philosopher of education. His teaching methods, openness to discussion and debate, and approachability were distinguishable in the academic environment of his time, and were highly commended.

After the *Machtergreifung* in 1933, Reichenbach came under fire due to various reasons. Reichenbach was dismissed from his position at the Humboldt University of Berlin through the *Berufsbeamtengesetz*, due to his Jewish ancestry. Another reason for Reichenbach's undesirability was his political activism. Throughout his life, Reichenbach had always been active in youth movements and student organizations and published articles about various topics including university reforms, freedom of research, and the infiltration of anti-Semitic elements into youth organizations. He had also written the manifesto of a Socialist Student Party in Berlin, and later acted as its Chairman. Clearly, this history, coupled with his heritage and chosen field, must have established Reichenbach as an undesirable.

¹⁷³ The Berlin Circle was a philosophical movement created in the late 1920s in Berlin under the name *Die Gesellschaft für empirische Philosophie* (lit. The Society of Empirical Philosophy) by Hans Reichenbach, Kurt Grelling and Walter Dubislav. Its other members included Carl Gustav Hempel, David Hilbert, and Richard von Mises. The Berlin Circle collaborated with the Vienna Circle of philosophy and published the journal *Erkenntnis* (Knowledge) and organized several congresses on the philosophy of science. It was dispersed after its members Reichenbach and Hempel emigrated from Germany following the rise of Nazism and Grelling was killed in a concentration camp (Murzi, 2016).

Reichenbach arrived in Istanbul in 1933 with his wife and two children, having been invited to the University of Istanbul as a professor of positivist philosophy and mathematics. According to Irzik, Reichenbach was considered an asset to the university not only because of his accomplishments but also due to his ideas regarding the philosophy of science, which ‘happily coincided with the positivistic founding ideology of the early Republic’ (Irizik, 2011, p. 160).¹⁷⁴ It might be interesting to note that Reichenbach, had also been extended an invitation by Oxford University, but chose the University of Istanbul: partly due to the more favorable 5-year renewable contract as opposed to one year, and partly because he wanted to “contribute to the foundation of a new university in a position of responsibility” (Irizik, 2011, p. 161). It would also be appropriate to recall Reichenbach’s work “Socializing the University”: an article he wrote during his early academic years that focused on his vision of what a university should be—in short, his ideas for university reform. In this article, Reichenbach had declared his ideas on the university as a principal site for knowledge, touched on the values of critical approaches, full-scale university autonomy, free expression and dissemination (Reichenbach, 1918, pp. 136-180). Evidently, Reichenbach was excited by the prospect of having a hand in the reform of a university.

At the University of Istanbul, Reichenbach took over the Institute of Philosophy. Under his leadership, the department saw a complete overhaul, though this was not unlike the overhauls experienced by other departments during the 1933 reform. Historically, the Institute of Letters (also called the Institute of Philosophy at the time) had taught courses in philosophy, psychology and pedagogy, considering them parts of a whole; Reichenbach did not dismantle this structure but improved upon it, including courses in general philosophy, logic, sociology, and the history of the Turkish civilization. Courses in metaphysics and Islamic thought and philosophy were, however, removed from the Institute of Letters (Philosophy) and moved to the Faculty of Theology. Even though this was not as much Reichenbach’s doing but of the reformists’, it certainly coincided with his perspective on scientific philosophy.¹⁷⁵ In reforming his department, Reichenbach increased the amount of courses in Western philosophy and the history of philosophy, intending to introduce his Turkish students to a way of thinking that was, at the time, largely unfamiliar to them. In order to do so, he lobbied for

¹⁷⁴ This happy coincidence can best be explained with Atatürk’s oft-spoken positivist motto, “The true guide in life is science”.

¹⁷⁵ According to Neumark, their neighbors the Reichenbach family were proponents of Montessori Education, an educational approach with an emphasis on independence, freedom within limits, and respect for the child’s natural psychological, physical, and social development. Apparently, influenced by Reichenbach’s elder son, Neumark’s son became an atheist at the age of 10 (Neumark, 1982, p. 64).

the employment of Ernst von Aster, a teacher and colleague of Reichenbach, though these efforts were contested by Leo Spitzer and Ernst Ludwig von Mises, on the grounds that Aster was already too close to Reichenbach philosophically and would fail to contribute different viewpoints. Reichenbach also attempted to add to the department of psychology, trying to get the university to appoint Adhemar Gelb, Kurt Lewin, and David Katz, all of whom were, interestingly, gestalt psychologists, a topic Reichenbach was very appreciative of.

Reichenbach also established a library for the Institute of Philosophy, and was allocated the resources to do so. Despite bureaucratic difficulties, he managed to obtain many books and journals for the library, which he is still commended for. However, Irzık mentions that Reichenbach showed no tolerance for philosophies which were antithetical to the scientific outlook and had such books sent to the library of the department of literature (Irzık, 2011, p. 168).

Reichenbach's Turkish students, assistants and colleagues included names such as Nusret Hızır,¹⁷⁶ Macit Gökberk¹⁷⁷, Vehbi Eralp¹⁷⁸, Hilmi Ziya Ülken¹⁷⁹, Niyazi Berkes¹⁸⁰ and Neyire

¹⁷⁶ Nusret Hızır (1899 – 1980) was a Turkish philosopher and educator. He studied physics, mathematics and philosophy in Germany, and following his return to Turkey became an assistant to Reichenbach. Hızır was appointed to the Ankara *Dil Tarih Coğrafya Fakültesi*, and while he became a part of the *147likler*, a shorthand title for the academics who were dismissed as part of the 1960 coup. Hızır was removed from his position, but later returned and continued to teach philosophy at various universities such as the Ankara Faculty of Political Sciences, Middle East Technical University, and Hacettepe University. Hızır is commended for developing the understanding of logic and epistemology in Turkey. Hızır was also an advisor for the Turkish Historical Society. He was additionally known for his various translation works, and was a member of the so-called “Translation Room” responsible for the translation of classic world literature, and is also he is credited for his translations of the works of Erasmus, Leibniz, and Nietzsche.

¹⁷⁷ Macit Gökberk (1908 – 1993) was a Turkish philosopher, best known for his work on the simplification of philosophical concepts, e.g. language and terminology. His graduation thesis for the philosophy department at the Faculty of Letters was a work on Plato's Theaitetos. He became an assistant at the faculty shortly afterward, and became Reichenbach's translator in his logic course. In 1935, he went to the University of Berlin to earn his doctorate, which he did with a work on the concept of society in Hegel and Comte. His return to his home country was followed by his return to the faculty and Turkish academia. He was an associate professor by 1941 and a professor in 1949. Gökberk's work touched a variety of topics. His *Felsefe Tarihi* (History of Philosophy) was the first history of philosophy book penned by a Turkish academic. His *Değişen Dünya, Değişen Dil* (Changing World, Changing Language) touched on the issue of language in the understanding of philosophy. He also worked extensively on the Age of Enlightenment and especially on the works of Kant and Hegel and their approach to history. Gökberk's efforts to simplify the language used in philosophical debate was his paramount effort, however, and he was responsible for the classification of terms and the creation of new expressions and words. Helping in this effort, Gökberk was also the president of the Turkish Language Association for two terms between 1954-1960 and 1969-1976. The Turkish Philosophy Association gives out a yearly award named in honor of Gökberk (Yapı Kredi Yayınları, 2017).

¹⁷⁸ Vehbi Eralp (1907 – 1994) was a Turkish philosopher and mathematician. Eralp was sent abroad to France on a state scholarship, and studied sociology, ethics, logic, philosophy, psychology and history of philosophy in Bordeaux and later Sorbonne. When his education was finished in 1932, Eralp returned to his home country, and taught philosophy in Konya Boys' High School and later Kadikoy High School before becoming an associate professor at the Faculty of Letters. Eralp then became Reichenbach's translator, and focused his studies on logic

Adil Arda¹⁸¹.¹⁸² Of these students, Macit Gökberk was Reichenbach's first assistant and translator before leaving for Germany for his PhD. His second assistant, Nusret Hızır, was

and rationality. He became a professor in 1949, and throughout his academic career was twice the dean of the faculty before retiring in 1977. Eralp's studies focused on the history of philosophy, logic, and method in experiment-based science. His various publications include *Descartes Fiziğinin Metafizik Temelleri* (The Metaphysical Foundations of Descartes' Physics), *Lojistik* (Logic), *Matematik, Fizik ve Kimyada Metot* (Method in Mathematics, Physics and Chemistry), and *Platon* (Plato), among articles written for the Turkish philosophy journal *Felsefe Arkivi* (Archive of Philosophy). Eralp was also a prolific translator, translating Weber's History of Philosophy alongside more, though literarily oriented books. Eralp was an admirer of literature, and started a foundation for the works of renowned Turkish author Yahya Kemal following his passing (filozof.net, 2017).

¹⁷⁹ Hilmi Ziya Ülken (1901 – 1974) was a Turkish philosopher and sociologist. A graduate of *Mekteb-i Mülkiye*, the school of political sciences, Ülken became an assistant at Istanbul University in 1921, at which point it was still unreformed and called *Darülfünun*. Ülken was a student of the history of philosophy and sociology at Darülfünun, and became an assistant and taught those subjects following his graduation. Ülken survived the Darülfünun purge of academics and was sent to Germany for further study in 1934. After a year of study abroad, Ülken was given an associate professorship chair on the subject of the history of Turkish thought. Ülken was a professor by 1944 and became an ordinarius professor in 1957. His most prominent work was undoubtedly his two-volume treatise on the history of Turkish thought, *Türk Tefekkürü Tarihi*, which he wrote and published between 1933 and 1934. Another important work by Ülken is *Türkiye'de Çağdaş Düşünce Tarihi* (History of Modern Thought in Turkey). Ülken had already published two books while still at Darülfünun as well, a textbook on sociology called *Umumi İctimaiyat* (General Sociology) and *Aşk Ahlakı* (The Ethics of Love). Ülken is also widely known for works that touch on theological philosophy. He studied the history of Islamic thought extensively, publishing books such as *İslam Düşüncesi* (Islamic Thought), *Dini Sosyoloji* (Religious Sociology), *Türk Mistisizmini Tedkike Giriş* (Introduction to an Analysis of Turkish Mysticism), and *Şeytanla Konuşmalar* (Conversations with the Devil). His more sociology-oriented works include *İctimai Doktrinler Tarihi* (History of Social Doctrines) and *Sosyolojinin Problemleri* (Problems in Sociology). The prolific Ülken was hailed for his contributions to the fields of Turkish thought and the social sciences, and was the director of the journals *İnsan* (Human) and the Faculty of Letters Journal of Sociology. He also contributed several translations to Turkish literature, such as Aristo's Metaphysics and Margaret Mitchell's *Gone With the Wind* (Üsküdar, 2007).

¹⁸⁰ Niyazi Berkes (1908 – 1988) was a Turkish Cypriot sociologist. Berkes graduated from the philosophy department of the Faculty of Letters and became an assistant in sociology in 1935. The same year, he went abroad to the University of Chicago in order to study and research sociology. Upon his return to Turkey in 1939, Berkes became an associate professor in sociology at the Faculty of Languages, History and Geography. In his later career in Turkey Berkes was accused of being “left-wing” and communist, and was subsequently purged from the faculty in 1948. In response, Berkes moved to Canada, where he took up residence at McGill University and continued his work. Berkes' prominent contributions to Turkish social science includes his deep analyses of the Turkish modernization process and its approach to secularism, especially the divide between the European concept of *laïcité* and its application in Turkey—Berkes draws a particular distinction between the French word *laïcité* and secularism, often preferring the latter, and approaches the issue with a unique perspective, drawing attention to the historical and political contexts of the *laïcité* movement in France and in Turkey (Kongar, 21-23 April 1999). These issues are detailed in works such as *Türkiye'de Çağdaşlaşma* (The Development of Secularism in Turkey), *Türk Düşününde Batı Sorunu* (The Problem of the West in Turkish Thought), *Atatürk ve Devrimler* (Atatürk and the Revolution), and *Teokrasi ve Laiklik* (Theocracy and Secularism). An analysis of the Turkish revolution with a deep-seated history from Ottoman times is also touched on in *100 Yıldır Neden Bocalıyoruz?* (Why Have We Been Floundering For 100 Years?). Berkes was the author of the first monograph made in Turkey, a theoretical work of sociology on *Bazı Ankara Köyleri Üzerine Araştırma* (A Research on Some Ankara Villages). Berkes's two-volume *100 Soruda Türkiye İktisat Tarihi* (The History of Turkish Economics in 100 Questions) is also a great contribution contemplating society's economic order in the framework of the state-society relationship. Berkes also translated a variety of works both to and from Turkish, such as Aristo's “The Apology of Socrates”, Freud's “Totem and Taboo” into Turkish and a collection of Turkish sociologist Ziya Gökalp's works in “Turkish Nationalism and Western Civilization”. Berkes retired from his position at McGill University in 1975 and moved to the United Kingdom. He died in London in 1988 (Altun, 2004) (Dinçşahin, 2010).

¹⁸¹ Neyire Ardil Arda (? – ?) was a Turkish philosopher and one of Reichenbach's assistants. While not much is known about her, it is noted that she “followed Reichenbach halfway around the world”, likely meaning that she went to the United States with him when he left (Reichenbach, 1978). Reichenbach thanked Arda generously for her help in his work, especially in his preface to his book *Experience and Prediction*.

Reichenbach's assistant and translator from 1934 to 1937, and became his strongest follower as a philosopher of science and advocate of logical empiricism. Vehbi Eralp, who lectured at the department from 1933 on, also translated for Reichenbach, though he had to do so from French, as he did not speak German at the time. Reichenbach taught logic and the theory of knowledge, contemporary philosophy, space and time, the image of the world in natural sciences, and advanced logic. He organized many interdisciplinary seminars and lectures, often with the rest of the Faculty of Sciences in attendance.

Reichenbach remained productive in the matter of academic publications during his stay in Turkey. Several of the books he is known for, such as his *Experience and Prediction* (his first English publication) and *Wahrscheinlichkeitslehre* (The Theory of Probability), were written in Istanbul. Reichenbach wrote over a dozen essays during his stay in Istanbul, and also maintained his editorship of the journal *Erkenntnis* (Knowledge), while simultaneously contributing to other journals such as *Philosophy of Science*. Even several of the lectures he gave at the start of the academic year as the chair of an institute (as was customary at the University of Istanbul) made their way into his *The Rise of Scientific Philosophy*. He also wrote a booklet on logic for his students, titled *Lojistik* (Logic and Rationality), which was translated by Vehbi Eralp. According to Ülken, *lojistik* was a new school of philosophy—merely translated into Turkish as *lojistik* and with no relation to the art of management other than simple phonetic similarity—a combination of mathematical logic and empiricism that began to take shape under Reichenbach's studies.

After a productive five years at Istanbul University, Reichenbach left Turkey for the United States, accepting a position at UCLA.¹⁸³ His reasons for leaving were twofold. The given reason for Reichenbach's departure was that the position at UCLA offered more favorable terms, and additionally, according to his wife Maria, he had never intended to stay in Turkey permanently, worrying for the future of his relatively young children. Another reason for Reichenbach's departure, however, was his growing disillusionment with Istanbul University. Although he had been extremely optimistic during his first few years, this was lost almost entirely towards the end of Reichenbach's journey. According to Irzik, Reichenbach's letters

¹⁸² It may be interesting to note that Reichenbach was not pleased with his colleagues all the time, and sometimes wrote negative reports about them and his doubts regarding their competence. Ziyaeddin Fahri Findıkoğlu seems to have been a target of his criticism.

¹⁸³ Reichenbach asked Istanbul University administration to release him from his contract in 1936, which the administration did not comply with. In response, resentment brewed, and Reichenbach gave up studying Turkish.

to various colleagues cite the reasons behind this disillusionment as follows: the low academic level of the students, the university administration's overall failure to understand what a scientific education should be (with the exception of a few idealists), the country being far too poor to sustain and provide a suitable scientific environment, the "from above" quality of the Turkish reform movement, and Reichenbach's academic isolation from his former circles.¹⁸⁴ As such, it can be said that Reichenbach's experience was exemplary of the dark side of the 1933 reform, and Reichenbach's own words should be quoted fully:

We are always forced to decrease the level of instruction and to turn the university into some sort of a higher secondary school. I can't talk at all about the things which interest me, so scientifically I am wholly isolated... The country doesn't seem to be ripe for such things that interest me; my ideas of a scientific philosophy do require a higher level of scientific education (Irzik, 2011, pp. 172-173).

According to Widmann, Reichenbach was an avid sportsman and mountaineer. He was fond of climbing Uludağ, and like other refugee scholars such as Alfred Kantorowicz, contributed to the popularity of the location—for skiing, which was a fledgling sport in Turkey at the time (Widmann, 1999, p. 165).

Reichenbach died in 1953. Widmann considers his mountaineering hobby as being the culprit behind his passing.

Ernst von Aster (1880 Berlin – 1948 Stockholm) was a German philosopher and historian of philosophy. After receiving his primary and secondary education in Berlin at the Askanisches Gymnasium, he pursued higher education at the Universities of Munich and Berlin, earning his doctorate at the young age of 22 in 1902. His academic career culminated after he was appointed a chair at the University of Giessen, where he laid down roots before having to go into exile.

Aster was an advocate of pacifism. During the last few years of World War I, Aster became very well known for this ideology, pleading openly for peace negotiations and peaceful solutions. In addition, he was also known as a politically active member of the

¹⁸⁴ It would be interesting to note that Irzik refers to the "from above" quality of the Turkish reform movement as 'a sort of enlightened absolutism'. *Enlightened absolutism*, also called benevolent absolutism, was a form of absolute monarchy, or despotism, inspired by the Enlightenment movement of the 18th century. As enlightened monarchs in positions of considerable power embraced rationality, they deemed that their subjects should embrace it as well; often by the way of fostering education, allowing religious tolerance, promoting freedom of speech, accepting private property rights, and so on. This may be considered an apt (though incomplete) summarization of the reforms experienced by Turkey after the war of independence.

Sozialdemokratische Partei Deutschlands (Social Democratic Party of Germany), SPD. These qualities had been considered undesirable at the time of his appointment at the University of Giessen in 1920, and were wholly unacceptable by 1933. Aster was removed from his position immediately, and went to Sweden in exile, where he lived for three years before moving to Turkey.

Aster was invited to take a position at the Faculty of Philosophy in 1936, with the history of philosophy as his field of expertise. Initially, Aster was considered only for this task, but following Reichenbach's departure, took on his responsibilities, as well as his systematic philosophy courses. After the departure of Richard Honig from the Faculty of Law, Aster also took on Honig's courses on philosophy for law students. Even so, as his responsibilities piled up, Aster was never overwhelmed. He devoted himself to teaching, and was commended for his lively and enthusiastic approach to lecturing. According to his student Bedia Akarsu, Aster's ability to make the mentally exhausting science of philosophy approachable and immersive was what made him indispensable (Akarsu, 1949). Aster was known for holding successful seminars and conferences, which introduced philosophy not only to university students but also to wider communities. Further, a few of Aster's written works, such as his *Fransız İhtilalinin Siyasi ve İctimai Tarihi* (Political and Social History of the French Revolution) and *Yeni Zaman Felsefesi* (Philosophy of the New Age) had already been translated and introduced to Turkish readers before his arrival in Turkey, in 1927 and 1928, by Mustafa Nermi¹⁸⁵ and Orhan Saadettin¹⁸⁶ respectively. In Istanbul, Aster published the Turkish textbooks *Bilgi Teorisi ve Mantık* (Theory of Knowledge and Logic) and *Felsefe Tarihi* (History of Philosophy), and also founded a journal, *Felsefe Arkivi* (Archive of Philosophy). As a result, Aster's work started circulating in Turkish philosophical circles even more after his arrival, and was popularized further through his activities at Istanbul University—and for these qualities, Aster is considered as having had more influence on the growth of philosophy teaching in Turkey than Reichenbach (Widmann, 1999, p. 168). Nevertheless, Aster was criticized for not furthering his own or his students' academic

¹⁸⁵ Mustafa Nermi (? - ?) was a Turkish translator and lyricist. Unfortunately, there is not much known about him, other than that he translated Aster's works and also provided Turkish lyrics to a Turkish anthem called which was composed by the chief of the Saxony State Orchestra, Kurt Schindler (Toprak, 1989).

¹⁸⁶ Orhan Saadettin (? - ?) was a Turkish philosopher. Saadettin earned his doctorate working with Aster in Germany, and was considered to have been the first Turkish academic with a doctorate in philosophy. He is known for translating Aster's work as well as the second volume of Karl Vorländer's *History of Philosophy*, and wrote many articles for *Felsefe ve İctimaiyyat Mecmuası* (The Journal of Philosophy and Sociology) (Aydın, ?).

careers, since his students were few in number and he aided few doctorates.¹⁸⁷ Aster did help raise his translator and student Macit Gökberk, however, who took on the direction of the Institute of Philosophy after Aster's passing. Takiyeddin Mengüşoğlu¹⁸⁸ is also considered to have been greatly influenced by Aster.

Aster remained in Turkey and showed no intention of leaving Istanbul University. He passed away in Stockholm in 1948, during a vacation.

Walther Kranz (1884 Osnabrück – 1960 Bonn) was a German philologist and historian of philosophy.¹⁸⁹ He studied at the University of Berlin and the University of Göttingen from 1903 to 1907, in the areas of classical philology, archeology, and German language and literature. In 1910, he received his doctorate from the University of Berlin. During his time as a young scholar, Kranz had received acclaim for the book *Die Fragmente der Vorsokratiker* (Fragments of the Pre-socratics), which he wrote with his mentor Hermann Alexander Diels, on the subject of Ancient Greek history, culture, literature and philosophy. He was an instructor of Greek and Latin from 1911 to 1928 in German gymnasiums, and turned down a professorship at Göttingen University on the reason that his instruction was more valuable on

¹⁸⁷ Criticism against Aster and Reichenbach seems to, at least partially, stem from a sort of intellectual feud between both philosophers' circles, with both professors' students defending one while criticizing the other. Reichenbach's critics argue that he was intolerant towards philosophical waves outside of his Berlin Circle and claim Aster to be influential on Turkish philosophy, while Aster's critics condemn him for teaching a more conventional history of philosophy and claim Reichenbach to have changed Turkish philosophy. Regardless of the precise content of this philosophical proselytizing, it can be said that inciting such intellectual debates among the second-generation Turkish academics was, essentially, a goal of the 1933 reform.

¹⁸⁸ Takiyeddin Mengüşoğlu (1905 – 1984) was one of Turkey's most prominent philosophers, best known for his work on philosophical anthropology, the concept of values, and human nature. Born and educated in his early life in Sivas, Mengüşoğlu was sent to Germany to study physics, chemistry and philosophy at the University of Berlin, earning his doctorate in 1937 with a thesis titled *Über die Grenzen der Erkennbarkeit bei Husserl und Scheler* (On the Limits of Recognition at Husserl and Scheler). After his return to his home country, he became an assistant at the philosophy department in 1938. The work he presented for his associate professorship was entitled *Nicolai Hartmann'ın 20. Asır Felsefesi'ndeki Yeri* (Nicolai Hartmann's Place in 20th Century Philosophy), defended in 1942. Mengüşoğlu became a professor in 1952. His work was often centered on the subjects of logic, epistemology, philosophy of history, ethics and the philosophy of nature. Mengüşoğlu is credited with the introduction of the philosophical concept of human nature in Turkey; fellow Turkish philosopher Ioanna Kuçuradi mentions that Mengüşoğlu's work on human nature are based on ontological foundations and provides a new base for the concept of human rights. Summarily, according to Mengüşoğlu, the human is a creature of success, and this success is defined by the cumulative of how he can influence the science, art, technology, and environment around him. This is the measure by which man can find his place in the universe as a living being; according to his environment, his relationships with said environment, and his issues with said environment. Mengüşoğlu believes that philosophy should be a guide in human life and serve as a guidepost for the organization of society, without being reduced to an abstract concept. Examples of Mengüşoğlu's prominent works include *Felsefeye Giriş* (Introduction to Philosophy), *Değişmez Değerler, Değişen Davranışlar* (Unchanging Values, Changing Behaviors), *Felsefi Antropoloji* (Philosophical Anthropology), *İnsan ve Hayvan, Dünya ve Çevre* (Human and Animal, World and Environment) (Ceran, 2011).

¹⁸⁹ Walther Kranz is often known as Walter Kranz in Turkish academia.

a secondary education level rather than tertiary. He was appointed the director of the five-century-old Landesschule Pforta in 1928, and was given an honorary professorship in didactics by the University of Halle in 1932.¹⁹⁰

After the Nazis came into power, Kranz started to face difficulties due to having a Jewish wife. He was transferred to a regular high school in 1935, was dismissed from his professorship at Göttingen, and was eventually forcibly retired from all other academic activities by 1937. After some lost years, Kranz was contacted by Ernst von Aster in 1943, who offered him a professorship at Istanbul University for the History of Philosophy and Classical Philology.

Kranz arrived at the University of Istanbul in 1944. He worked in various areas in the faculty, initially taking over the directorship of the department of German Language and Literature before moving to the chair of Classical Philology in 1949. During this time, he taught courses on philology and philosophy as well as archeology. Kranz found the opportunity to study the Ancient Greeks in more detail during his stay in Turkey, making research trips to İzmir and especially Ephesus and Pergamon, and publishing his textbook *Antik Felsefe* (Ancient Philosophy). In his articles which he published in the Faculty of Philosophy journal, *Felsefe Arkivi* (Archive of Philosophy), Kranz promoted the Ancient Greek and Roman cultures as the foundation of Western civilization, and considered them indispensable in understanding European and German culture, which were in line with Turkey's westernization efforts. One of his students, İsmail Tunalı¹⁹¹, recounts that Kranz had a background not only in the

¹⁹⁰ The *Landesschule Pforta* is a former Cistercian monastery, established in 1543, which serves as a school for gifted children. Notable alumni included Friedrich Nietzsche.

¹⁹¹ İsmail Tunalı (1923 – 2015) was a Turkish philosopher and historian of art. Born in Romania, he was a 1948 graduate of the Department of Philosophy at the Faculty of Letters of Istanbul University, he received a doctorate from the University of Vienna after studying philosophy, psychology and art history. Following his return to Turkey, he began an academic career as an assistant at Istanbul University, and later was a founding professor at Erzurum Atatürk University between 1959 to 1962. He was an associate professor in 1961 and a professor by 1966. From 1963 until 1974, Tunalı was a member of a governmental organization for the preservation of cultural heritage, *Gayrimenkul Eski Eserler ve Anıtlar Yüksek Kurulu* (lit. High Council of Immovable Ancient Works and Monuments). In 1978, he went to the University of Vienna, and taught aesthetics and philosophy there for six years, and also held conferences at Konstanz University. Tunalı's famous works include various books on aesthetics, such as *Grek Estetik'i* (Greek Aesthetics), *Marksist Estetik* (Marxist Aesthetics) and *Estetik* (Aesthetics). *Felsefeye Giriş* (Introduction to Philosophy), *Yeni Bir Aydınlanmaya Doğru* (Towards a New Enlightenment) and *Sanat Ontolojisi* (Ontology of Art) are also examples of his work. He later directed Mimar Sinan University of Fine Arts' Institute of Social Sciences for a year before his retirement in 1989. Tunalı throughout his academic career taught at a variety of Turkish universities, including Istanbul University, Maltepe University, Mimar Sinan University, Yeditepe University, and Marmara University (İstanbul Üniversitesi Edebiyat Fakültesi Felsefe Bölümü (Istanbul University Faculty of Letters Department of Philosophy), 2015).

German world but in the Greek one, and introduced Turkish students to the world of Ancient Greece, which to them had always been so close, yet so far (Akdağ, 2006).

After World War II, Kranz was invited to the University of Halle as a professor of Greek Language and Literature in 1948, but refused the offer in favor of staying in Turkey. In 1949, he was invited to the University of Bonn to deliver a series of lectures at several conferences, where he took an offer of professorship in Ancient Culture and Its Effects on European Intellectual Life, finding the chair to be completely specific to his area of interest. Kranz left Turkey in 1950. He retired in 1955, and passed away in 1960.

3.4.1.2 Philology

While the history of the study of various languages in the early Ottoman Empire is too nondescript and disconnected to examine in great detail for the purposes of this thesis, the history of the study of philology at university level can be traced back to the 1900 reorganization of *Darülfünun*, where a department of philology was established with the purpose of teaching its students various languages, such as English, French, German, Russian, Arabic, Persian, and Turkish.

The study of various philologies with a Western academic tradition, however, should be traced to the reform of Istanbul University in 1933. As the new Republic of Turkey turned its face towards the West and set its goals on Westernization as per its various reforms in various areas, the idea of learning the languages of the Westerners was soon of paramount importance, and only naturally. To this end, when the University of Istanbul was reformed in 1933, a chair of Western Philology was established for the first time at the Faculty of Letters, and the renowned linguist Leo Spitzer was invited to take it. Additionally, prior to the reform, Albert Malche's report on the state of *Darülfünun* pointed out the necessity of establishing a school separate from the previous department of linguistics, a "School of Foreign Languages", with the sole task of teaching language in comparison to direct linguistic study, separating the two fields. This was also a task given to Spitzer, and Auerbach followed it after him.

Leo Spitzer (1887 Vienna – 1960 Forte del Mermi) was an Austrian romanist and literary critic and was renowned as a pioneer of stylistics. He was a student of the Swiss romanist and linguist Wilhelm Meyer-Lübke and had received a doctorate in romance studies with a thesis titled “Die Wortbildung als stilistisches Mittel exemplifiziert an Rabelais” (Morphology as a stylistic device as exemplified by Rabelais) in 1910. He received his *habilitation* in 1912, and in 1913 became a *privatdozent* of romance studies at the University of Vienna. During World War I, Spitzer served in the Austrian military with a unique task: he was a part of the Austrian censorship department, and was responsible for the analysis of phrases and style methods used by Italian prisoners of war—effectively a method of discourse analysis (Hurch, 2010). In 1925, Spitzer had become the professor ordinarius of romance studies at the University of Marburg, and later transferred to the University of Cologne in 1930.

Spitzer was dismissed from his post at the University of Cologne in 1933 due to the so-called Aryan paragraph of the Nuremberg Laws and his undesirable Jewish origin. He emigrated to Istanbul in the same year, taking the newly-established chair of Western Philology at the Faculty of Letters. Spitzer was unique among the refugee scholars for the sheer number of assistants and students he brought with him to Turkey as companions in exile. Spitzer had been popular in Germany, and had surrounded himself with a number of talented and large-minded academics, many of whom followed him to Turkey—Neumark fondly refers to them as “Spitzer’s apostles” (Neumark, 1982, p. 64). Spitzer’s seven students and assistants were Heinz Anstock, Eva Buck, Rosemarie Burkart, Herbert and Lieselotte Dieckmann, Traugott Fuchs, and Hans Marchand. In line with their talents and training, these colleagues of Spitzer were mostly employed as lecturers at Istanbul University, and taught language studies: Anstock became one of the founding members of the German Language Department of Istanbul University, taught German at Turkish high schools, published a book “Deutsch für Türken” (German for Turks), and directed Deutsche Schule Istanbul (German High School of Istanbul, commonly known in Turkish as *Alman Lisesi*) for many years. Fuchs became a prominent figure of German Studies at Istanbul University. He also taught at Robert College and Boğaziçi University for many decades until his death in 1997, at which point he left behind 63 years worth of an archive containing his manuscripts, lecture notes, poetry, compositions and artwork to Boğaziçi University. Buck was responsible for introducing Western literature to Turkish students and taught French. Burkart taught German, as did Herbert and Lieselotte Dieckmann. Fuchs also lectured German, and later became a lecturer

for Germanistics and German philology, and was an assistant professor at Robert College. Marchand lectured philology until 1953.

As for Spitzer himself, he directed the Department of Western Philology at the Faculty of Letters. This department was largely influenced towards Romance studies due to Spitzer's own expertise in the field. As the director of a newly established department, Spitzer was responsible with building it from the ground up, and he soon found himself struggling to obtain literary material for its libraries, as well as other academic material. A second task of Spitzer was the organization and establishment of *Yabancı Diller Okulu* (School of Foreign Languages) within Istanbul University, which, though a dire necessity at the time, took valuable time away from Spitzer's academic work. The School of Foreign Languages was an establishment proposed to Istanbul University in Albert Malche's report from the very beginning; it was imperative that the Turkish students at the university be educated intensively in various western languages, especially French, English and German, with the addition of Italian and Russian. Spitzer employed most of his aforementioned assistants and students at the School of Foreign Languages, and the school was credited with endowing Turkish students with foreign language capabilities. As a result of his hard work at the School of Foreign Languages, Spitzer did not get a chance to pursue much of his academic publications in Turkey, lacking the time and resources needed to devote to them. He did, however, establish a journal of philology: *Romanoloji Semineri Dergisi* (The Journal of the Romance Studies Seminar) began its publication in 1937 and included articles, papers, and short series by Spitzer. Azra Erhat¹⁹² was an assistant to Spitzer during his time at Istanbul University, and Süheyla Bayrav¹⁹³, Nesteren Dirvana¹⁹⁴, Safinaz Duruman¹⁹⁵ and Mina Urgan¹⁹⁶ were all prominent students of philology that Spitzer taught and influenced.

¹⁹² Azra Erhat (1915 – 1982) was a Turkish essayist, writer, philosopher, archeologist, translator and philologue of Ancient Greek and Roman languages. A graduate of the Ankara University DTCF, she became an assistant at the Department of Classical Philology at Istanbul University. She translated Sophocles, Aristophanes, Hesiodos and Homer, and is renowned in Turkish literary circles as the primary translator of the Iliad and Odyssey. Erhat was a writer at the Turkish arts and philosophy journal *Yeni Ufuklar* (New Horizons), and a leading figure in Turkish humanist thought; Erhat is also credited with the creation of the concept of *Mavi Yolculuk* (Blue Cruise) as a philosophical practice of nature and culture expeditions in the Aegean and Mediterranean Seas, though the concept is currently highly touristic.

¹⁹³ Süheyla Bayrav (1914 - 2008) was a Turkish romanist and linguist. She was educated in Notre Dame de Sion Girls' High School and was a 1938 graduate of the Faculty of Letters in Romanist philology. She became an assistant in the same faculty following her graduation, and earned her doctorate in 1945 with a thesis titled *Chanson de Roland, Edebiyat ve Üslup Tahlihi* (Examination on the Literature and Style of the Ballads of Roland). She was an associate professor in 1949, and a professor by 1957, and was removed from her position at the university during the 1960 military coup. She returned to the Faculty of Letters in 1962, however, and was the director of the department of French philology for many years before retiring in 1982. Bayrav is survived by her many translations of Chanson de Roland and medieval French literature as well as her various publications in

Spitzer received an invitation from Johns Hopkins University in the summer of 1936 and took the offer. According to Harry Levin, Spitzer's reason for departure was the lack of resources available for studying literature at Istanbul University, especially the lack of library material (Levin, 1969, p. 471). Spitzer spent the rest of his life in the United States, teaching at various universities for twenty-four years before his retirement. He won a Feltrinelli prize, and was a professor emeritus by 1956. He passed away in 1960.

Erich Auerbach (1892 Berlin – 1957 Wallingford, CT) was a German philologist, linguist, comparative scholar, and literary critic. Born in Berlin to an upper-middle class Jewish family, he graduated from the French Gymnasium in Berlin. He received further education at

philology, such as *Yapısal Dilbilimi* (Structural Linguistics), *Filolojinin Oluşumu, Çağdaş Dilbilim, Eleştiri Sorunları* (The Creation of Philology, Modern Philology, Issues in Literary Criticism), *Roman Dillerinin Doğuşu ve Gelişmesi* (The Birth and Growth of Romance Languages), among others (Yalçın, 2000).

¹⁹⁴ Nesteren Dirvana (1916 – 2006) was a Turkish philologist, specializing in French and Romance Languages. She was a grandchild of Küçük Said Pasha, who was grand vizier to Abdülhamid II for nine times. Dirvana was homeschooled throughout her primary education and was tutored by Turkish and French teachers, and graduated from Galatasary High School in 1935 (though, as Galatasaray High School was a boys' school at the time, she did not attend classes at the school). She was a 1939 graduate of the Faculty of Letters' French and Romance Philology, and was an assistant at the same department in 1942. She earned her doctorate in 1949, was an associate professor by 1951. She traveled to Spain in 1954 upon the invitation of the Spanish government on a scholarship, and studied Spanish Philology at Salamanca University. After her return to Turkey, she became a professor of French and Romance Philology and retired in 1984. She was educated in Latin, French, English, and Spanish (Anadolu Ajansı (Anadolu Agency), 2006).

¹⁹⁵ Safinaz Duruman (1920 - 2001) was a Turkish Germanist. Of the first generation of professors in the field of Germanistics, she is commended for her work on the development of the German Language and Literature department at the Faculty of Letters. Examples of her works include *Jacob Bidermanns Cenodoxus* (Jacob Bidermann's Cenodoxus) and *Der Wandel der Dichterischen Sprachform* (The Transformation of the Poetic Language Form) (Develi, 2002).

¹⁹⁶ Mina Urgan (1915 – 2000) was a Turkish professor of English language and literature, writer, philologist and translator. Born to a wealthy family in Istanbul, Urgan graduated from the Arnavutköy American Girls' High School and later became a student at the department of French philology at the Faculty of Letters, and following her graduation continued her academic career with a doctorate in English language and literature. Her associate professorship thesis, "Elizabeth Devri Tiyatrosunda Soyatarılar" (Jesters in Elizabethan Theater) was defended in 1949, and she became a professor in 1960. Urgan's contributions to Turkish studies of the English language and literature were found in many different fields. As a translator, Urgan was credited with the introduction of many great works in the English language to Turkish audiences, including the works of Thomas Malory, Aldous Huxley, William Golding, and Shakespeare, among others. Her textbook, *İngiliz Edebiyatı Tarihi* (History of English Literature) consists of five-volumes, and is considered a cornerstone of the teaching of English language and literature in Turkey. Urgan also wrote extensive, analytical books on the works of Shakespeare (*Shakespeare ve Hamlet* (Shakespeare and Hamlet)), Thomas More (*Edebiyatta Ütopya Kavramı ve Thomas More* (The Concept of Utopia in Literature and Thomas More)), Virginia Woolf, and D. H. Lawrence. Urgan humorously referred to Thomas More as "my lover", in reference to her love of his work, and to herself as "the dinosaur" in her retirement years—her memoirs and travel book, *Bir Dinazorun Anıları* (Memoirs of a Dinosaur) and *Bir Dinazorun Gezileri* (Travels of a Dinosaur) were Turkish best sellers for quite some time. In addition to her academic and literary works, Urgan was also a politically active figure, as a member of the Workers Party of Turkey and a founding member of the Freedom and Solidarity Party, both socialist parties. Unlike many of her peers in the same political groups, however, and surprisingly, Urgan was never targeted for her political activism—a fact she seemed to regret in her later life. Urgan retired from academic life in 1977, and after publishing her memoirs, passed away in 2000 (Yapı Kredi Publishing, 2010).

the universities of Berlin, Freiburg, and Munich, and earned a doctorate degree in law from the University of Heidelberg in 1913. Unlike many other refugee scholars who were drafted into military service, Auerbach volunteered willingly to serve Germany in the military during World War I. He was badly wounded in northern France in 1918, earned an *eisernes Kreuz* (Iron Cross) in recognition of his service, and was released from duty after he recuperated. After this, Auerbach returned to academia, this time changing his area of interest: he studied Romance philology at the Humboldt University of Berlin, and earned a second doctorate from the University of Greifswald with a dissertation on the German and Italian novellas of the early renaissance era. He then studied under Leo Spitzer at the University of Marburg, and earned his habilitation, as well as considerable fame, with a dissertation on *Dante: Poet der weltlichen Welt* (Dante: the Poet of the Secular World). After Spitzer was transferred to the University of Cologne in 1930, it was Auerbach that took up his professorship chair in Romance philology after him.

Auerbach was removed from his professorship at the University of Marburg in 1935. His service in the military and his Iron Cross medal of honor had made him an exception from the first version of the antisemitic *Berufsbeamtensgesetz*, but when the law was extended Auerbach suffered the same fate as the other deemed undesirables. He was invited to the Istanbul University Faculty of Letters in the same year, and followed his mentor Spitzer as a professor of Roman philology there, and replaced him once again.

At the University of Istanbul, Auerbach taught courses on Romance languages and philology. A textbook for his Turkish students was titled *Roman Filolojisine Giriş* (Introduction to Romanist Philology) and translated to Turkish by his assistant Süheyla Bayrav; this textbook was later translated into French and English as well. Auerbach also published various writings and articles in Turkish profession journals, a bibliography of which is available in (Auerbach, 1967, p. 367). Auerbach was responsible for the establishment of the journal *Garp Filolojileri Dergisi* (Journal of Western Philology) in 1947. Like Spitzer before him, Auerbach also directed the School of Foreign Languages at the Faculty of Letters, and again much like Spitzer, he created the opportunity for more refugee scholars to work at this school. These refugee scholars included Andreas Tietze, Robert Anhegger, Kurt Laqueur, Karl Weiner, and Ernst Engelberg. Tietze was a prominent Austrian Turkologist at Istanbul University, who is famous for having prepared a massive, 7000 page and six-volume Turkish dictionary called *Tarihi ve Etimolojik Türkiye Türkçesi Lugatı* (Historical and Etimological Dictionary of

Turkey Turkish), though only the parts containing A-E of the dictionary were published in his lifetime. He also wrote a dictionary called *Ecnebler için Türkçe* (Turkish for Foreigners), and was a mentor to Turkish historian İlber Ortaylı (Ortaylı, 2003). Anhegger was a lecturer of German and later became the director of the Goethe Institute in Istanbul. Laqueur was son of the doctor August Laqueur and taught at the School of Foreign Languages and later pursued politics and was German consul general to Zagreb. Weiner lectured German at the School of Foreign Languages, as did Engelberg.

Auerbach is recognized in the international arena for his book of literary criticism, *Mimesis: Dargestellte Wirklichkeit in der abendländischen Literatur* (Mimesis: The Representation of Reality in Western Literature). The book discusses the titular concept of *Mimesis*, which deliberates on the conception of works of art as physical representations of philosophical beauty, truth, and good; Auerbach's text is a consideration of how the world is thus represented in Western literary work. Auerbach wrote *Mimesis* during his stay in Istanbul—at the crossroads of the Western and Eastern world, which, while close to both worlds, belonged in neither. Auerbach had wanted to write a literary criticism of Western work, and while he had his roots in the West he had been sprung up and moved somewhere completely alien. Being so close and yet so far from Europe was allegedly both detrimental and facultative in the creation of Auerbach's work. Auerbach's writings were delayed and in parts lacking, because the resources he could find in Istanbul were limited—though Klemperer claims that this inadequacy was what enabled the creation of *Mimesis* in the first place, that the difficulties Auerbach went through provided him with the necessary conditions to create it (Klemperer, 1956, pp. 224-229). Edward Said later also confirmed this with the quote:

“(Mimesis) is not only a massive reaffirmation of the Western cultural tradition, but also a work built upon a critically important alienation from it, a work whose conditions and circumstances of existence are not immediately derived from the culture it describes with such extraordinary insight and brilliance but built rather on an agonizing distance from it.” (Krystal, 2013)

Auerbach remained in Turkey as a refugee for eleven years. In 1947, he took up an offer of a professorship at Pennsylvania State University as a visiting professor, later worked at the Institute for Advanced Study at Princeton University, and ultimately became a professor in French and Romance Philology at Yale University. He passed away on October 13, 1957, in Wallingford in Connecticut (Reisman, 2006, p. 85).

3.4.1.3 Psychology and Pedagogy

The study of psychology in Turkey, according to Batur, can be traced back to before the first opening of *Darülfünun* in 1869, to midnight conferences during Ramadan, held by a scholar by the name *Aziz Efendi*, on the subject of *Emzâc-ü Ekâlim* (Moods and Climates), and to teologically inclined psychology courses by the name of *İlm-un Nefs* (Science of the Soul) after the Second Constitutional Era after 1908 (Batur, 2003). However, in most literature, the academic study of psychology is traced back to 1915, and refers to experimental psychology, which was then a budding science in the Western world. As part of the German *Bildungshilfe* program to break French influence on Ottoman education, a German psychologist by the name of Georg Anschütz was sent to Istanbul *Darülfünun* to establish a laboratory for the study of experimental psychology. However, partly due to the changing political climate after World War I, Anschütz failed in this task and returned to Germany in 1918. In 1919, this chair was taken over by the *müderriis muavini* Mustafa Şekip Tunç¹⁹⁷, who had been educated abroad in Geneva, though Tunç was more of a philosopher and held his field of expertise in nonexperimental psychology. In 1933, a chair for experimental psychology was established at the Faculty of Letters, though no professor could be found to take up the task. The German experimental psychologist Adhémar Gelb was invited to take the chair, but he died in 1937 without leaving behind much information as to whether he responded to the invitation or not. Following Gelb's death, the Turkish psychologist Mümtaz Turhan¹⁹⁸ held the chair for a year before Wilhelm Peters was invited.

¹⁹⁷ Mustafa Şekip Tunç (1886-1958) was a Turkish psychologist and philosopher. Educated in Switzerland in Psychology and Pedagogy, he became a teacher of pedagogy at Ottoman institutions such as the *Dar-ül-muallimat* (Teachers' College) after his return to the country, and was later appointed to the Faculty of Letters as an associate professor. He became a professor in 1919, and by the time of his retirement in 1951, he was an ordinarius professor of general psychology. Tunç was credited with the introduction of Bergson philosophy to Turkey. He wrote for many periodicals on art and literature, such as *Dergah*, *Ağaç*, *Çığır*, and *Türk Düşüncesi* (Turkish Thought). His known works include *Hissiyat Ruhiyatı* (Psychology of Emotions), *Terakki Fikrinin Menşei ve Teamülü* (The Source and Tradition of the Idea of Progress), *Yeni Türk Kadını ve Ruhi Münasebetleri* (The New Turkish Woman and Her Psyche), *Bir Din Felsefesine Doğru* (Towards a Religious Philosophy) and others. Tunç was a member of the Turkish Historical Society, as well as the International Philosophy Association (Batur, 2009).

¹⁹⁸ Mümtaz Turhan (1908 – 1969) was a Turkish professor of psychology. He was sent to Germany on a state scholarship in 1928, and studied at the universities of Giessen, Berlin, and Frankfurt. He received a doctorate in psychology from the University of Frankfurt am Main in 1935, and later obtained another doctorate from the University of Cambridge. After his return to Turkey, he became an associate professor at the Institute of Psychology in Istanbul University in 1939, and by 1953 was the professor of Experimental Psychology (Sağlam, 2011). Turhan is known for his critique of Turkey's westernization process, which he summarily deemed as trapped on surface levels, reasoning that the country had failed to adopt western scientific and technological processes and was only capable of mimicry without the ability to produce them by itself. For more information see (Turhan, 1958).

The study of pedagogy at Istanbul University, on the other hand, was academically represented by the renowned Turkish philosopher, pedagogue and educational reformist İsmail Hakkı Baltacıoğlu. Baltacıoğlu had been teaching pedagogy at *Darülfünun* since 1913, and was the first *Darülfünun emini* (rector) in 1923. However, Baltacıoğlu was displaced during the 1933 reform for political reasons. The chair of pedagogy therefore remained empty for three years before being taken up by Sadrettin Celal Antel.

In 1937, an Institute of Pedagogy was established at the Faculty of Letters, and combined both the study of psychology and pedagogy. Wilhelm Peters was named its director following his arrival. According to Widmann, the various purposes of this institute were apt in orienting the two studies towards research and experimentation, as well as towards modernizing education (Widmann, 1999, p. 177). The purposes of the Institute of Pedagogy were as follows: to install mandatory courses in modern psychology and pedagogy in order to raise future generations of teachers (especially at secondary level educational institutions), to install a scientific mindset in the fields of psychology and pedagogy and promote empirical research, and to succeed in the establishment of experimental psychology laboratories in Turkey.

Wilhelm Peters (1880 Vienna – 1963 Würzburg) was an Austrian psychologist and pedagogue. Educated in his early life in Vienna, he studied at the universities of Vienna, Strasbourg, Zurich and Leipzig in various fields including philosophy, pedagogy, physics, chemistry, and eventually medicine. He later earned a doctorate in medicine with a thesis titled *Die Farbenwahrnehmung der Netzhautperipherie* (Color perception of the retinal periphery). In 1904, he entered the Psychological Institute of Vienna, and in 1906 moved to the Munich Psychiatry Clinic. Later, encouraged by his mentor Hermann Ebbinghaus, he pursued an academic career at the Academy for Social and Commercial Sciences in Frankfurt am Main. He received his habilitation in 1910 in Würzburg, and was permitted to teach courses on philosophy, psychology, and pedagogy. In Würzburg, Peters achieved significant scientific acknowledgement for his critical analysis of school performance as a result of the intelligence quotient or sheer mental capacity. In 1919, he was appointed a professor at the University of Mannheim. In 1923, he was offered a professorship at the University of Jena by its social democrat government to take part in its education reform, which due to his Jewish descent and significant political conflict in Tübingen, saw resistance from the university's Faculty of Philosophy and the press. The affair was later named the *Thüringer Hochschulkonflikt* (Tübingen College Conflict) (Ulbricht, 2009, pp. 40-47). After the conflict

was resolved, Peters became responsible for the reform of teachers' education. Peters later became politically active against national socialism's demagoguery, becoming especially critical of their treatment of the concept of race. In 1933, he was dismissed as the dean of the University of Jena's Faculty of Mathematics and Natural Sciences. He emigrated to the United Kingdom, and was working there at the East London Child Guidance Clinic before he accepted an offer from the University of Istanbul in 1937.

Peters became a professor of psychology and the founding director of the Institute of Pedagogy at Istanbul University. According to Widmann, Peters' task was a daunting one; he had to bring together many professors and lecturers to succeed at the task of defining pedagogy for the reformed university in a newly reborn country (Widmann, 1999, p. 179). Peters' institute was committed to spreading a desire to learn, but establishing it required substantial effort due to the lack of equipment, literature, and materials, especially since the threat of war was looming. According to Peters himself, the institute started collecting its required material very quickly during 1937 and 1938, but had to slow down during 1939, and after the war broke out, came to a screeching halt (Peters, 1952, p. 176). Nevertheless, the Institute of Psychology established its own library and laboratory. Peters wrote a textbook on youth psychology, *Ergenlik ve Delikanlılık Çağı, İnsan Ruhunun Tekamülüne Ait Bir Fasıl* (Puberty and Adolescence: A Chapter Concerning the Evolution of the Human Soul), translated by his colleague Mümtaz Turhan, which was also distributed to the Turkish public. Peters promoted the translation of significant material. According to Toğrol, he was also responsible for introducing and promoting a tradition of scientific research in Turkey, which he accomplished through the introduction of experimental methods in psychology (Toğrol B. B., 1987, p. 8). Peters' view included applied exercises in psychology, where he taught his students the scientific method through practical courses, allowing them to develop their scientific observation skills and technical capabilities, leading experimental investigations to be made; thus resulting in the completion of about eighty minor studies and half a dozen doctoral investigations (Toğrol B. B., 1956, p. 4). Peters is also said to have repeated his research in Turkey, and he conducted tests to evaluate the intellectual quotients and mental capacities of thousands of Turkish children (Şen F. , 2008, p. 206). According to Toğrol, among Peters' students were names such as Neriman Hızıroğlu,¹⁹⁹ Nusret Hızır, Mümtaz

¹⁹⁹ Neriman Hızıroğlu (1908 - 1985), commonly known as *Ayşe Abla*, a pseudonym she took on in a pedagogical program she made for Ankara Radio, was a Turkish pedagogue, among the first of the new Republic's pedagogues. She was an assistant in the Institute of Pedagogy, and was educated in pedagogy in the United

Turhan and Beğlan Birand Toğrol²⁰⁰ himself. Peters is also credited with the introduction of Western psychology and pedagogy to Turkey, as well as the strengthening of academic relations within the field.

Peters was interred at Yozgat when Turkey declared war on Nazi Germany near the end of World War II. During that time, he made himself responsible for the medical care of the interred. After the war and his internment ended, he retired after 15 years of service to the University of Istanbul. He was 73 years old when he returned to Würzburg. Back in his homeland, he was appalled to find that psychology “was one of the most nazified sciences” in Germany. He commented that at least one-third of all psychologists in Germany were active Nazis, and during their time had managed to “desecrate all existing psychology literature”, and were guilty of bringing politics into their science (Eckardt, 1999, p. 154). Peters passed away ten years later.

3.4.1.4 Orientalism and Archeology

Orientalism refers to the study of art, history, literature, geography, and cultural studies of the region collectively referred to as “the Orient”, i.e. the Middle East, North Africa and South and Southeast Asia. However, as an academic field of study, Orientalism originates from the West. Thus, the study of Orientalism naturally connotes the study of these various fields, from

States and Switzerland. From 1940, she was responsible for the Children’s Hour program of Ankara Radio, which was the first communications program aimed at the children of Turkey. She also established a kindergarten specializing in systematic education, Ayşe Abla İlkokulu, which was shut down in 1970.

²⁰⁰ Beğlan Birand Toğrol (1927 – 2016) was a Turkish scientist, best known for her work in psychology and neuroscience. She was a graduate of the departments of English philology as well as Psychology at the Faculty of Letters, and also had a degree in painting. She went abroad to study psychology at Stanford University in 1952 for a year, and following her return, earned a doctorate in psychology from Istanbul University. After becoming an associate professor in 1957, she traveled to Newnham College as a research fellow to conduct experiments on color perception, and in so doing earned a masters degree from Cambridge University. Her second return to Turkey heralded her professorship at the psychology department in 1965, which she served until 1994 as professor of experimental psychology, becoming the head of the department from 1982-1994, and serving as the principal of the Institute of Experimental Psychology from 1969 to 1981. Examples of Toğrol’s works include works on statistics applications to psychology research such as *İstatistik Metotları* (Methods in Statistics) and *Psikolojide Deneylerin Düzenlenmesi ve Analiz Metotları* (Experiment Organization in Psychology and Research Methods), works on psychology theory such as *Büyük Britanya’da Yeni Psikoloji Cereyanları* (New Waves of Psychology in Great Britain) and *İdeal Bir Üniversitede Psikolojinin Yeri* (The Role of Psychology in an Ideal University), as well as research on the psychological wellbeing of Bulgarian Turks following their migration to Turkey in 1989, such as *112 Yıllık Göç* (The 112-Year Migration) and *Direnış* (*Bulgaristan Türklerinin 114 Yıllık Onur Mücadelesinin Karşılaştırmalı Psikolojik İncelemesi*) (Resistance (A Comparative Psychological Analysis of the 114-Year Honor Struggle of Bulgarian Turks)). Toğrol also attended many congresses both in Turkey and abroad. Recognized for her contributions to the field, Toğrol was awarded an International Council of Psychologists Certificate of Recognition in 1992 and was a lifetime member of the ICP. She was also the founder of the Psychological Research Foundation in Turkey, and was a member of the Turkish Neuropsychology Foundation. She died in 2016.

the viewpoint of the West, with the methodology of the West, and according to Edward Said, with the *purposes* of the West (Said, 1977). The concept of Orientalism is hugely divisive today following Said's critique of it, as is the academic field associated with it. In summary, Said criticizes the academic field as being a means to separate the West from the "other", in this case the Orient. This "other", according to Said, through Orientalism, is considered a collective of something that can be studied, depicted and reproduced. The study of Orientalism, therefore, also inherently presupposes the thesis that the West is superior to this "other", and seeks to prove it with the end goal of justifying Western imperialism.

While the political discourse associated with the study of Orientalism is difficult to ignore today, for the purposes of this thesis, we turn our attention to the refugee scholars who studied the various fields under what was collectively titled Orientalism (e.g. history, archeology, linguistics, anthropology, etc.) by the architects of the 1933 University Reform. We remove the academics of the 1930s from the politics of the late 1970s, in order to observe the effect these refugee scholars' works had on the academic development of Turkey, and analyze their contributions.

In discussing Orientalism, it would be prudent to mention the various criticisms on the study. For some scholars, the term Orientalism is in itself a misnomer. It is often difficult to separate the concept of Orientalism from politics, and one can come across many articles and opinions of the study being an imperialist Western view imposed on the East. This is prevalent in the modern conjuncture, especially after the publication of Edward Said's *Orientalism* (1978). However, during the 1933 University Reform, *Orientalism* was not yet published and public opinion regarding the study had not been so influenced and shaped by Said. In the views of the Turkish officials who spearheaded the reform, many of the so-called orientalists were archeologists, Assyriologists, Sumerologists and the like, invested in a variety of studies such as numismatics, ancient writings, and ancient philology. It was due to this that the first official usage of the word Orientalism in Turkish higher education began after the university reform of 1933, and to the Turks connoted the study of non-Turkish history, archeology, and linguistics. The study of archeology especially dominated the understanding of Orientalism in Turkey, and as a result the studies of Orientalism and Archeology were often mentioned together. It should be noted that every refugee scholar that studied and taught "Orientalism" at the Faculty of Letters was an archeologist, though they held many fields of expertise, such as Hittitology, Sumerology, etc. As the Turks considered archeology, linguistics, and history to

be the core studies of Orientalism, it was these fields that they focused on. A research center by the name of *Şarkiyat Enstitüsü* (Institute of Orientalism) was established in 1938, and was responsible for the study of these fields, and especially for the transfer of Western methodologies used for them. Additionally, the research center intended also to carry out research projects, and of course to raise more Turkish academics to advance this academic tradition. Refugee scholars were employed to this end.

It should also be mentioned Turkology was separated from Orientalism well before 1933. *Türkiyat Enstitüsü* (Institute of Turkology) was established in 1923 within *Darülfünun* before the university reform, and the institute was, understandably, completely staffed by Turkish academics. The separation of the two studies is symbolic of the new republic's desire to differentiate itself from what the Western world collectively coined "the Orient"—especially in order to turn its face towards the West, as it were.

Clemens (Mehmet Emin) Bosch (1899 Köln – 1955 Istanbul) was a German Orientalist, ancient historian, and numismatist. While not much is known of his early life, it is recorded that Bosch was drafted into serving in World War I in 1917 and released in 1919, and passed a matriculation examination at the Darmstadt gymnasium. After studying ancient history, classical philology and archeology at the universities of Heidelberg and Berlin, he earned a doctorate in 1925 with a thesis titled *Die Quellen des Valerius Maximus; ein Beitrag zur Erforschung der Literatur der historischen Exemplar* (The Sources of Valerius Maximus: A Contribution to the Study of the Literature of Past Exemplaries). By 1930, he had become an assistant at the Institute of Archeology of the University of Halle/Saale. Around the same time, Bosch became interested in studying numismatics, and took a special interest in coinage from Asia Minor, and wrote his habilitation thesis on the subject in 1932 as *Die kleinasiatischen Münzen der römischen Kaiserzeit* (Coinage of the Roman Empire in Asia Minor). Before his emigration, he was working as a *privatdozent* and head assistant at the University of Halle/Saale, at its Institute of Ancient History (Kadioğlu & Erginöz, 24 and 29 April 2007).

Bosch was considered undesirable due to his Jewish wife, Johanna Bosch. He was not removed from his teaching position immediately, however, due to his history of military service; it took until 1937 to do so. By then, the Bosch family had already emigrated to

Turkey with refugee status in 1935—Clemens Bosch had realized that there would be no chance to improve his academic career in Germany.

In Turkey, Bosch was initially employed at the Istanbul Archeological Museum as a "meskûkat mütehasısı", an expert numismatist—a curator of ancient currency. Here, Bosch was at the center of his field of study, and found a comfortable working environment rich in resources for his research. He worked at the museum from 1935 until 1939, and during this period, worked on the classification and cataloguing of ancient coins displayed in the museum, publishing the catalogues in three volumes and a guidebook *Eski Sikkeler Rehberi* (Guide to Ancient Coins). In 1938, he started working at Istanbul University as a professor of classical philology, by 1939 he had also been given the professorship chair of ancient history in the same university. According to Kadioğlu and Erginöz, this also coincided with the fact that due to the start of World War II, the ancient coins displayed in the museum—and were under Bosch's care—began to be transported to smaller museums in Anatolia for safety reasons, and perhaps due to this, Bosch needed a new main area of work outside the museum (Kadioğlu & Erginöz, 24 and 29 April 2007). At the University, Bosch was then based at the Faculty of Letters, and lectured at the Department of History, with a focus on Hellenism, as well as the Department of Archeology, with a particular focus on Greek and Roman numismatics. Bosch produced a wide variety of publications, both aimed at students and a wider public audience. His textbooks included *Roma Tarihinin Anahatları* (Outlines of Roman History) and *Helenizm Tarihinin Anahatları* (Outlines of the Hellenistic Period), published in two volumes, with the first volume examining the empire of Alexander the Great, and the second on the Hellenistic states until their inclusion in the Roman Empire. Bosch also traveled Anatolia for research purposes, and published reports on various archeological surveys conducted in Turkey, such as *Antalya Bölgesinde Araştırmalar* (Surveys in the Antalya Region), *Pamphylia Tarihine Dair Tetkikler* (Surveys On Pamphylian History), and *Quellen zur Geschichte der Stadt Ankara im Altertum* (Resources on the History of the City of Ankara in Ancient Times). Sabahat Atlan²⁰¹ was a known translator-assistant

²⁰¹ Sabahat Atlan (1913 – 1983) was a 1935 graduate of the Istanbul University Faculty of Letters, Department of History. She was sent abroad to Germany on a government scholarship in 1936 to study Archeology and the languages of Asia Minor. After three years, she returned, and became an assistant and translator to Clemens Bosch, and worked with him for eleven years between 1940 until 1951. Under Bosch's tutelage, Atlan became interested in numismatics, and defended a doctoral dissertation entitled "Küçükasya Sikkeleri Üzerinde Aphrodite Tipleri" (Depictions of Aphrodite on Coins from Asia Minor) in 1948. She became an associate professor in 1952, and a professor in 1964; she lectured on Roman history and numismatics, and was oftentimes responsible for Bosch's own courses when his health had begun to fail. Atlan retired in 1978 due to the decline of her health, and passed away in 1984 (Tekin, 2009).

for Bosch, and Arif Müfid Mansel²⁰² was a coworker considered to have been deeply influenced by him (Widmann, 1999, p. 426).

Bosch converted to Islam in 1939, and took on the name *Clemens Mehmet Emin Bosch*. In a letter to Alexander Rüstow in 1949, Bosch wrote that he did not intend to return to Germany, though it was possible that he would have to. Bosch noted that his ability to make his contract with the Turkish government permanent also depended on whether he could get Turkish citizenship or not. Bosch was not entirely certain of permanent residency in Turkey, and he had turned down an offer of work from West Germany a few years prior. He also noted that he wanted to move to the United States but had so far been unable to (Şen F. , 2008, p. 150).

Due to a stroke he suffered in 1951, Bosch's health deteriorated considerably, and he soon became unable to continue his academic activities. His assistant Sabahat Atlan tried to continue his lectures in his stead where he was unavailable. As he was effectively bedridden, Bosch's contract with the Turkish government was cancelled in 1954. His situation continued to deteriorate, and he passed away in 1955 (Kadioğlu & Erginöz, 24 and 29 April 2007).

Fritz Rudolf Kraus (1910 Spremberg – 1991 Leiden) was a German Orientalist, Assyriologue and numismatist. Born to an Austrian Jewish convert father and a Protestant mother, he studied Ancient Near Eastern Studies at the universities of Munich and Leipzig and earned his doctorate under the tutelage of Benno Landsberger, who was also a refugee scholar in Turkey.

Kraus was considered undesirable in Germany due to the heritage of his father, which by National Socialist standards was 'Jewish' regardless of his conversion to Protestantism.

²⁰² Arif Müfid Mansel (1905-1975) was a renowned Turkish archeologist, considered to have been among the first academics in the study in Turkey. Educated in both *Alman Mektebi* and the French Saint Benoit High School, he was sent to Germany in 1925, and studied archeology at the University of Berlin, earning a doctorate in the field with a thesis entitled *Stockwerkbau der Griechen und Römer* (Storied structures of the Greeks and Romans). Soon afterwards, he returned to Turkey, and started working for the Istanbul Archeological Museum. In 1936, he was appointed an assistant professor of ancient history at the Faculty of Letters, while still retaining his position as assistant director of the museum. His teaching responsibilities were later extended with the establishment of the Chair of Classical Archeology, and from 1936 he was made director to excavations conducted in the Thracian region, researching the archeological relationships between Anatolia and the Balkans. Additionally, he taught Aegean and Greek history, and was also sent to Greece for archeological surveys. Mansel became a professor in 1944, and retired from the museum two years later to direct all his energies to the university. By 1956, he was a professor ordinarius. His various excavations and surveys continued until 1974, starting with the Yalova thermal springs in 1932. Later on, Mansel was responsible for much research done on the Pamphylia region, especially in the context of their relation to Hellenistic and Roman periods. Mansel became the first director of the Archeological Research Station established in Antalya in 1954 (İstanbul Üniversitesi, 2012).

Because of this, Kraus could not find a job, and got by with the aid of his parents until he emigrated to Turkey in 1937 as a refugee. Through the mediation of his mentor Landsberger, Kraus was employed by the Istanbul Archeology Museum as an expert on, and conservator of, clay tablets. After Kraus' arrival, efforts began to classify and make an inventory of the clay specimens in the museum, and this was an effort that he devoted ten years to. According to his own testimony, the Istanbul museum archive contained around 75000 tablets from 12 different sources, 40000 of them from Tello—and many of those were either heavily damaged or very small, which he reasoned was a result of failed (and mistaken) attempts to preserve the clay specimens by baking them further in the early 1930s. Kraus also served as an assistant and lecturer at Istanbul University from 1942 (Reisman, 2006, p. 76).²⁰³ In Istanbul, Kraus defined himself as “petty bourgeois living by proleterian standards” in regards to his poor situation.

Kraus spent thirteen years in Turkey. Kraus and his family left for Vienna in 1950, with Fritz taking a professor extraordinarius chair at the University of Vienna for Semitic Philology and Near Eastern Archeology that was left empty by an expelled National Socialist. There, he earned Austrian citizenship. In 1954, he moved to Leiden University in Holland, and acted as a professor of Assyriology until retiring in 1980. Records of his correspondence in Istanbul, particularly with his mentor Landsberger, is available in his student Jan Schmidt's two-volume biography and compilation *Dreizehn Jahre Istanbul* (Thirteen Years in Istanbul) (Schmidt, 2014).

Karl Süssheim (1874 Nuremberg – 1947 Istanbul) was a German Orientalist and Turkologue. Graduating from Gymnasiums in Nürnberg, Süssheim studied history, philosophy, and natural sciences at the universities of Jena, Munich, Erlangen, and Berlin. During his studies, he learned various Oriental languages, such as Arabic, Persian, and Turkish. Süssheim earned a doctorate in history with a dissertation titled *Preussens Politik in Ansbach-Bayreuth 1791-1806* (Prussian Politics in Ansbach-Bayreuth 1791-1806) in Berlin in 1902. Later, he traveled

²⁰³ In his memoirs, Kraus mentions his attending his students' tea parties. During these events, Kraus makes note of poetry reading, sketches and dancing, observing the (educated) Turkish community's interest in poetry with delighted surprise. He mentions that he would often dance with his female students (despite being old enough to be their father, and would find this a highly peculiar endeavor, as the slightest bit of flirting was considered unacceptable by the conservative community). Kraus later received a circular letter from the German Ministry of Foreign Affairs that if he were to marry one of these students—the Turkish citizen Hariklia Anastiades—he would be denaturalized. While the German Ministry of Foreign Affairs' special interest in Kraus' dancing partner is peculiarly entertaining, Kraus was denaturalized in the same year regardless. And in any case, he married Anastiades in 1946 (Şen F. , 2008, p. 184).

to Istanbul on a mission sponsored by the Bavarian Academy of Science, and also to further his knowledge of Oriental languages. Süssheim initially stayed in Istanbul for six years. His subject of research during his stay was the history of the Seljuk Empire, though according to Heywood, Süssheim failed to gain access to the Ottoman archives for this research, and was denied sight of any official archival document (Heywood, 2003). Nevertheless, there he also became interested in Turkish literature, publishing an article on it called *Türkische Volksliteratur* in Berlin (Özgen & Balcı, 2010). Süssheim returned to Germany in 1908, and was a *privatdozent* at the University of Munich before being drafted to serve in World War I, where he was utilized as a postal censor. Heywood comments that Süssheim's post-war career never took off, however, and he never truly managed to secure a chair in Germany.

After the *Machtergreifung*, Süssheim's career in Germany came to an abrupt end due to his Jewish heritage and he was briefly interned in Dachau before managing to leave Germany. He arrived in Istanbul in 1941 and was employed by the Faculty of Letters, lecturing, researching, and publishing. According to Heywood, however, Süssheim's productions in terms of scholarship were little—at least, if measured by modern standards. The majority of Süssheim's research is mentioned in his letters, rather than being published, and is therefore difficult to track down. However, Süssheim is known as having been an obsessive collector of foreign stamps and Islamic manuscripts. The latter collection was purchased from his widow in 1960 by the Berlin Staatsbibliothek, and contained 338 Islamic manuscripts and volumes of Süssheim's obsessively kept diary. Evidently, Süssheim's collection of manuscripts were unique and highly valuable. Additionally, Süssheim is credited with being the first westerner to have become aware of Mahmud al-Kashgari's *Dîvânü Lugati't-Türk* (Compendium of the Languages of the Turks), which had only been discovered during his earlier stay in Istanbul (Heywood, 2003).

Süssheim passed away of a kidney disease in Istanbul in 1947.

*Helmut Ritter*²⁰⁴ (1892 Lessich-Listenau – 1971 Oberursel) was a German Orientalist. Born the son of a protestant pastor, Ritter attended a Gymnasium in Gütersloh, and continued his education in Halle and Strasbourg. He began an academic career at the University of Hamburg in oriental studies, which was a very wide field at the time: Ritter learned Turkish,

²⁰⁴ Helmut Ritter's name was often also written as Helmuth Ritter, Hellmut Ritter, or Helmut Ritter, depending on the source.

Arabic, Persian, and other Semitic languages including Hebrew and Aramaic. In addition to learning these languages, he became well acquainted with Islam, and the culture and history surrounding it. Ritter's studies were temporarily interrupted in World War I, as he was drafted and sent to Iraq and Palestine as an interpreter of the various languages he learned—in 1914, Ritter had arrived in Istanbul, and took the opportunity to expand on his knowledge in Turkish greatly. In Iraq, Ritter improved his Arabic. In the region, he also researched the local folklore and made it the subject of his later publications. Later, he did the same in Palestine, and according to Ateş, therefore developed the skill of combining his military service with purposes of academic research. His doctoral thesis, *Ein arabisches Buch der Handelswissenschaft* (An Arabic Book on Trade), was written on a book he obtained during his service. After the war, he returned to the University of Hamburg, receiving his habilitation in 1919; in the same year, he was appointed professor ordinarius to the chair of oriental languages. At the age of 27, Ritter had become Germany's second youngest ordinarius, compared only to Friedrich Nietzsche, who had earned the title at 26 (Ateş, 1964).

Back in Germany, Ritter published German translations of traditional Turkish shadow plays “Hacivat ve Karagöz”, translating *Kanlı Kavak* (Bloody Poplar), *Sahte Gelin* (Fake Bride) and *Kanlı Nigar* (Bloody Nigar) from Turkish transcriptions he had taken during his stay in Turkey. In this way, Ritter was responsible for the transfer of culture between the two countries.

Ritter emigrated to Turkey in 1926, much earlier than most other refugee scholars, and Ateş notes that he was sent by the *Deutsche Morgenländische Gesellschaft* (German Oriental Society) as the director of their Istanbul office. Another reason for his early arrival, however, is evaded by most early articles on Ritter, including Ateş's. Ritter was sent to a penitentiary prison in Germany in 1925 after he was convicted of §175 StGB, i.e. Paragraph 175 of the German Criminal Code, which criminalized homosexual acts between males.^{205,206} According

²⁰⁵ Paragraph 175, adopted in 1871 after the unification of Germany, was a sodomy law which criminalized homosexuality between males, considering it similar in depravity to bestiality, prostitution, and underage sexual abuse, which were subsets of the law. A subject of much political debate, the article saw many different revisions, with protests against the “disgraceful paragraph” beginning in the 1890s. Despite various demands from social democrats for a complete repeal of the law, the legislation remained in limbo in the German constitution, and inevitably fell into the hands of the Nazis in 1935. The National Socialist regime broadened the law considerably, effectively making it so that the courts could pursue any act deemed ‘lewd’ or ‘unnatural’, even one involving no physical contact. Convictions immediately multiplied tenfold, and within two years the “Reichzentrale zur Bekämpfung der Homosexualität und Abtreibung” (Reich Office for Combating Homosexuality and Abortion) had a list of over 100,000 suspected homosexuals, with many prosecutions resulting from private accusations by other citizens. Furthermore, the Gestapo was granted the legal right to transport any of these suspected homosexuals to concentration camps without any justification at all, even if the

to Reisman, Ritter was openly homosexual, and therefore escaped certain death by leaving Nazi Germany when he did (Reisman, 2006, p. 77). Reisman also notes that Ritter was Jewish, though this seems to be an incorrect deduction since Ritter did not come from a Jewish family. His brother, Karl Bernhard Ritter, was a Protestant evangelist pastor; Helmut himself was never convicted for 'being Jewish', was never denaturalized, and received an order to return to the Reich in 1944. The Scurla report also mentions that his relation to Jews was that he was among the Nazi political opponents who kept their relationships with Jewish friends despite orders not to do so (Şen F. , 2008, p. 212). Ritter is considered to be among the refugee scholars who emigrated to Turkey due to his homosexuality and political noncompliance, not due to his religious background.

In Istanbul, Ritter was tasked by the Society to work at Istanbul's libraries, catalogue the valuable works he located there and introduce them to the world of academia, and publish important texts. To the latter end, he published a series of articles he titled *Philologica*. He published various texts in Arabic and Farsi, and also established a journal called *Bibliotheca Islamica* in 1929. After the university reform in 1933, Ritter was invited to become a lector in Arabic and Farsi philology at the Faculty of Letters in 1936, and took the chair of the same name in 1936. At the University, Ritter was responsible for the teaching of modern philology and orientalism, and also the transfer of the western academic understanding of the study to Turkey. To that end, he installed modern philological techniques and scientific methods into Turkish academia. İnalçık considers Ritter's biggest contribution to the Turkish academia to be his transfer of the western "critical edition" textual criticism method, and notes that western methods, alongside Ritter's academic legacy, contributed greatly to the study of modern Orientalism and Turcology through the development of hermeneutic methods (İnalçık, 2002). Ritter founded the Institute of Orientalism in a room at the Istanbul University library, in order to develop and conduct research on the resources found there. Ritter's efforts to institutionalize the study of orientalism continued, and he founded *Milletlerarası Şark Tetkikleri Cemiyeti* (International Society for Oriental Research) in Istanbul in 1947 together with Adnan Adıvar, Reşit Rahmeti Arat, Fuad Köprülü, J. K. Birge, W. C. Edvars, L. Thomas, and Ahmed Ateş. This society began publishing a journal on Orientalism, called

convicted had been acquitted or already served their time in jail. The end result of the Nazi practice of the law was the incarceration of 5000 to 15000 homosexual males in concentration camps, where they were identified by a green or pink triangle. Many did not survive (Jellonnek, 1990).

²⁰⁶ In comparison, homosexuality was decriminalized in the Ottoman Empire in 1858 when sodomy laws were removed as part of the *Tanzimat* movement during the reign of Abdülmecid I (BBC News, 2014).

Oriens, in 1948. Nihad Çetin²⁰⁷ and Fuat Sezgin²⁰⁸ were Ritter's students, and continued his tradition. Ritter is considered to have been the pioneer of German Orientalism in Turkey for his various efforts (Turan, 2013).

In addition to his work on Orientalism, Ritter also furthered the art of librarianship in Turkey. As his Institute of Orientalism was situated in the library and was in fact Ritter's haven inside it, the two studies of Orientalism and librarianship were often intermingled. Ritter's contributions to Turkish academic librarianship included instituting the art of western bookkeeping and library organization at Istanbul University. At the university library, Ritter worked alongside fellow refugees Walter Gottschalk and Josef Stummvol, and as the head of the *Kütüphane Tasnif Komisyonu* (Library Classification Committee), prepared the eleven

²⁰⁷ Nihad Çetin (1923 – 1991) was a Turkish Orientalist. Initially registered as a student of Istanbul University Faculty of Law, he later transferred to *Yüksek Muallim Mektebi* (Teachers' College) and simultaneously became a student of Turcology at the Faculty of Letters. After his graduation in 1948, he taught Turkish and literature in Adana and Kayseri before becoming an assistant in Arabic and Farsi philology at the Faculty of Letters. After earning a doctorate in 1958, he became an associate professor in 1964 and was a professor by 1971. Çetin was a member of Ritter's *Milletlerarası Şark Tetkikleri Cemiyeti* (International Society for Oriental Research), and was the chair of the Institute of Orientalism from 1971 to 1990, at which point he retired due to his declining health. He was a member of the Istanbul University senate from 1982 on and also directed the department of Near Eastern Language and Literature. Examples of his works include *Eski Arap Şiiri* (Ancient Arab Poetry), *Arapça Dilbilgisi* (Arabic Grammar), *Mesnevi'nin Konya Kütüphanelerindeki Eski Yazmaları* (Mesnevi's Historical Writings in Konya Libraries) and *Fennü'l Hat* (The Art of Islamic Calligraphy). Çetin also served as an advisor for the Ministry of Religious Affairs and was responsible for the development of *İslam Ansiklopedisi* (Encyclopedia of Islam) (Furat, 1998).

²⁰⁸ Fuat Sezgin (born 1924) is a Turkish historian of Islam, science and technology. Sezgin was a student of the Orientalism department headed by Ritter, and was personally put on the path of further study by him. An interesting anecdote noting that Ritter once asked Sezgin how many hours a day he devoted to studying; Sezgin answered that he devoted twelve: four hours in the morning, in the afternoon and at night. In response, Ritter scoffed and noted that he needed to devote *all* his time. Sezgin graduated from the faculty in 1947 and earned his doctorate in 1951, with his associate professorship following on a thesis on *Buhari'nin Kaynakları* (The Sources of Imam Bukhari). Sezgin's thesis proposed that the Islamic hadiths collected by Bukhari were actually dated far earlier than believed, possibly the 7th century, the very early period of Islam. Sezgin's associate professorship placed him at the Institute for Islamic Studies at Istanbul University. Through Ritter, Sezgin was introduced to the works of German Orientalist Carl Brockelmann, particularly his five-volume *Geschichte der Arabischen Litteratur* (History of Arabic Literature) and, finding that many of the sources he himself had used in his works uncited in the book, set to work on extending the colossal series of Arabic literary history. During this period, Sezgin traveled often to Germany. Following the 1960 military coup, Sezgin became one of the *147likler*, a "dangerous professor", and was removed from his position at Istanbul University. He instead moved to Germany, and took up a position at Goethe University Frankfurt in 1961, becoming a professor there following his habilitation in 1965. Sezgin published his monumental work, his thirteen-volume *Geschichte des arabischen Schrifttums* (History of Arabic Literature), in 1967; the work chronicles various topics ranging from religious and historical literature to geography and cartography. Sezgin founded the Institute of Arabic-Islamic Historical Studies at Goethe University Frankfurt in 1982, and a museum for it in 1983. The museum showcases samples of scientific and technological tools reimagined as according to historical sources, and a catalog of it is available as *Wissenschaft und Technik im Islam* (Science and Technology in Islam). Sezgin spearheaded the establishment of a similar museum in Turkey, the Istanbul Islam, Science and Technology museum in 2008. Sezgin speaks out often in favor of the Islamic world's "return to science", noting that for several centuries, Muslims have been living under an "inferiority complex". Sezgin believes that a reexamination of the last 800 years of human progress is in order for Muslims to emancipate themselves from said complex, and that they can draw inspiration from the Golden Age of Islam to uplift themselves and produce creative, productive individuals in the likes of great Islamic scientists and scholars such as Al-Biruni, Ibn Sina, Jabir ibn Hayyan, and many others that seem to have been forgotten (Macit, 2015).

fascicles of the Istanbul Libraries Turkish History-Geography Manuscript Catalog. He also went on research trips to Bursa and other Anatolian cities to study the literature found in their libraries and archives, and published articles about his findings in *Oriens*. Ritter was as if in love with hand-written books: in addition to cataloguing, interpreting, and detailing oriental manuscripts for Turkish libraries and academia, Ritter also added many manuscripts on Arabic and Islamic culture to his personal library. In one interesting case, Ritter purchased a rare manuscript of Gülşehri's *Felekname* and had it sent abroad to Germany, and later when it was noticed that there was no other copy of the manuscript anywhere, the Minister of Education Hasan Ali Yücel had to step in and ask Ritter to take it back to the Ankara University School of Language, History, and Geography's library. Ritter obliged (Turan, 2013).

According to Neumark's testimony, Ritter had an eccentric personality. Apparently, he was "slightly odd, often obstinate, and mostly acted coldly but had an explosively aggressive temperament at times, which led to resentments". For example, he once taunted a Turkish senate member, saying that "You speak of being cultured here, but like any other mediocre Turk you are incapable of telling apart even twenty or more kinds of spring water!" (Neumark, 1982, p. 65). What Ritter exactly meant by this line is rather vague. Neumark nevertheless commends Ritter's ability to "understand the Oriental way of thinking" and the value he put in his work: in another example of Ritter's eccentricities, Neumark recounts that Ritter once vehemently argued with the university engineers for wanting to set up neon lighting in his seminar room. According to Ritter, the specimens of ancient Arabic writings he kept in the room were so fragile that they could not withstand any sort of electrical lighting and any research on them had to be carried out using gas lamps. Ritter also reacted similarly to the transfer of Istanbulian manuscripts to the Süleymaniye Library during the height of World War II, informing the library's director that if the library were to be attacked, all this cultural heritage would be lost (Turan, 2013). Ritter wanted the aforementioned manuscripts, among other such historical artifacts, to be relocated across various archives in Turkey instead (and in some cases, abroad in his private collection).

When German-Turkish diplomatic relations were severed in 1944, Ritter was not interned as a German citizen, and was instead positioned as the caretaker of the library at the German Archeology Institute. He was soon removed from this position by Berlin authorities, and later received a telegraph ordering him (alongside other German citizens) to return to the Reich, which he refused. Ritter remained in Turkey, but in 1947 found himself in a dispute with

Istanbul University administration when the administration did not employ him as an ordinarius professor, which he found deeply insulting and disheartening. He then accepted an offer from Frankfurt University in 1949 and returned to Germany. Ritter retired in 1956. Even after his retirement, however, he came to Istanbul again and taught at Istanbul University until he no longer could. The decline in his health forced him to quit teaching in 1969. He passed away in Germany two years later.

3.4.1.5 Librarianship

The study of academic librarianship in Turkey should be traced to a time after the declaration of the Republic, according to Şenöz (Şenöz, 2009, p. 624). As the government that was being founded built itself up on the philosophy that “The true mentor in life is science”, and that this could not be achieved without libraries, it was necessary to train librarians equipped with the various abilities of establishing and organizing libraries, developing and improving library services, and ultimately promoting reading and learning—instead of simply “storing and maintaining books”. Sadly, while the intent to establish a department of library science was shown in 1924, the official opening of such a department was delayed for near forty years until 1963. Nevertheless, a chair of library science existed at the Faculty of Letters at Istanbul University, and a refugee scholar occupied it.

Walter Gottschalk (1891 Aachen – 1974 Frankfurt) was a German librarian. In his early academic career, he studied orientalism, philosophy, history, and history of art at the universities of Würzburg and Berlin, and earned a doctorate in 1914 with a thesis titled “The Older Arab Concept of the Vow”. He participated in World War I, and held posts in Turkey, Syria, and Palestine, possibly as an interpreter much like Helmut Ritter due to their study of orientalism and familiarity with Middle Eastern culture and language. After the war, Gottschalk took a job at the Prussian State Library in Berlin and was the senior librarian for language and history of the Middle East. Despite his contributions to the organization of the Oriental Department of the library over the years, Gottschalk was dismissed from his position in 1935 due to antisemitic reasons.

Gottschalk fled Germany in 1939, and spent some time in Belgium on the run with his family before emigrating to Turkey with refugee status in 1941. He was employed by the University of Istanbul, and was contracted as an expert on library matters. Gottschalk worked as a

supervisor to the libraries of all institutes in the university, and took its newly established chair of library science in 1949. From then on, he contributed to the development of the Turkish library system.

Gottschalk returned to Germany following his retirement in 1954. He was succeeded by his assistant, the non-refugee émigré Rudolf Juchhoff, who was in turn succeeded by the Turkish librarian Meral Alpay. Gottschalk passed away in 1974.

3.4.1.6 Aesthetics and History of Art

In 1933, the Faculty of Letters also held a department for Aesthetics and History of Art, which stemmed from the study of *Bediiyat* (Aesthetics) in *Darülfünun* prior to the 1933 university reform. It employed a number of Turkish and foreign scholars, though none of them were refugees. As this thesis deals specifically with the refugee scholars, however, these foreign non-refugee scholars will not be examined.

3.4.2 Social Sciences at the University of Ankara (Ankara Dil Tarih Coğrafya Fakültesi (DTCF))

Dil Tarih Coğrafya Fakültesi (Faculty of Language, History and Geography), hereby abbreviated DTCF, was a Faculty established in Ankara in 1935 on the orders of Atatürk. Named by Atatürk himself, the stated purpose of the faculty was to study, examine and research Turkish culture, language and history using academic methods, to establish a national consciousness and to foster of a younger generation capable of free thought, to which end it would train teachers in accordance with modern scientific approaches (Ankara University Faculty of Languages, History and Geography, 2016).

DTCF was devoted entirely to the examination of Turkish cultural life, and according to Widmann, was established with the obvious purpose of forming the core of Ankara University, which would come to life later in 1946 (Widmann, 1999, p. 236). In the larger framework of Turkish educational development at the time, the establishment of DTCF could be considered one of the final steps in various education projects undertaken by the Turkish government from the beginning of the republic: DTCF was established after the culmination of the *Kadro* movement in 1932-1935, was followed by the establishment of *Halkevleri* (a state-sponsored enlightenment project), coincided with the founding of the Turkish Historical

and Linguistic Societies, and was another step in further research onto Turkish folklore and language. All of these projects were undertaken with the purpose of establishing a new cultural generation, and DTCF—by name a faculty—was a tertiary education institution, the beginnings of a new university, built from the ground up (as opposed to being reformed, in the case of *Darülfünun*'s transformation into Istanbul University).

When it was first opened in 1935, DTCF was established to be a center for the education of social sciences, and held departments for the study of various languages and literatures including Turkish, German, Arabic, French, English, and Russian, as well as departments for classical philology, geography, philosophy, history, Sumerology, Indology, and so on. It employed renowned Turkish academics, including some who had previously taught at Istanbul University. For example, İsmail Hakkı Baltacıoğlu, the elected rector of *Darülfünun* who had been removed from his position during the 1933 university reform, was among the academics teaching at DTCF. Some members of the Turkish parliament were asked to teach at DTCF in addition to their political duties. Foreign scholars were also present at DTCF in a variety of fields, and this group included refugees from German-speaking countries as well as non-refugees (such as Olivier Lacombe, who headed the department of philosophy, and Jean Comborde, who did the same for the department of French Language and Literature). The refugee scholars at DTCF were Georg Rohde, Benno Landsberger, Hans Güterbock, Walter Ruben, and Karl Menges.

Georg Rohde (1899 Berlin – 1960 Berlin) was a German classical philologist. Born to a Catholic family of humble origins, Rohde was influenced by his family to become a priest and studied at the *Evangelisches Gymnasium zum Grauen Kloster* (Evangelical Gymnasium of the Gray Cloister), where he adopted the outlook of classical humanism and discovered a love of ancient studies and classical languages. He later studied classical philology at the Universities of Berlin and Marburg, and received a doctorate with a dissertation on the works of Virgil in 1924. Rohde remained at the university of Marburg, becoming an assistant in philology and later becoming the director of the university's Latin courses. He received his habilitation in 1931 with his work *Die Kultsatzungen der römischen Pontifices* (The Cult Statutes of the Roman Pontiffs), and was working at the University of Marburg as an associate professor of philology.

Rohde's trouble with the Nazi regime began due to the undesirability his wife, the Jewish archeologist Irmgard Kalischer. According to his colleague and friend Paul Moraux, Rohde

was pressured to either divorce his wife or bid farewell to any prospect of furthering his academic career. Rohde, instead, chose exile (like Cicero, Ovid, and Seneca before him, as Widmann words it) (Widmann, 1999, p. 238). Suggested to the Turkish government by his former teacher and mentor Eduard Norden, Rohde was invited to take up the chair of Classical Philology at the Ankara University Faculty of Language, History and Geography. He arrived in Turkey in 1935.

Rohde found himself with plenty to do at the faculty. According to Moraux's testimony, Rohde had to build a European-styled department of Classical Philology almost from scratch. At the newly established faculty there was no library and no textbooks. Rohde even found it difficult to find students who were willing to go through the necessary preparatory courses, as most of these students knew neither Latin nor Greek. Due to the sweeping changes that had been made to the Turkish language following the reform movement, most of the students were as foreigners even to their mother tongue (Widmann, 1999, p. 238). Perhaps in response to this, Rohde quickly learned Turkish and spoke it fluently, often holding conferences in Turkish in and outside the boundaries of the university. Despite the difficulties he faced, Rohde found a way to thrive: the Turkish ideological world at the time had been thrust into a flurry of activity following Atatürk's reforms, and the Western-oriented culture program and general outlook provided Rohde with the opportunity to install his humanist way of thinking into Turkish academia. His relationship with Hasan Ali Yücel, who was the Minister of Education at the time, also allowed for government-aided programs in the teaching of his study. Moraux classifies Rohde's contributions to the study of classical philology of Turkey in four separate categories. These include the establishment of an excellent library of classical philology at the Faculty of Language, History and Geography, the introduction of Latin courses to Turkish high schools. In collaboration with Yücel, and with his student Samim Sinanoğlu, Rohde coauthored a textbook of Latin aimed at high schoolers and students of higher education.²⁰⁹ He prompted of the translation of many classical works, also in

²⁰⁹ Samim Sinanoğlu (? - ?) was a Turkish translator and academic, the elder of the Sinanoğlu brothers. Together with his brother Suat, he was brought up in Rome, and entered the Faculty of Letters at the University of Rome, but returned to Turkey in 1940 when Italy began preparations towards World War II. Samim Sinanoğlu graduated from the Faculty of Letters at the University of Istanbul, and focused on the Latin language. Unfortunately, information on Samim Sinanoğlu is rather rare compared to his younger brother Suat. Samim Sinanoğlu was a professor of Romance languages at Istanbul University by around age 35, and his works included works on Latin, such as a Latin grammar dictionary written alongside his mentor Rohde, *Latin Dili Grameri Morfoloji* (The Morphology of Latin Grammar). Samim Sinanoğlu also authored publications such as *Latincenin Değeri* (The Importance of Latin), *Lingua Latina*, *Curiatius Maternus*, and *Yunan Dünyası Karşısında Cicero* (Cicero Against the Greek World). As Samim Sinanoğlu focused his studies on the Latin language, and his younger brother Suat on the Greek language, it can be said that Rohde was responsible for

collaboration with Yücel. To this end, Rohde also established the department of Greek and Latin writers, and personally translated four volumes of Plato's Republic. In the end, Rohde raised a generation of academics, which included many professors and associate professors, classical philologues, archeologists, classical historians and romanists. Famous among these students were the philologue brothers Samim and Suat Sinanoğlu²¹⁰, Ayşe Sarıgöllü²¹¹, and the archeologist Ekrem Akurgal²¹². Sarıgöllü testifies that Rohde's direction of the chair of classical philology allowed him to introduce the worlds of ancient Rome and Greece to

raising two capable scholar brothers in the languages of two great ancient civilizations (Gürçağlar, Paker, & Milton, 2015).

²¹⁰ Suat Sinanoğlu (1918 – 2000) was a Turkish writer, translator, and academic. Like his elder brother, Samim Sinanoğlu was initially educated in Rome at the University of Rome, which was cut short by the family's immediate return to Turkey in response to Italy's tence towards joining the upcoming war. Sinanoğlu then graduated from the Faculty of Letters at Istanbul University. He became an assistant at the Faculty, focusing on the ancient Greek language. His doctorate thesis was titled *Bukolik Şiirin Kaynakları* (The Foundations of Pastoral Poetry) and his associate professorship thesis was titled *Epigram Bukoliği ve Theokritos* (The Epigram Pastrol and Theocritos). Suat Sinanoğlu was credited with founding contributions to the teaching of the ancient Greek language in Turkey, and he authored a Greek-Turkish dictionary titled *Kelimelerin Etymonu Esas Tutularak Tertiplenen Yunanca-Türkçe Sözlük* (Greek-Turkish Dictionary, Prepared In Accordance With the Etymon of the Words) and textbooks such as *Yunan Dili Grameri I* (Greek Grammar I) and *Yunanca Uygulama Kitabı* (Greek Practice Book). His many translations of classic works, such as Euripides' *Iphigenia in Tauris*, Xenophon's *Hellenica*, Plato's *Kriton*, and Sophocles' *Aias* were influential in introducing Ancient Greek Literature to Turkish audiences. Suat Sinanoğlu also authored a book titled *Türk Humanizmi* (Turkish Humanism), first published in French as *L'Humanisme à venir*, which introduced Kemalism as a whole, physical and spiritual ideology of Westernization that would go beyond mere imitation of another society and instead be verification of a Western identity. This, he argued, was in line with humanism and should only be considered a part of the movement. Suat Sinanoğlu was also the founder of Turkey's Foundation of Classical Research. He passed away in 2000 (Demir & Atılgan, 2008).

²¹¹ Ayşe Sarıgöllü (? - ?) was/is a Turkish linguist and translator. While not much is known about her, it is known that she was an associate professor and that she focused on classical philology. Her various publications include *Roma Edebiyatında Tarih* (History in Roman Literature), *Roma Edebiyatında Destan* (Legend in Roman Literature), and *Cicero'nun Mektuplarında Beliren Şahsiyeti* (Cicero As He Appears in His Letters). She has also provided Turkish translations of *Cato Maior de Senectute*, the words of Cicero on old age.

²¹² Ekrem Akurgal (1911 – 2002) was a Turkish archeologist. Born to a family of Ottoman governors near Haifa, Akurgal moved to Istanbul at an early age and graduated from Istanbul Boys' High School. He was educated abroad in Germany with a state scholarship and studied archeology from 1932 to 1941. He returned to Turkey with a doctorate, and was employed at the Faculty of Language, History and Geography, becoming one of Turkey's youngest associate professors. Akurgal became a professor in 1949 and an ordinarius professor in 1957, and was the founder of the archeology department at the faculty. Akurgal's works, including his books, papers, lectures and conferences were all centered around Anatolian civilizations and cultures: Lycians, Hittites, Phrygians, Urartu, and Ionians, which he theorized were the founding cultures for the development of Western civilization. Akurgal's archeological expeditions were responsible for the uncovering of the ancient sites of Phokaia (in Foça), Pitane (in Çandarlı), Erytrai (in Çeşme), and the Bayraklı-Tepekule sites of Smyrna (in İzmir). Akurgal was also the author of almost countless publications, examples of which include *Griechische Reliefs aus Lykien* (Greek Reliefs from Lycia), *Die Kunst Anatoliens von Homer bis Alexander* (Anatolian Art from Homer to Alexander), *Treasures of Turkey*, *Eski İzmir* (Ancient İzmir), *Anadolu Uygarlıkları* (Anatolian Civilizations), *Türkiye'nin Kültür Sorunları* (Turkey's Culture Problems), *The Aegean Birthplace of Western Civilization History of East Greek Art and Culture 1050 – 333 BC*, and more. Akurgal's *Orient und Okzident* (Orient and Occident) is among his most famous works. Also active politically, Akurgal was a founding member of the Turkish Human Rights Foundation. He was the recipient of a German Order of Merit in the Federal Republic of Germany in 1981 and a grand award winner from the Turkish Ministry of Culture in the same year. Akurgal held honorary doctorates from the Universities of Bordeaux, Athens, Lecce, and Anadolu University. Akurgal died in 2002. Though he had requested to be buried at the archeological dig site at Smyrna – the excavation he had worked on for over thirty years – his wish was not granted (Şener, 1995) (Özgünel, 2003).

Turkey, which though a door to the Western world, had remained closed until the establishment of the Faculty of Language, History and Geography.

Rohde was also responsible for some work on the Turkish Sun Language Theory. According to Rohde's daughter, Atatürk's desire to develop a strong national identity for the Turks through language, passed through the act providing proof to the assumed fact that Turkish was the oldest language in the world. To this end, Atatürk invited many linguists to the country, especially experts in exotic ancient languages like Hittite, Sumerian, and Assyrian, but also including indologues and classical philologues like Rohde. However, the German linguists retained their Western scientific methods, and found no such proof as to the plausibility of the Sun Language Theory. Nevertheless, these academics were not interfered with, and raised their students according to their standards (Şen F. , 2008, p. 216). Rohde contributed more to the Westernization/Europianization focus of Atatürk's reforms by establishing circles to translate European and world literature into Turkish, thereby opening a door to the western world through the language.

Rohde remained in Turkey until 1949. In 1941, his wife Irmgard was denaturalized by the Nazi German government, as with all German citizens of Jewish descent, and her properties were seized. In 1944, when diplomatic relations ceased between Turkey and Germany, the Nazi German government ordered Rohde to return to the Reich. According to the NSDAP propaganda director in Ankara, he refused, due to "his Jewish wife" (Şen F. , 2008, p. 216). The Rohde family were not interned with other German citizens during the war, as Rohde was considered indispensable by the Faculty of Language, History and Geography. Rohde returned to Germany in 1949, taking up a position at the Free University of Berlin, eventually becoming its rector. He passed away in 1960.

Benno Landsberger (1890 Frýdek-Místek – 1968 Chicago) was a German Assyriologue. Born to a Moravian-Silesian Jewish family, Landsberger began his academic life as a student of Oriental Studies in 1908 and graduated in 1913. In 1914, he joined the Austrian army and served on the Eastern Front. Wounded severely in 1916, he was discharged and earned a Golden Cross of Merit. Landsberger then moved back to Germany and the University of Leipzig, pursuing a career in academia. He received his doctorate in 1920, and was later appointed as a professor extraordinarius at the University of Marburg in 1926 before returning once again to Leipzig as a professor ordinarius.

The 1933 *Berufsbeamten-gesetz* could not initially displace Landsberger from his position as a civil servant due to his previous military service. The 1935 revision of the law revoked the clause concerning war veterans, however, and Landsberger was immediately removed from his position due to anti-semitic reasons. Landsberger was then invited to the Faculty of Language, History and Geography.

In 1935, Landsberger's arrival in Turkey coincided closely with the establishment of the Faculty of Language, History and Geography. Hence, he played an active role in the establishment of the faculty not only as a professor but also as an organizer. Landsberger focused his academic attention on the early history of Anatolia, as the subject was important to Atatürk and the newly established Turkish republic. To this end, Landsberger researched the early history of the Asia Minor region, adding Sumerology to his list of interests. The testimony of Eugen Merzbacher²¹³, a fellow (and considerably younger) refugee who worked as Landsberger's secretary, recites that Landsberger often studied cuneiforms, tablets, and ancient scripts, which he obtained from museums and dictated to Merzbacher his findings to write down. Landsberger also contributed to the establishment of a working library in Ankara, seeking to acquire the extensive library of his mentor Heinrich Zimmer from the University of Leipzig (Möckelmann, 2013, p. 92). According to Hans Gustav Güterbock, a colleague and student of Landsberger and fellow refugee scholar, Landsberger was a rare kind of intellectual and prominent name in his own field, and for years devoted his energy to raising students, sometimes even at the expense of his own research (Widmann, 1999, p. 241). Widmann lists the department of Sumerology as Landsberger's students, including Emin Bilgiç²¹⁴, Kemal Balkan²¹⁵, Mebrure Tosun²¹⁶, Kadriye Yalvaç²¹⁷, Mustafa Kalaç²¹⁸ and Firuzan Kınal²¹⁹.

²¹³ Eugen Merzbacher (1921 – 2013) was a Jewish American physicist. Born in Berlin, he emigrated to Turkey in 1935 and graduated from the University of Istanbul in 1943, moving to Ankara afterwards to teach at a high school for four years. As a member of the Jewish émigré community he aided Landsberger as his secretary at the International Rescue and Relief Committee, though evidently he became familiar with his academic work as well. Merzbacher went to Harvard University in 1947 and became a renowned physicist later on in his life.

²¹⁴ Emin Bilgiç (1916 – 1996) was a Turkish Sumerologist. He was one of the first graduates of the Faculty of Language, History and Geography, and studied Sumerology, Assyriology, and Hittitology. Following his graduation, he became an assistant at the Faculty in 1940, earned his doctorate in 1943, and became an associate professor in 1949. He spent two years abroad in the United Kingdom for research from 1952 to 1954, and following his return became a professor of Sumerology in 1955. In 1960, Bilgiç became one of the *147likler*, and was removed from his position at the Faculty. He went to the University of Hamburg in response, but returned in 1961 when the law changed. Bilgiç then served as the dean of the faculty from 1966 to 1968 and was one of the senate members at Ankara University. Bilgiç published his findings in Sumerology in many books, articles, and papers, in journals such as the *Journal of the Faculty of Language, History and Geography*, *Belleten*, the *Turkish Journal of Archeology*, and the periodical *Anatolia*. His efforts to establish an Institute for Seljuk History and Civilization were well commended and, while the journal produced by this institute was short-lived, had Bilgiç's

Alongside Albert Eckstein, Landsberger was also the co-president of the International Rescue and Relief Committee in Ankara, a refugee aid committee established by unions in the United States.

Landsberger left for the United States in 1948, taking a position at the Oriental Institute at the University of Chicago. He taught there until 1955, at which point he retired. He passed away in 1968.

academic and literary publications in it often. Bilgiç also provided his research to the Turkish History Association and the Turkish Encyclopedia. Bilgiç was also very active politically, and was one of the forerunners of the Turkish nationalist movement. He was one of the founding members of *Ankara Ocağı* (lit. "hearth", in modern contexts often denoting a nationalist gathering). publishing books such as *Millî Kültür Davamız* (Our Cause for National Culture) and *Maarif Davamız* (Our Cause for Education). He was also responsible for providing a Turkish translation of Arnold Toynbee's *The World and the West*. Bilgiç was the grandfather of Ekmeleddin İhsanoğlu (Sefercioğlu, 2005).

²¹⁵ Kemal Balkan (? - ?) was a Turkish sumerologist. Not much is known about him other than that he was an associate professor of Sumerology and published various articles in the *Journal of the Faculty of Language, History and Geography*. His works focused on ancient civilizations, such as the Hittites, Babylonians, and Urartu, as well as the Seljuks (Balkan, 1951).

²¹⁶ Mebrure Tosun (? - ?) was a Turkish sumerologist and a professor at the Faculty of Language, History and Geography. Details of her life are rare. She was the author of many books and papers on the Sumerian civilization, such as *Sumer Dili ve Grameri* (Sumerian Language and Grammar), *Sumer-Babil-Asur Kanunları ve Ammu-Şaduga Fermanı* (Sumerian-Babylonian-Assyrian Law and the Edict of Ammi-Saduqa), both with fellow Sumerologist and classmate Kadriye Yalvaç. Tosun also authored articles such as *Die Prophylaktische Funktion der Mesopotamischen Rollsiegel und die Bedeutung Ihrer Beischriften* (The Prophylactic Function of Mesopotamian Cylinder Seals and the Importance of their Conflicts), *Hammurabi'nin Toprak Kanunları* (The Land Ownership Laws of Hammurabi) and *Sümer-Babil Tanrı Sembollerinin Adları Üzerinde Bir Araştırma* (An Investigation on the Names of God Symbols in Sumeria and Babylonia) (Tosun, 1960).

²¹⁷ Kadriye Yalvaç (? - ?) was a Turkish sumerologist. Like many of her colleagues, details on her life are rare. She was the co-author of Mebrure Tosun's aforementioned works. She also published articles in the *Journal of the Faculty of Language, History and Geography*, such as *Eski Babil'de Kız Evladın Miras Meselesi* (Female Inheritance in Ancient Babylon) and *Sanherib'in Ölümü ve Asarhaddon* (The Death of Sennacherib and Esarhaddon). Additionally, she wrote for the journal *Anatolia*, where she published her findings in various archeological expeditions in Turkey, e.g. *1971-1972 Hacıbayramlar Kazısı* (The Hacıbayramlar Expedition 1971-1972) (Yalvaç, 1972).

²¹⁸ Mustafa Kalaç (? - ?) was a Turkish archeologist. A student of Hans Gustav Güterbock and Benno Landsberger, Kalaç became an expert at the Museum of Oriental Art and earned his doctorate under the guidance of Helmut Bossert with a thesis titled *Babil Steli* (The Babylonian Stele). He later became an associate professor in 1957 on the field of languages and cultures of the Ancient Near East. He became a professor in 1964, and became the head of the department of Protohistory and Near Eastern Archeology later on. He retired in 1983. Kalaç was the author of *Tünp Hiyeroglif Yazıtı* (The Hieroglyphs of the Tünp Stele), and other articles from his various expeditions in Turkey (Yıldırım T. , 2017).

²¹⁹ Firuzan Kınal (? - ?) was a Turkish historian and professor at the Faculty of Languages, History and Culture. She was the author of many works on the histories and civilizations of ancient Anatolia and Mesopotamia. Examples of her work include the books *Eski Mezopotamya Tarihi* (History of Ancient Mesopotamia), *Eski Anadolu Tarihi* (History of Ancient Anatolia), and articles such as *Eski Önasya Dinlerinde Monoteist Temayüller* (Monotheistic Trends in Ancient Near Eastern Religions), *Eski Önasya Medeniyetlerinde Halk Meclisleri* (Popular Assemblies in Ancient Near Eastern Civilizations), *Kimmer İstilası* (The Kimmerian Invasion), *Eski Önasya'da Ehli Atın Tarihi* (The History of the Domestic Horse in the Ancient Near East), and *Eski Anadolu'da Kadının Mevkii* (Women's Role in Ancient Anatolia), among others. In 1985, Kınal donated 35 million liras (around a million TL today, inflation adjusted) towards the establishment of a middle school in Çınarcık, Yalova, noting that children and especially girls should have an equal chance towards education. The school was named after her and remains a successful school (Milliyet, 1985).

Hans Gustav Güterbock (1908 Berlin – 2000 Chicago) was a German Hittitologist, archeologist, philologue and historian. Hans Gustav Güterbock was born in Berlin to a wealthy family and was the son of the scholar Bruno Güterbock, who was secretary to the German Oriental Society. Surrounded by the new discipline of Hittitology through his younger years, Hans Gustav decided to follow in his father's footsteps and grew up studying oriental history, archeology, and various Semitic languages including Hittite and Akkadian. He later learned Sanskrit and Arabic in Berlin, and enrolled in the University of Leipzig, where he continued his studies in Hittitology and Assyriology. In Leipzig, Güterbock also became a student of Benno Landsberger, and learned Sumerian and Babylonian from cuneiforms they examined together. In 1931, he came to Turkey, and was privately funded for three years as an epigraphist in a research project led by the German Oriental Society, and conducted research in Hattusa, the capital of the Hittite Empire (currently in Boğazkale, Çorum). His findings earned him his doctorate in 1933 with a thesis titled *Die historische Tradition und ihre literarische Gestaltung bei den Babyloniern und Hethitern bis 1200* (The Historical Tradition and the Literary Formation of the Babylonians and Hittites until 1200). Güterbock was employed by the Berlin National Museum from 1933 until 1935.

As the son of a Protestant-converted Jew, Güterbock was classified a *Mischling* (half-Jew) by the Nuremberg Laws. Because of this, he could no longer find a job in the Berlin museums after 1935, but was invited to take up the chair of Hittitology at the Faculty of Language, History and Geography in 1936. Already familiar with Turkey, and with his teacher Benno Landsberger already employed by the Faculty, Güterbock accepted the offer and traveled once more to the country.

At the Faculty, Güterbock became a professor of Hittitology, and was responsible for the raising of the first generation of Turkish Hittitologues and archeologists. Widmann names Kemal Balkan, Mustafa Selçuk Ar²²⁰, Muazzez İlmiye Çığ²²¹, Hatice Kızılay²²², Tahsin²²³ and

²²⁰ Mustafa Selçuk Ar (? - ?) was/is a Turkish doctor of Hittitology and an assistant at the department of Hittitology. Unfortunately, there is next to information on him, except that he was the author of a book titled *Urartu Kılavuzu* (Guide to Urartu) and several papers, such as *Etiler'de Bahar Bayramı Törenleri* (Spring Festivals of the Hittites) *Çivi Yazılı Kaynaklara Göre Türkçe-Etice-Hurricce Arasındaki Bağlar Üzerinde Yeni Araştırmalar* (New Investigations on the Relationships Between Turkish, Hittite and Hurrian Based on Cuneiforms) (Ar, 1944).

²²¹ Muazzez İlmiye Çığ (born 1914) is Turkey's most prominent Sumerologist. She was a graduate of the Teachers' School of Bursa, and spent four years teaching in Eskişehir before enrolling at the Hittitology department of the Faculty of Language, History and Geography in 1936, where she became a student of Landsberger and Güterbock. Following her graduation, Çığ became an expert at the Istanbul Museum of Oriental Art, where she worked on cuneiforms for 31 years (she later noted that she was often so busy at the museum that it was her mother who brought up her children). In the course of her work, Çığ was responsible for the cleaning, preparation, and categorization of countless cuneiforms written in Sumerian, Akkad and Hittite languages, and established the cuneiform archive of the faculty, which contains over 70000 samples. Throughout her career, Çığ traveled abroad to Munich, Heidelberg, Rome, London and Philadelphia to do research, oversee exhibitions, and attend history seminars. She retired in 1972 and began publishing works on her findings more frequently, especially after 1990. She translated prominent Assyriologist Samuel Noah Kramer's *History Begins at Sumer* into Turkish with her coworker Hatice Kızılay. Examples of her own work include *Zaman Tüneliyle Sümer'e Yolculuk* (A Time Warp Trip to Sumer), *İbrahim Peygamber – Sümer Yazılarına ve Arkeolojik Buluntulara Göre* (The Prophet Abraham According to Sumer Texts and Archeological Findings), *Hititler ve Hattuşa – İhtar'ın Kaleminden* (The Hittites and Hattusa, According to Ishtar), *Orta Doğu Uygarlık Mirası* (The Middle Eastern Civilization Heritage), *Gilgameş – Tarihte İlk Kral Kahraman* (Gilgamesh, History's First Hero-King), and the much debated *Kur'an İncil ve Tevrat'ın Sümer'deki Kökeni* (The Sumerian Origins of the Quran, Bible and Torah), where she draws parallels between the bases of Abrahamic religions and Sumerian mythology. Çığ is a popular figure in Turkish academia, though she is often also criticized. In 2007, she drew significant attention after the publication of her books *Bereket Kültü ve Mabet Fahişeliği* (The Cult of Fertility and Sacred Prostitution) and *Vatandaşlık Tepkilerim* (My Citizenly Reactions), for theorizing that womens' head scarves originated as distinguishing clothing for priestesses of the goddess Inanna, who practiced the sexual rite in ancient Sumer. A lawsuit was filed against her for "inciting hatred and hostility", but Çığ was acquitted and cleared of all charges. In later years, she co-hosted a history and discussion program called *Giderayak* (On The Way Out) alongside the (almost) equally old Hayrettin Karaca. Çığ is currently 103 years old (Çığ, 2011-2012).

²²² Hatice Kızılay (? - ?) was a Turkish Sumerologist. Information about her is unfortunately unavailable. She was Muazzez İlmiye Çığ's coworker at the Istanbul Museum of Oriental Art, and was a co-translator for *History Begins at Sumer*.

²²³ Tahsin Özgüç (1916 – 2005) was a Turkish archeologist. Born in Kardzhali, Özgüç became one of the first students of the archeology department of the Faculty of Language, History and Geography in and graduated in 1940. Özgüç pursued an academic career following his graduation, and earned a doctorate with a thesis titled *Tarih Öncesi Anadolu'da Ölü Gömme Gelenekleri* (Funeral Traditions in Prehistoric Anatolia), which was published in both Turkish and German. Özgüç's career at the Faculty began as an assistant in 1945, followed as an associate professor in 1946, and as a professor in 1954. Özgüç served as the faculty's dean from 1968 to 1969, and was also the rector of Ankara University from 1969 to 1980, being the longest-serving rector of Ankara University. Özgüç was a prominent figure in Turkish archeology, and conducted many archeological expeditions, most notably in Kültepe (Kayseri), which Özgüç worked at for 57 years. At Kültepe, Özgüç and his team unearthed an ancient city by the name of Kanesh, populated by Assyrian tribesmen; many architectural remains, artifacts, and cuneiforms were retrieved from the site, allegedly numbering at around 20,000 items. The vastness of the exhibition led to the establishment of the Kayseri Archeological Museum. Özgüç also worked at the sites of Kazankaya (Yozgat), Horoztepe (Tokat), Masathöyük (Tokat), Altintepe (Erzincan), and Karahöyük (Konya), which unearthed an ancient post-Hittite inscription that allowed Turkish archeologists to better understand the history of post-Hittite Anatolia. Özgüç's published works included books such as *Die Hethiter* (The Hittites) and he published his findings in many articles, such as *Kültepe Kanış I, Assur Ticaret Kolonilerinin Merkezinde Yapılan Yeni Keşifler* (Kültepe Kanış I, New Discoveries at the Center of Assyrian Trading Colonies), *Altintepe II, Depo Binası ve Fildişi Eserler* (Altintepe II, The Storage Building and Ivory Artifacts), *Masathöyük II, Boğazköy'ün Kuzeydoğusunda Bir Hitit Merkezi* (Masathöyük II: A Hittite Center Northeast of Boğazköy), and other such examples, all from his expeditions. Özgüç was also responsible for the

Nimet Özgüç²²⁴, Raci Temizer²²⁵, and Emin Bilgiç among them (Widmann, 1999, p. 242). Tahsin Özgüç testified to Güterbock's efforts in raising this generation of scholars with the following words, and also commented on the works of Benno Landsberger:

“Güterbock and Landsberger taught us how to study systematically and methodically, which for a scientist is of the utmost importance. They wrote books and articles on the ancient history, language, and culture of the Near East. What more would you ask of a university professor? They raise young scientists, develop educational methods and leave behind important works. Both of them accomplished that to the fullest (Şen F. , 2008, p. 169).”

Güterbock's familiarity with Turkey was evidenced by his near-perfect Turkish, and while he was perfectly capable of carrying out lectures and authoring textbooks, his chosen field required that he also venture outside the boundaries of the university to teach his students and conduct research. The young, energetic Güterbock led archeological digs in Anatolia before and through World War II, and spent most of his time doing field research, particularly back in ancient Hattusa in Boğazkale, and reported his findings in two volumes of *Siegel aus*

archeological journal *Anatolia*. Through his career, Özgüç served as a visiting professor at Princeton University, Saarland University, and the University of Munich. Indeed, Özgüç was internationally renowned for his services to archeology: he was a member of the German Archeological Institute, the British Academy, the Archeological Institute of America, the Bavarian Academy of Sciences and Humanities, and the City of London Archeological Society; he held a German *Bundesverdienstkreuz* award of service, a Japanese medal of the Order of the Rising Sun, and a Belgian Order of the Crown award; and he was awarded honorary doctorates from Gent University, the University of Munich, and the Freie Universität Berlin. In Turkey, Özgüç was made a member of the Turkish Board of Higher Education (YÖK) in 1980 following the coup d'état, and was its deputy chairman. As YÖK was held responsible for many decisions impeding academic freedoms, Özgüç was criticized heavily for not taking a stand against them. Tahsin Özgüç was married to fellow Turkish archeology professor, Nimet Özgüç, who was his coworker and lifetime research partner. They are survived by their children, Bülent Özgüç and Meral Özgüç, who are also both professors; of computer engineering and information science, and medical biology, respectively (Duruel, 2011).

²²⁴ Nimet Özgüç (1916 – 2015) was a Turkish archeologist. Convinced by her history teacher Afet İnan to enroll at the archeology department at the Faculty of Language, History and Geography, Özgüç studied Ancient History at the Faculty and became an assistant after her graduation in 1940. She earned her doctorate four years later, and later became an associate professor in 1949 and professor in 1958. Married to Tahsin Özgüç, she worked with him at the Karahöyük and Altuntepe archeological digs, and after 1962, led her own expedition in Acemhöyük (Aksaray), and worked on Tepebağları Höyüğü (Niğde) from 1972 to 1975. From 1978 to 1989, Özgüç tried to salvage the ancient city of Samsat in Adıyaman, which was flooded by the Atatürk Dam before its many “archeological layers” had been uncovered completely. Research on Samsat revealed that the city had been populated throughout history, and contained artifacts linking it to medieval times, the Roman period, the Hellenistic Period, Babylonia, the Iron Age... all the way to the Copper Age; the loss of Samsat has been written down as a devastating loss for Turkish archeology, at least until the more recent loss of Hasankeyf, another important excavation site that was similarly flooded. Özgüç retired in 1984. She was an honorary member of the Turkish Academy of Sciences, and was the recipient of a Culture and Art Award by the Ministry of Culture and Tourism in 2010 (Duruel, 2011).

²²⁵ Raci Temizer (1918 – 2005) was a Turkish archeologist. He was a 1941 graduate of the department of archeology at the Faculty of Language, History and Geography. Temizer was the curator and director of the Ankara Archeology museum (currently the Museum of Anatolian Civilizations) from 1955 and is credited with much of its development, as well as its catalogue, which is available internationally. Temizer was the president of the Turkish committee for the International Council of Museums (ICOM) (filozof.net, 2017).

*Boğazköy*²²⁶ (The Seals of Boğazköy), *Die Königssiegel der Grabungen und die übrigen Hieroglyphensiegel* (The King's Seals of the Excavation and the Remaining Hieroglyphs). These two volumes played a key role in further research on Hittite language and history (Reisman, 2006, p. 74). Güterbock's research on the Hittites also related the Near East to Europe: his research on the Hittite language uncovered a relation between the Hittite "Luwian dialect" and Indo-European languages, and the various texts he published on the epic of the god "Kumarbi" of the ancient Hurrians allowed for comparisons between classic Greek and Near Eastern mythology, relating the influence of the Near East on Greek mythos.

Güterbock was denaturalized from German citizenship in 1941 as a *Geltungsjude*, a "deemed Jew": as he had been a *Mischling* who had married another *Mischling* (the Protestant Fransizka Hellmann), the whole family was considered "too Jewish" to retain German citizenship. He became a *heimatlos* and remained at Ankara University until 1948, at which point his contract wasn't extended.

Güterbock later moved to Uppsala University in Sweden as a guest lecturer for a year, and then became an associate professor at Chicago University in 1949, and was a professor by 1956. At Chicago University, Güterbock contributed greatly to the study of Hittitology in the United States. There, Güterbock also co-authored of the *Chicago Hittite Dictionary*, which expanded on his previous work on the Hittite language. Güterbock also became the president of the American Oriental Society in 1962, and was also the president of the American Research Institute in Turkey from 1968 to 1977. He was the second person to be awarded the American Oriental Society Medal of Merit to honor his work on Hittitology (Ravo, 2000). In a conference held in his honor at Bilkent University in 2014, "Hans Güterbock'a Saygı: Bir Hititoloji Öncüsü" (A Tribute to Hans G. Güterbock, A Pioneer of Hittitology) Güterbock's son Thomas W. Güterbock humorously titled his speech "*What does your Daddy do?*" "*He's a Hittitologist*" to relate the experiences of how his father's profession was received in the United States (Bilkent University, November 8, 2014). Güterbock passed away in his Chicago home at 91 years of age in 2000.

Walter Ruben (1899 Hamburg – 1982 Berlin) was a German indologist. The Hamburg-born Ruben was educated in the Wilhelm-Gymnasium of his home city and showed an early interest in indology, taking private lessons in Sanskrit. He graduated during wartime in 1917,

²²⁶ Boğazkale was called Boğazköy at the time.

and immediately after graduating began to serve in the army. After the end of World War I, Ruben took up the study of Indology, Greek and Latin languages, and philosophy at the universities of Hamburg and Bonn, spending three semesters also in Berlin. In 1924, he graduated with a thesis titled *Zur indischen Erkenntnistheorie. Die Lehre von der Wahrnehmung in den Nydyasūtras* (On Indian Epistemology: The Doctrine of Awareness in the Nyāya Sūtras). In 1927, he finished his habilitation. From 1931 on, he worked as a *Privatdozent* in Philology at the University of Frankfurt am Main.

Ruben was classified a *Mischling* by the Nuremberg laws, the same as his wife. He was removed from his position at the university in 1935, like many other refugee scholars, his removal was delayed due to his previous military service. Ruben had become a member of the “Rote Studenten” (Red Students) in 1927, and was part of the communist Workers International Relief organization. According to Scuria, the Nazis were not initially privy to this information, and Ruben would have been removed from his position immediately in 1933 if this fact had been known to them (Şen F. , 2008, pp. 217-218). In the end, Ruben was removed from his position, and took up an offer from the Faculty of Language, History and Geography in 1935.

At the Faculty, Ruben established the chair of Indology. His foremost student was Abidin İtil²²⁷. True to his field of expertise, Ruben’s publications in Turkey included work on indology, such as *Eski Hind Tarihi* (History of Ancient India) and *Budhizm Tarihi* (History of Buddhism). He also translated the *Marcchatikam* (Mrccahakatika or “The Little Clay Cart”) a ten-act Sanskrit drama into Turkish in 1947, introducing it to the Turkish world forty-two years after it was introduced to the English-speaking world in 1905. Ruben also published the journal *Indoloji Araştırmaları* (Research on Indology) from 1940 to 1941, and published many articles in the *Journal of the Faculty of Language, History and Geography* and *Belleten*, a Turkish Historical Society publication on language and history, as well as other academic journals.

Being a German citizen, Ruben was one of the targets of the Nazi German call to return to the country in 1944. He refused, and was interned in Kırşehir with his family. His son Gerhard testifies to their experiences and activities in Kırşehir:

²²⁷ Abidin İtil (1910 – 1980) was a Turkish indologue. Born in Bakü, he graduated from the Faculty of Language, History and Geography in 1940, earning his doctorate in 1944 and becoming an associate professor in 1946. He later became a professor and succeeded his mentor Walter Ruben at the chair of Indology, keeping it until 1975 at which point he retired. He published a guide to Sanskrit called *Sanskrit Kılavuzu* and also published various articles on Indology (Küçükler & Korhan, 2009).

“My father was, first and foremost, a scientist. When we were sent to Kırşehir we were given twenty-four hours to pick up everything and be ready to travel. It was impossible to pack our library. (...) We didn’t know how long we would have to stay there. We had to keep ourselves busy. (...) So, my father set to work scientifically examining the little town... he interviewed people of various professions, people from all walks of life. He started out by examining the geological situation, then the geographical location, history from the ancient era until now, everything. He discovered ancient ruins, Seljuk constructions. Then he became interested in handicrafts: what sorts of arts and craftsmanship there was, at the time. The results of his research were heartbreaking. When the number of artisans drops to one third of what it had been, that means a culture is dying. Nobody could make the wood carvings we’d seen in the old houses anymore, those divans, the fine workmanship in those old closets. Those who could weren’t alive any longer. (...) It was these things that my father analyzed—he tried to paint a picture of an Anatolian town in the middle of the 20th century” (Şen F. , 2008, p. 218) (Translation mine).

The Ruben family were released from internment in 1946 after the end of the war. Walter Ruben then returned to his position at Ankara University. Though this time, as the war had ended, he was looking for opportunities to return to his homeland. His efforts did not bear fruit. Feeling unwanted in Ankara as well, he accepted an offer from the University of Santiago in Chile to work at their Institute of Anthropology. He later returned to Germany, moving to Humboldt University in East Germany, where he was treated with suspicion as a “Western refugee”. Later, Ruben became a member of the German Academy of Sciences at Berlin, and continued to work for the academy well after his retirement (Şen F. , 2008, p. 219). He passed away in 1982.

Karl Heinrich Menges (1908 Frankfurt – 1999 Vienna) was a German linguist, specializing in Altaic and Slavic languages. Educated at the Lessing Gymnasium of Frankfurt, he studied at the Universities of Frankfurt am Main and Munich and earned a doctorate from the University of Berlin in 1931. He was working as an assistant at the Prussian Academy of Sciences before his arrival in Turkey.

Menges’ reason for exile was wholly political. Menges was in contact with the Institute for Social Research²²⁸, and was particularly close to the (then) Marxist Karl Wittfogel, an active member of the Communist Party of Germany. Wittfogel was an active political combatant against the Nazi Regime, but Menges chose—in Wittfogel’s own words—the “quiet life of a scholar”. Menges was guilty by association nevertheless: he kept his political circle of

²²⁸ The Frankfurt *Institut für Sozialforschung* is known as the institutional home for the Frankfurt School and critical theory. It came under fire after Hitler’s rise to power and was moved to New York in 1934.

communists and anarchists even after the Nazis' rise to power and, for example, kept Wittfogel's library and archives when his fellow was forced to go underground. In 1936, Menges was arrested by the Gestapo, and was tried on the grounds of a "treason attempt". According to Wittfogel, Menges hid in Germany for about a month before escaping to Prague, where he hid for a year until receiving the offer to work at the Faculty of Language, History and Geography (Şen F. , 2008, pp. 197-198).

At the Faculty, Menges was responsible for the education of Slavic languages and Eastern Studies. His stay was short and lasted from 1937 until 1940. Wittfogel's testimony relates that he taught Russian and was allowed to visit the Near East. Wittfogel criticizes that the academic environment that had so fostered Menges' creative spirit did not exist in Ankara as it did in Germany (before the Nazis disrupted it, of course), and noted that the "spirit of modern science (could) not be forced to awaken overnight", perhaps an apt commentary on the trials and tribulations of the 1933 university reform (Şen F. , 2008, pp. 197-198). Unfortunately, further information on Menges' activities in Turkey is unavailable.

Menges received an offer from Columbia University and moved to New York in 1940. He initially became a lecturer and then was a professor of Altaic languages. After the war, he was a guest lecturer at the Free University of Berlin and the University of Frankfurt am Main, and following his retirement taught at the University of Vienna. He passed away in 1999.

3.4.3 Political Sciences at the University of Ankara

The study of political sciences in Turkey traces itself back to the establishment of the Ottoman school *Mekteb-i Mülkiye* (School of Political Sciences) in 1859, which followed the Tanzimat reform movement. The reform movement, when it came to matters of the state, intended to adopt a Western approach in state organization, state management and methodology in order to systematize its activities, and this school was built with the intention of fostering capable administrators who could operate this newly established state system with knowledge and skill (Serin, 1985, p. 9). In 1877, the school became a college, taking on the title of *Yüksek Okul*, but gradually began to fail in its purposes: according to Widmann, it started to fail during the reign of Abdülhamid II as courses on religious doctrine overwhelmed its curriculum and pushed back its earlier focus on economics, law and history (Widmann, 1999, p. 262). The Young Turk Revolution of 1908 removed Abdülhamid II from power and led to a number of reforms in *Mekteb-i Mülkiye* with the aid of the French, and in 1913, it was

reorganized using the Parisian College of Political Sciences as a model. However, this attempt of *Mekteb-i Mülkiye* did not last long either. The school was closed down in 1915, and its funding was transferred to *Darülfünun*. This was soon realized to be a grave mistake, however—Talat Paşa, who was the grand vizier at the time, commented that the “country was in ruins... and every effort towards civilization (he) had seen had been the effort of a *Mülkiye* graduate, a governor, a demarch, or mayor, who devoted themselves to bringing light, life and civilization to the most forsaken corners of the nation”. *Mülkiye* was then reopened in 1918. Throughout *Mülkiye*'s lifetime, the many disruptions to its educational activities had dampened its level of success.

After the declaration of the new Turkish Republic, the government set its eyes on *Mülkiye* with the intent to reform it. It would, initially, be moved to Ankara, the new capital and headquarters of the government. To this end, the construction of a college building was begun in 1934 in Cebeci, and in a year it was ready. As per Atatürk's request, the reformed *Mekteb-i Mülkiye* was renamed to *Mülkiye Mektebi* (School of Political Sciences), and with a four-year planned curriculum, started its modernized educational activities in 1936.²²⁹ In 1950, it would become part of Ankara University.

The College of Political Sciences at Ankara was mostly staffed by Turkish academics. It did, however, house the renowned German politician and municipal scientist, Ernst Reuter.

Ernst Rudolf Johannes Reuter (1889 Aabenraa – 1953 Berlin), was a renowned German politician and municipal scientist²³⁰, known internationally as the first mayor of West Berlin from 1948 to 1953, and heralded by many Germans for his stance during the Berlin blockade. Born in Apenrade, which was then the Prussian province of Schleswig-Holstein, but is currently in Denmark and called Aabenraa, he graduated from a Gymnasium in the city of Leer in 1907, and studied history, geography, economics and German at the universities of Marburg, Munich, and Munster, passing his state examinations to qualify for a teaching

²²⁹ A point that needs to be made here is that the rename occurred in part to remove the Arabic grammar from “old” Turkish *Mekteb-i Mülkiye*. The rename, *Mülkiye Mektebi* is closer to modern Turkish than the former, and has Turkish grammar.

²³⁰ For the most part, Reuter is not known internationally as an academic—in the international arena, his fame as a politician outweighs his importance as a scientist. Indeed, Reuter's academic career and his work as a professor begins and ends with his eight-year tenure in Turkey. Yavuz summarizes Reuter's dual professions in the following manner: “Reuter the politician belongs to the Germans, Reuter the professor belongs to the Turks.” Additionally, Yavuz presents a humorous analogy of Reuter as “the filling between two pieces of bread in a sandwich”, referring to Reuter's persona as a politician as one piece of bread and his persona as a professor as the other, with Reuter inbetween, holding the two connected together (Yavuz F. , 1968, p. 136).

position in 1912. In the same year, he became a member of the Social Democratic Party of Germany (SPD), and although his decision to pursue the social democrat political ideals (in particular social democratic revisionism, social reforms, and the labor movement) ended his parents' financial support for him and made his fiancée's father call off their engagement, Ernst Reuter started a budding career in politics, working for the party as a journalist and traveling speaker, earning his livelihood through lectures. Reuter also became a staunch anti-militarist, in contrast to the political climate in Germany at the beginning of World War I—in particular to the *Augusterlebnis* (Spirit of 1914), where the German people were jubilant after having experienced a string of military victories and felt that Germany had overcome its domestic conflicts and united the various parties in the Reichstag. Reuter was convinced that the Spirit had merely silenced the SPD, and with some political brothers-in-arms established a pacifist organization called *Bund Neues Vaterland* (Band of the New Fatherland). The organization was later shut down by the military, and Reuter was drafted, much to his antimilitarist chagrin. During his service on the Eastern Front in 1916, Reuter was injured, and fell into Russian captivity. He was transported to Moscow, and there witnessed and welcomed the October Revolution, adopting the ideals of socialism. In July 1918, Lenin himself sent Reuter to the Saratov region to become the Commissar (First Chairman) of the autonomous republic for Soviet Germans in the USSR, the Volga German Autonomous Soviet Socialist Republic. In December 1918, Reuter returned to Germany, and continued his political career by joining the Communist Party of Germany (KPD), initially becoming the First Secretary of its Berlin section and then of the party itself. Reuter later had a falling-out with the communists, and left them in 1921, returning to the Social Democratic Party in 1923. He became a journalist again, writing for the the SPD papers *Freiheit* (Freedom) and *Vorwaerts* (Forward). Reuter then directed his interest in politics to the applications of municipal policy, seemingly pulling himself back from discourse on political ideology. In 1926, he became a member of the Berlin city council, and was in charge of its transportation system. From 1931 to 1933, he was the mayor of Magdeburg, and in 1932, he was elected a member of the *Reichstag* (German Parliament).

The Reichstag elections of March 5, 1933, which followed the Nazi seizure of power and occurred only six days after the Reichstag fire, cemented Nazi rule. The events that followed divested Reuter of his offices, though they did not occur immediately or painlessly. On March 11, SA members stormed the Magdeburg city hall, attempting to take Reuter into so-called 'protective custody'—a police major kept Reuter in the police headquarters and managed to

release him an hour later. On May 30, in a meeting of the provincial state parliament of Merseburg, the NSDAP members of parliament assaulted the SPD members, and Reuter had to be treated in the hospital. On June 8, Reuter was arrested on the grounds of his subversive activities as a member of the SPD and KPD, as well as his activities in the Soviet Volga German region. He was forced to abdicate his positions in July as part of the *Berufsbeamtensgesetz* as he was considered unfit for service. In August he was sent to the Lichtenburg concentration camp in Torgau, and spent five months there before being released due to what were allegedly interventions of foreign bodies and the intercession of the Meissen bishop Petrus Legge (Reichhardt, 1965, p. 108). Reuter recovered in the “Rest Home” established by a religious community of Quakers²³¹—who had made it their mission to provide protection to political prisoners in Germany to strengthen opposition towards Nazism (Bernet, 2012). After leaving the Rest Home, Reuter was arrested again in June 1934, and sent back to the Lichtenburg concentration camp. Reuter’s second stay at Lichtenburg was more severe. He was kept in an isolated cell, in darkness; his health was permanently damaged for a lifetime of chronic bronchitis and he developed a severe hearing impairment as a result. His wife, Hanna Reuter, mobilized the Quakers once again to arrange for his release, and the British politician and former minister Noel Noel-Buxton diplomatically requested this release. At the time, the Nazi government was not willing to compromise good relations with the United Kingdom, and Reuter’s release was arranged, though they forced the family’s departure from the country. Ernst Reuter then moved to England. His efforts to find a job there did not bear fruit, and he lived on the financial support of the Quaker community. Eventually, Reuter received a telegraph from Fritz Baade, an agricultural economist who held an advisory position to the Turkish Ministry of Economy and simultaneously lectured at YZE, stating that there may be a similar advisory position for him in Turkey. Reuter arrived in Ankara, Turkey on June 4, 1935. Reuter’s work in Turkey would share the same dual characteristics of Baade’s work: he would work as an advisor to the government, and he would also be a teacher, passing on his knowledge to Turkish students. Because of this duality, it would be fair to examine Reuter’s work on two separate fields.

Reuter’s initial employment contract, signed by Celal Bayar, the Minister of Economy at the time, identified him as an expert on “price determination and commerce”—which Yavuz

²³¹ Reuter was not explicitly a part of the Quaker community, despite being protected and cared for by them on many occasions. He did, however, mention that if he “were to belong to a religious sect, (he’d) join the Quakers”—Yavuz notes that the simple, unpretentious way Reuter lived his socialist’s life was merely in line with the Quaker belief of simple living (Yavuz F. , 1968, p. 141).

notes could also be considered as a “tariff expert” (Yavuz F. , 1968, p. 151). As the holder of this title, Reuter traveled throughout Turkey, especially its three coastlines to the Aegean, Marmara, and Black Sea. He set to work on writing reports, statistics, and other articles, mostly on the subject of logistics, meant for the use of the Ministry of Transportation in conjunction with the Ministry of Economy. Over the course of four years from 1935 to 1939, Reuter wrote a total of twenty-four reports, ranging from subjects such as the state of the *Şirket-i Hayriye* (the steamboat company responsible for public transportation on the Bosphorus), to tariffs of Turkey’s four big port cities, the transportation of materials for use in the construction of the Karabük Steel Factories, logistical statistics, and so on.²³² Reuter’s experiences at the Berlin transportation system must have played a vital role to aid in this task, though he had his own share of problems. He faced a strong barrier of language, which required him to write his reports in French, German, or English, or sometimes in all of these languages at once; though he did get to practice during his travels and later on in his more academic life.

In 1938, Reuter received a request from Mehmet Emin Erişirgil of the Ankara School of Political Sciences to give lectures on city planning, local administrations, municipal finances and so on: summarily to relate his experiences in public administration in an academic manner. Reuter delayed in his response to Erişirgil, reasoning that he’d had to think this thoroughly, but when he did, his academic purposes were thoroughly planned out. In Reuter’s own words, he’d decided on “a sixty-hour curriculum ... every single hour of which will be the rundown of ten typewritten pages of a hitherto unwritten *Komün Bilgisi: Şehirciliğe Giriş* (Textbook of Municipal Information: Introduction to Urban Planning)” —Reuter had even decided on the title of his textbook before he’d started teaching (Yavuz F. , 1968, p. 154). He requested a translator for this prospective manuscript, and planned to get better at Turkish by communicating with his students during his lectures; from the moment he wrote the letter back to Erişirgil Reuter started learning Turkish in earnest (Widmann, 1999, p. 265). Upon the conclusion of his communications with Erişirgil, Reuter officially became a professor of urban planning—a position that was established just for him—at the Faculty of Political Sciences in Ankara. The main theme of the courses he taught at the faculty were urbanism with a socioeconomic focus, as well as regional administrations and their finances. In his lectures, Reuter related his experiences and knowledge on municipal politics and methodology, as well as all issues regarding the subject which were of importance to him. He

²³² A complete list of the reports Reuter prepared is available in (Yavuz F. , 1968, pp. 152-154).

published the textbook, as he planned and as according to his contract, held a number of conferences on the field of urbanism and published their proceedings, also producing around seventy articles in various Turkish journals, the complete bibliography of which is available in Yavuz's article on Reuter (Yavuz F. , 1968, pp. 180-183). According to Yavuz, most Turkish terminology in the field of urban planning was first coined by Reuter himself. Widmann also claims that (by the time of his writing, i.e. the 1970s) most higher administrative officers and district governors considered themselves to be students of Reuter—indeed, Reuter established an *ecolé* of city planning experts in Turkey, which included academics such as Fehmi Yavuz²³³, Bedri Gürsoy²³⁴, and the Institute of Housing and Urban Development that was later established at the Faculty of Political Sciences and Ankara University.

Towards his academic purposes, Reuter had requested two days off from his work at the Ministry to devote himself to academic study. However, Reuter also had another project in mind—he also told the Ministry that if his planned *İskan ve Şehircilik Enstitüsü* (Institute of

²³³ Fehmi Yavuz (1912 – 1991) was a Turkish urban planner and politician. He was a 1937 graduate of the College of Political Science, where he studied finance. After his graduation, Yavuz was sent to the University of Berlin on a state scholarship to study economics, though his visit was cut short due to the outbreak of World War II. Returning to Turkey, Yavuz was drawn to academic life through the suggestion of his teacher and mentor Ernst Reuter, and became an assistant at the College. From 1940, Yavuz served as an undersecretary for the Ministry of Education, and simultaneously furthered his academic career until he became a professor in urban planning in 1951. He received further education in this subject in England from 1953 to 1955, and specialized in this field, becoming one of Turkey's first urban scientists, and being credited with the development and popularization of the science. Examples of Yavuz's works include *Köy İdarelerimizin Maliyesi* (Financing of Our Villages), *Ankara'nın İmari ve Şehirciliğimiz* (The Ankara Reconstruction and Our Urban Planning), *A Survey on the Financial Administration of Turkish Municipalities*, and *Memleketimizde Toplum Kalkınması* (Societal Development in Our Country), among others. Yavuz taught at the College of Political Sciences and later Ankara University for many years, and also lectured at Middle East Technical University and Karaelmas University. After the military coup of 1960, Yavuz served as the Turkish Minister of Housing and Urban Development from 1960 to 1961, and also as Minister of Education for a three-month period in 1960 (Ankara University, 1983).

²³⁴ Bedri Gürsoy (? - ?) was a Turkish urban planner and politician, much like Yavuz. A 1937 graduate of the finance department at the College of Political Sciences, Gürsoy initially began working at the Ministry of Finance. At the time, the Ministry was suffering from a lack of learned personnel capable of reforming Turkey's taxation system, and it was decided through exams that Gürsoy would be sent abroad for further study. Gürsoy thus studied economics at Paris-Sorbonne University, earning a doctorate and returning to the Ministry, as well as becoming an assistant at the College of Political Sciences a few years later. He became an associate professor in 1945, and taught classes on stock exchanges, public finance, and agricultural economics. Gürsoy became the first professor at the Faculty of Political Sciences (when it became a Faculty under Ankara University) in 1950. He spent a two-year period between 1952 to 1954 at the University of Southern California, and upon his return became the dean of the Faculty in late 1954. During his tenure as dean, Gürsoy implemented a new system for undergraduate education at the Faculty, and also started a doctoral program. Gürsoy became the founding director of the Turkey and Middle East Public Administration Institute, and worked towards the establishment of the Academy of Economics and Commerce at Ankara University as well. Another of Gürsoy's services as dean of the Faculty was his implementation of a student exchange program between New York University and Ankara University—many graduates of the program later worked on the preparation and implementation of Turkey's first Five Year Plan. When he was elected for a second term as dean, Gürsoy then worked actively to facilitate the law that would enable the return of the coup-exiled *147likler* to academia. Bedri Gürsoy was also known as a poet, and published his works as *Rubailer* (Persian Quatrains) (Türk, 1992).

Housing and Urban Development) at the Faculty of Political Sciences were to be established, he would be required to work there at least four days a week. Reuter planned the establishment of this institute with immaculate precision, defining its mission statement, primary objectives, administration and control, required staff, courses, teaching method, conferences, connections, curriculum, practice school, and so on. During a time where various socioeconomical aspects of urban management were barely taught in Turkey, Reuter's efforts to install the understanding of city planning as an academic field in the country was remarkable, and he attested to this himself in parts: one difficulty Reuter foresaw in the establishment of such an institute was that there was no other existing school similar to the one that he envisioned—and though he was certain that if the Institute was established and developed along the correct path it would accomplish great things, he noted that Turkey could not expect to see progress immediately, especially if it wanted to emulate things that had taken other countries many years of slow advancement to accomplish. Reuter's own words should be quoted to relate his foresight regarding the revolution:

“Revolutions happen overnight, and with the excitement of revolution people think: now everything will be different, tomorrow we will start a new and better life. I lived twelve years in a country that had experienced a true revolution—such a revolution that it meant more to them culturally and spiritually than what we had ever done in Germany. And yet it is with these twelve years of experience that I know: twelve years is a very short time in the history of a people. To look at a revolution from the outside may be misleading. It does not give you the opportunity to see whether something should have been done differently, or if the things from the past that were destroyed were ever truly destroyed at all.” (Widmann, 1999, p. 268) (Translation mine).

Reuter's words considering the Turkish revolution on the whole are definitely something to consider. His foresight regarding the organization of further educational institutions, and the problems associated with their founding, however, was as if prophecy. Despite his efforts towards the planning of the Institute of Housing and Urban Development, Reuter was not able to establish it himself. Due to various factors such as the difficulties posed by the outbreak of World War II and the inability to find people to work with him at the institute, the institute's establishment was ostensibly delayed. What Reuter had planned in 1938 was accomplished only in 1953, fifteen years later, and seven years after Reuter had already returned to Germany. Tragically, it also coincided with the year of his death.

According to Yavuz, one interesting quality of Reuter's work in Turkey is that it was almost completely removed from politics despite the fact that he had come to Turkey as a political refugee—Reuter was not fond of proselytizing despite his career being firmly entrenched in it

(Yavuz F. , 1968, p. 150). He was simply known as “the German with the dark blue beret riding his bicycle.” Taking up the mantle of an academic in Turkey, Reuter was no longer devoted to discussing ideology. He was merely interested in providing practical approaches to city planning and issues related to his field.

Reuter’s advisory contract with the Turkish government ran out in 1940, leaving him with his professorship at the College of Political Sciences. In 1946, Reuter wrote a letter to Burhanettin Köni, the director of the school, that he had decided to return to his homeland. He returned to Germany later that year, and was elected the Mayor of Berlin in 1947—though he was prevented from taking up the job due to the intervention of the Russian invasion forces remaining in Berlin. When the city was divided, however, he became the Mayor of West Berlin. Reuter is remembered throughout Germany as the mayor of Berlin for this reason and especially due to his stance during the Cold War, which put war-torn Berlin once again in dire straits. During the Berlin Blockade, Reuter became a symbolic figure of the “Free Berlin” and saved the city from starvation by appealing to the international arena not to abandon the city and continue providing sustenance through an airlift. He became a national hero, appeared on Time Magazine, and was titled “Herr Berlin”. The German people therefore largely remember Reuter as the mayor, whereas Turkish people remember him as a professor.

Reuter died suddenly of a heart attack in 1953, passing away at 64 years of age. His Berlin funeral was attended by more than a million people, and he rests in an *Ehrengrab* (lit. “grave of honor”).

3.4.4 Conclusion

The arrival of the refugee scientists at Istanbul University led to a shift in the approach to many social sciences including philosophy, philology, psychology and pedagogy, orientalism and archeology, and academic librarianship. The refugee scholars’ activities at the University of Istanbul and the Ankara Faculty of Language, History and Geography all served to introduce a modern, Western European model of academic thinking and scientific methodology in how the new Turkish Republic approached the social sciences, which are often more abstract and socioculturally driven than other sciences like formal and natural sciences.

In many cases, the refugee scientists’ contributions to their respective institutions permanently installed a new way of thinking. In the case of philosophy, for example, it was the 1933 University Reform that truly succeeded in making Western philosophy known in Turkish

academic circles. This may be construed as rather bizarre, as Turkey is indeed in close 'physical' proximity to many of the foundations of Western philosophy i.e. the Aegean and Greek philosophies, and can even boast to being the physical birthplace of many of its great philosophers. Even so, mentally, Turkey has drifted away from that train of philosophical thought over the ages, and so it has come to the point where it had to reclaim the foundations of Greek philosophy through refugees from Germany. Where previous attempts to introduce Western philosophy into the Ottoman Empire had met with little success and barely left the study rooms of the Ottoman elite, the later Republican attempt provided far more substantial results, producing generations upon generations of Turkish philosophers who later wrote books synthesizing Western philosophy with their own local logic, culturally adapted to familiarize the new methods of thinking. The early republican period was indeed a time where social, cultural and political thought flourished; this set the foundation of the Republic's gestalt, and was—at least in part—enabled and catalyzed by the training provided by the refugee academics.

The Turkish study of philology also improved significantly through the instruction of the refugee scholars. While many languages were studied following the 1933 University Reform, the new Turkish Republic's westward outlook resulted in significant attention given to Western languages and Romanistics, which would prove useful in establishing relations with the Western world. A great number of students benefited from the training provided by the refugee scholars, who had their roots in the Western world and were native speakers of Western languages. In addition, the broad scope of the languages studied – from both East and West and all the world – allowed the new Republic of Turkey to build for itself a communicative outlet with which it could introduce itself to the modern world.

Further, with the introduction of Orientalism (which became an umbrella term compounding many studies such as archeology, history, linguistics, cultural studies, etc.) as an academic field, Turkey became a bridge between the East and the West. The lands of Anatolia and Thrace had been cradles of civilization for centuries, and were very rich in their history, fertile ground for field work in academic study. The Western academics who brought their methodology in Orientalism studies got to experience the subject of their studies firsthand, when they came to Turkey, and they also raised generations of prominent archeologists, historians, Hittitologists, Sumerologists, and many more specialized academics, to continue their studies after they were gone.

The newly established Ankara Faculty of Language, History and Geography was similarly concerned with Turkey's history, but more specifically, where it would go in the future. It could be argued that the Faculty was specifically tailored to serve as a think-tank for the future of Turkish sociocultural life, also drew significant human capital and academic resources from the refugee scholars, their many students, and their knowledge stock. These myriad resources would be used to build Turkey's future.

In this regard, another important contribution by the refugee scholars was the introduction of librarianship as an academic science. The proposal that librarianship was in itself a science broke new ground in Turkey: academic librarianship was a systematic endeavor that dealt with various methods of storing knowledge to render it accessible through the ages, and, for a country that wanted to establish a substantial, easily accessible stock of knowledge to serve as a foundation in its future, this was a significant gift.

3.5 Law

3.5.2 Jurisprudence at the University of Istanbul

The teaching of modern and secular law at Istanbul University Faculty of Law can be traced back to the *Tanzimat* modernization movement of the Ottoman Empire. Several years into the Tanzimat period, a desire to reform Ottoman law became clear. In 1854, *Meclis-i Ali-i Tanzimat* (lit. “Higher Council of Reorganization”) was established as a supervisory board, aiming to assist in the development of the legal measures required by the innovation movements undertaken before and after the Tanzimat. In 1885, it ruled that a new civil law should be written. This ruling brought forth with it the idea of a dedicated school of law to be established in Istanbul (Ergin, 1977, p. 1085).²³⁵ Prior to this date, the Ottoman Empire had no established civil courts, and the judiciary needs of the Ottoman people were served by *şer-i* (sharia) courts. At the time, since a civil law was yet unwritten and at best in progress, and the planned civil courts were completely nonexistent, the Ottoman government sought to go about its reform in law education by addressing the education of the sharia judiciary first. The Islamic judiciary, who had until then supported the Ottoman system, had *kadıs* and *naibs* (deputy judges) as its main practitioners. After the parliament ruling, it was decided that these judges would be trained at a school called *Muallimhane-i Nüvvab* (School (House) for Deputy Judges), established 1854. The *Muallimhane-i Nüvvab* was established by the Sheikh-al Islam, and was concerned with the teaching and application of Islamic laws, teaching the *kadıs* and *naibs* the procedures of sharia law. The school continued its teaching of traditional sharia law until the declaration of the republic in 1923. Throughout its history, it was reformed several times, becoming the *Mekteb-i Nüvvab* in 1885 and later the *Mekteb-i Kuzat* in 1910.

By 1869, however, the Ottoman Empire’s first civil law, *Mecelle-i Ahkâm-ı Adliyye* (Compilation of Legal Principles) was ready. Prepared by a commission headed by Ottoman statesman, historian and jurist Ahmet Cevdet Paşa, the *Mecelle* was a codex of civil codes, based on Islamic law and its tradition of *fiqh*. Considered one of the Ottoman Empire’s greatest hallmarks in its modernization attempts, the *Mecelle* compiled sharia law in sixteen chapters and a total of 1851 articles, which it approached in an analytic manner with the ultimate goal of providing for a new legal system. With the new code now prepared, a new

²³⁵ In the beginning of the *Tanzimat* movement in 1839, the *Mekteb-i Maarif-i Adliye* (School of Judicial Knowledge) and *Mekteb-i Ulûm-ı Edebiye* (School of Literary Science) were established, and both schools taught courses on law, with the end goal of raising government officials capable of carrying out *Tanzimat* reforms. *Mekteb-i Mülkiye-i Şâhâne* (Royal School of Civil Service), which followed these schools in 1877, also had law courses in its curriculum. Neither institution specialized in law education, however.

law school, *Hukuk Mektebi* (Law School) was established the same year. *Hukuk Mektebi* naturally took the *Mecelle* as the foundation of its teaching. Another school established in 1870 under the wing of *Divan-ı Ahkâm-ı Adliye* (High Court of Legal Judgments), *Kavânîn ve Nizamât Dershanesi* (School of Laws and Orders), did the same. Another school that followed the new legal system was the *Mekteb-i Hukuk-i Sultani* (Imperial School of Law), which was established in 1874 and was part of *Mekteb-i Sultani* (Galatasaray High School). While neither the *dershane* nor the *Mekteb-i Hukuk-i Sultani* lasted for long, their establishments nevertheless signaled a desire to modernize law education in the country (Gedikli, 2011, p. 91). The Ottoman Empire's goal to raise a new "type" of jurist, who would work in accordance with the reforms of the *Tanzimat* era, was clear even in the nineteenth century.

The establishment of *Mekteb-i Hukuk-i Şahane* (Royal School of Law) in 1878 was the most successful Ottoman attempt to modernize law education, and it occurred during the height of the First Constitutional Era: at a time where all fields of law were being codified, and the court system was going through a complete overhaul, in line with the new constitutional authority. The establishment of *Mekteb-i Hukuk-i Şahane* was a much more thorough and detailed process after the failed attempts with the *dershane* and *Mekteb-i Hukuk-i Sultani*. Ahmet Cevdet Paşa, the chair of the commission that wrote the *Mecelle*, even gave its first lecture (Ergin, 1977, p. 1093). The *Mekteb-i Hukuk-i Sultani* was also merged with the *Mekteb-i Hukuk-i Şahane* following its establishment, and combined, the new institution laid out the foundation of the Istanbul University Faculty of Law. It should also be noted that *Mekteb-i Hukuk-i Şahane* was also initially designed as a part of the prospective Ottoman university, *Darülfünun*, which would be established, after a significant delay, in 1900. When it was, however, the law school was officially part of *Darülfünun*, and as it had been established earlier and already possessed a working system, could be used as a model for the other institutions in *Darülfünun*.

The Second Constitutional Era saw the school of law within *Darülfünun* change its name to *Darülfünun-ı Osmanî Hukuk Fakültesi* (Ottoman Darülfünun Faculty of Law), officially denoting itself as a faculty—though Dölen notes that while the school had adopted a western term in its name and included a number of new courses studying Western law, such as *Roma Hukuku* (Roman Law), its spirit remained completely unchanged in that it was still strictly tied to Islamic law (Dölen, 2010b, p. 69). The Turkish Republic declared in 1923, however, aimed to change this spirit, and in adopting secularism, also set out to revolutionize law and build a new legal order—which would draw its various laws from Western countries. The

name of the law school at *Darülfünun* was changed first as *İstanbul Darülfünunu Hukuk Fakültesi* (Istanbul Darülfünun Faculty of Law), and after the 1933 University Reform, it became the Istanbul University Faculty of Law.

After the 1933 reform, a number of refugee jurists took teaching positions at the Faculty of Law. The report presented by Albert Malche foresaw twelve chairs at the Faculty of Law, and Reşit Galip requested that half of them be occupied by refugee professors. As mentioned previously in Chapter 3.1, the Faculty of Law also housed an Institute for Economics and Sociology that was established under its wing.²³⁶

Four refugee jurists were invited to the Istanbul University Faculty of Law to take professorship positions (though one later moved to Ankara University). They were Andreas Schwartz, Ernst Hirsch, Richard Honig, and Karl Strupp.

ISTANBUL UNIVERSITY FACULTY OF LAW		
REFUGEE SCHOLARS		
NAME	CHAIR / FIELD	DURATION OF STAY
Andreas Bertalan Schwartz	Civil Law	1934-1953
Ernst Eduard Hirsch	Commercial Law	1933-1952
Richard Honig	Introduction to Law, Philosophy of Law	1933-1939
Karl Strupp	Civil Law of Nations	1933-1935

Source: (Dölen, 2010b, p. 526)

Andreas Bertalan Schwartz (1886 Budapest – 1953 Freiburg im Breisgau) was a Hungarian jurist. He was trained in law in Budapest and later continued his studies in Germany at the Universities of Bonn and Leipzig. He received his doctorate in law from the University of Leipzig in 1908, and followed with his habilitation in 1912. Following this, he became a *privatdozent* at the university until 1920. Later, he became the University of Leipzig's professor extraordinarius for Roman law and German Civil Law until 1922, and then switched to comparative law until 1926. Following this, he returned to his field of Roman and Civil law, and worked as a professor ordinarius at the Universities of Zurich, Frankfurt am Main, and lastly, at Freiburg im Breisgau (Universität Leipzig (University of Leipzig), 2016).

In 1933, Schwartz was removed from his position at the University of Frankfurt am Main due to his Jewish heritage. He was suggested to the Turkish government by the Swiss federal

²³⁶ The economists eventually broke off and established their own faculty. This was detailed in the chapter on the Faculty of Economics.

government, and was extended a professorship at the Istanbul University Faculty of Law. He arrived in Turkey alongside his non-Jewish wife Ruth in 1934.^{237,238}

At the University of Istanbul, Schwartz was tasked with his field of expertise; he taught Roman law, civil law, and comparative law. He worked at the University of Istanbul for nineteen years, producing various books on the study of law, such as *Aile Hukuku* (Family Law), and *Borçlar Hukuku Dersleri* (Lectures on the Law of Obligations) translated by his colleague and lecture translator Bülent Davran.²³⁹ His *Roma Hukuku Dersleri* (Lectures on Roman Law) was printed no less than six times and was translated by his student Türkan Basman Rado.²⁴⁰ Ziya Umur²⁴¹, and Hıfzı Veldet Velidedeoğlu,²⁴² as well as some other professors at the Faculty of Law as of the 1970s were also students of Schwartz.

²³⁷ “Non-Jewish” was a term used by Herbert Scurla, the Nazi official who authored the Scurla Report. He intentionally notes on the Jewishness (or the non-Jewishness) of both émigré scholars and those close to them, for obvious reasons.

²³⁸ In his report, Scurla claimed that the ‘Aryan’ Ruth Schwartz was “suffering greatly from her destiny (of being married to a Jew)”. Şen notes that Scurla’s words had no basis on reality and were, again, merely propaganda. Şen believes that if Ruth was truly suffering, she would have simply divorced Andreas, heeding the Nazi government’s promotion of divorces between Aryans and non-Aryans.

²³⁹ Bülent Davran (1912 – 1998) was a Turkish jurist. He spent his early childhood in Germany and graduated from the German High School in Istanbul when he returned to Turkey. He graduated from the Istanbul University Faculty of Law in 1936. He went abroad to Germany on a scholarship to study law in 1937, and returned to Turkey with a doctorate in 1939. At Istanbul University, he became an assistant on Civil Law. In 1944, he became an associate professor in this field, and became a full-fledged professor in 1956. He was the dean of the Faculty of Law from 1964 to 1966, and retired in 1972. Davran had been an independent law advisor to Türkiye Sınai Kalkınma Bankası (Turkish Industrial Development Bank) from its establishment in 1950, and was an expert in foreign investment and international private law relations. He had been awarded an Order of Merit of the Federal Republic of Germany. He also co-authored a German-Turkish dictionary (filozof.net, 2016).

²⁴⁰ Türkan Basman Rado (1915 – 2007) was a Turkish jurist, Turkey’s first female professor of law, and the world’s first female professor of Roman law. Born to the Darulfünun *müderri*s of criminal law, Cevdet Ferit Basman and his wife Ayşe Nikfal, she was educated in Notre Dame de Sion French High School, and received her baccalaureate education at Galatasaray High School, registering for the reformed University of Istanbul in 1933. Basman was noticed by the émigré scholars at the university for her grasp of French and Latin, and even as a student would be asked for translation tasks. She graduated from the Faculty of Law as its valedictorian in 1936, and immediately afterwards was employed as the Faculty’s first female assistant on the suggestions of Honig and Schwarz. She learned German as a result of her assistantship, and upon becoming an associate professor in 1944, started learning Italian, and was sent to the University of Rome to work at its Institute of Roman Law and Mediterranean Law in 1950. In 1956, she became a professor. Her academic career ended after 46 years of teaching in 1982, at which point she retired as chair of Roman Law. Her publications on Roman law and trade law are still in use, particularly at the Istanbul University Faculty of Law (Anadolu Ajansı (Anadolu Agency), 2007).

²⁴¹ Ziya Umur (? – 1990) was a Turkish jurist and a professor of Roman Law. He is known for his textbooks on Roman Law, aptly titled *Roma Hukuku*. Additionally, he published *Türk Hukuk Tarihi* (History of Turkish Law). He is also known for his work on the subject of freemasonry.

²⁴² Hıfzı Veldet Velidedeoğlu (1904 – 1992) was a Turkish jurist, journalist, and writer. After graduating from the Istanbul University Faculty of Law in 1928 while also working as an officer at the Grand National Assembly of Turkey, he was sent on a state scholarship to Switzerland to pursue a law doctorate. After obtaining this doctorate, he studied criminal law in Rome for two years. His return to Istanbul University was followed with his appointment to an associate professorship in Civil Law, and he became a professor in 1942 and a professor ordinarius in 1948. Velidedeoğlu is renowned both nationally and internationally for his five volumes on Civil Law, around 100 scientific investigations, research papers, and conference proceedings, as well as fifteen

According to Widmann, Schwartz's biggest contribution to the education of law in Turkey was his 'successful experiment', in which he introduced Roman law-based European law to Turkey. Schwartz was responsible for simplifying concepts and terminology for use in the creation of a new Turkish civil law, which had become increasingly necessary as from 1926 on the new Turkish republic had deviated from (and ultimately expunged) Arabic and Iranian sources and influences in the study and practice of law. Schwartz's efforts towards this purpose were highly commended by the Turkish government (Widmann, 1999, pp. 189-190).

According to Neumark, Schwartz was among the most impressive and educated refugee scholars, and had an 'appropriate amount of self-respect' (Neumark, 1982, p. 63). While not extremely influential on his students initially, he influenced his coworkers greatly, and permanently. Neumark testifies to Schwartz's pride in his status as a scholar with an interesting anecdote: according to Neumark, not even Schwartz's well-established understanding of law prevented him from behaving in a proud manner. Schwartz was convinced that a university professor would naturally exhibit certain social privileges (which, in Turkish society, was not untrue). These privileges, Schwartz believed, would make him exempt even from a wartime curfew. At one point during the curfew, Schwartz stepped out of his house in Bebek and, intent on his morning swim, strode majestically towards the beach in front of his house. He was stopped immediately by the police, and was dragged to the nearest police station—in nothing but his swimming trunks. When his subsequent interrogation proved that he was not an oddly-clad spy but a professor of law at the University of Istanbul, Schwartz got away with his lawbreaking, perhaps confirming his belief that a person of his status did indeed hold some social privileges.

Schwartz held his professorship at the University of Istanbul until his death. In an attempt to reconcile the damages done, the University of Freiburg im Breisgau extended an emeritus professorship to Schwartz between 1949 and 1950, though Schwartz remained in Turkey. He passed away in Freiburg during a one-semester guest professorship at his old university.

translations and reviews of German and French books in law. He was the author of *Kat Mülkiyeti Kanunu* (Condominium Law) and was a member of the Constitutional Commission on Science, and also worked on the revision of Turkish Civil Code from 1951 to 1960, which was accepted in 1971. Velidedeoğlu was also the member of the Constitutional Commission after the military coup of 1960, though he resigned from this position after the 1961 Constitution was accepted. In addition, after the 1980 military coup, he was unaniously offered to become the President of the Republic of Turkey, but refused on the grounds that he was a scientist and had no place in politics. Velidedeoğlu wrote a column for *Cumhuriyet* every Sunday from 1942 until his death in 1992. Additionally, he was a member of the Uludağ explorers community, sharing the hobby of hiking with with many émigré scholars (Velidedeoğlu, 2016).

*Ernst Eduard Hirsch*²⁴³ (1902 Friedberg – 1985 Königsfeld im Schwarzwald) was a German jurist and legal sociologist. He was educated at a *humanistisches Gymnasium* (humanities gymnasium), and later studied economics and law at the universities Munich and Giessen. In 1924, he received a doctorate in law at the age of 21, and in 1930 earned his *habilitation* from the University of Giessen. By January 1931, Hirsch had passed all necessary state exams, practiced and worked as a deputy judge, and had been declared a judge for life in Frankfurt (Topçuoğlu, Karayalçın, Akipek, & Ansay, 1976, p. V). Prior to his emigration, he was also teaching civil law, trade law, law of German states, and international law as a *privatdozent* at the university of Frankfurt am Main. In 1931, he was appointed to the civil court of Frankfurt.

Hirsch was Jewish. In his autobiography, Hirsch gives various examples of antisemitism in Germany, and notes that Hitler “did not invent antisemitism, and instead found it already present” (Hirsch E. E., 1997, p. 40). One life example given by Hirsch is from around 1927, where he questioned Friedrich Klausning, the chair of Trade Law at the University of Frankfurt am Main, on whether he would be considered for an associate professorship, only to receive the following response: “You are Jewish, and even if we were to make you an associate professor your chance to hold a chair here in Frankfurt is minimal at best. But perhaps, if you were to accept being baptised, or get a “very good” from your Assessor exam in Berlin...” His academic life in Germany, as it seems, was difficult enough.

Because of his Jewish origins, Hirsch was removed from his positions at the court and lost his right to teach as a *privatdozent* in 1933 due to the *Berufsbeamtengesetz*. Being a scholar of law, Hirsch realized the absurdity of dismissing a judge who had been appointed for life, and noted that such a dismissal was legally unsound and in breach of the principle of separation of powers, the independence of judges, as well as the laws regarding civil servants—but there was nothing he could do. Hirsch’s requests for help from two other university professors earned him the following: “You’ll be of no use to anybody if you get yourself killed on the court steps. Nobody who dies for the sake of a case these days becomes a hero; everyone must remain silent in the face of terror,” (Hirsch E. E., 1997, p. 179). These words of advice stuck with Hirsch for life, and he was enraged both at the inaction of the judiciary elite, as well as of the German people—Hirsch lost hope after the boycott of Jewish businesses in Germany on April 1, which he dubbed the *Day of German Shame* in his memoirs (Hirsch E. E., 1997, p. 181). The young Hirsch went to France in search of a job, but could not find one, and later

²⁴³ Following his acceptance of Turkish citizenship Ernst Eduard Hirsch’s name became *Ernest Hırş*, to fit with Turkish phonetics and spelling rules.

moved to Amsterdam. It might be interesting to note that Hirsch claims in his memoirs that he left Germany voluntarily, under no pressure and with no threat to his wellbeing or personal freedoms. He notes, simply, that he could analyze the situation in cold blood and, in light of the (openly declared) short and long term goals of the “movement”, and after inspecting the new laws that were being written, needed to prepare for the worst.

During negotiations with the University of Amsterdam to become an associate professor there (and to possibly have a chair transferred to him at the end of the year), Hirsch was contacted by Philipp Schwartz to take up the chair of Trade Law at Istanbul University. Hirsch considered his options, and concluded that Istanbul University was a more certain and more financially permissive option for both himself and his family. They would also be safer, he figured, especially considering Hitler’s expansionist politics and Amsterdam’s proximity to the German border—Turkey, by comparison, was so very far away. Hirsch signed his contract with Istanbul University in Geneva on October 1933.

According to Neumark, Hirsch was the youngest refugee scholar invited to the University of Istanbul, and the only one to skip a title; he bypassed becoming a regular professor and was promoted to a professor ordinarius from an associate professor (Neumark, 1982, p. 63). At Istanbul University, Hirsch taught Trade Law from 1933 to 1943. He was later transferred to the Ankara Law School in 1943, and remained there until 1952. At these universities, the various courses Hirsch taught included trade law, philosophy of law, sociology of law, legal method, and intellectual and industrial property rights. Additionally, as stated in his contract, Hirsch was also responsible not only with teaching and research, but also with the organization of training courses for officials who took up law as a profession, as well as various activities and seminars open to the public (Kara, 2013). Another contribution by Hirsch to Turkish academic life was his work on the university library. Armed with the motto “A university without a library is like a barracks without an arsenal,” Hirsch set to work on transforming the library of the Istanbul University Faculty of Law. Hirsch’s criticism noted that said library was considered more of a “reading room” than a place of learning, and was used only by students to make use of the desks while studying. Hirsch is noted to have spent his summers in the library with his assistants, working on a variety of tasks such as library coordination, material acquisition, and even cataloguing and shelving books properly (Kara, 2013).

Hirsch was requested to start teaching in Turkish by his fourth year. Initially, he had a translator appointed for him, but Hirsch was doubtful about the success of his lectures because his translator was not a jurist by profession. To solve this problem, he set his eye on a second-year student, Halil Arslanlı,²⁴⁴ who had grown up in Germany, and made him his honorary assistant. Arslanlı translated Hirsch's lectures and books, and Hirsch received Turkish lessons from Arslanlı several days a week. As a result, Hirsch was very quick to learn Turkish, and began teaching in Turkish by his third year. He used the language first in his exams, then in his lectures, and eventually became proficient enough to write his textbooks without the aid of translators. In fact, Hirsch became so proficient in the language that he became a member of a commission established for the purpose of modernizing the Turkish language as part of the "Turkish Language Revolution": Hirsch was tasked with finding new legal terminology to replace their old Arabic equivalents (mirroring Fritz Arndt's task of transforming chemistry terminology, though Arndt had been speaking Turkish for far longer) (Akpınar, 2016).²⁴⁵

Hirsch had more valuable students and assistants in addition to Arslanlı throughout his years in Turkey. The most famous of Hirsch's students included Hamide Topçuoğlu²⁴⁶, Yaşar

²⁴⁴ Halil Arslanlı (1906 – 1964) was a Turkish jurist. Born as the son of the Damascus *Kadı*—an Islamic judge and legal scholar—Arslanlı lost his father at the young age of 12, and was sent to Germany along with his brothers for education. He was taken in by a German governess in Danzig (current Gdansk in Poland), and after graduating from Saint Petri High School, went to Écoles Supérieures de Commerce Marseille (currently KEDGE Business School). Upon his return to Istanbul, he worked for the Ottoman Bank. He registered at the Istanbul University Faculty of Law in 1932 at 26 years of age, and graduated three years later. He then became Hirsch's assistant, and earned his doctorate in 1938 with a thesis entitled *Türk Hukukunda Devletçiliğin Anonim Şirketlerin Ehliyeti Üzerine Tesiri* (The Effect of Statism on the Competence of Corporations in Turkey) and then his associate professorship in 1940 with a dissertation entitled *Türk Bankalar Kanununun Şirketler Hukukunu Muaddil Hükümleri* (Articles of the Turkish Banking Law Modifying the Corporate Law). He was a professor by 1946, and was a professor ordinarius in 1957. In 1961, he was one of the *147'likler* and dismissed from service following the military coup of 1960, which led to considerable changes in his views, though his academic interests were not dispersed (Tekinalp, 1978, p. XIX). He did, however, later testify that he regretted leaving his job at the Ottoman Bank to become an academic, especially if their fates were to be swung to-and-fro by political turmoil, like his mentor Hirsch did (Arslanlı Bilim Arşivi (Arslanlı Archive of Science), 2011).

²⁴⁵ An iconic anecdote shared by Hirsch's assistant Yaşar Karayalçın is that, following Hirsch's acceptance into Turkish citizenship, the government requested proof of Hirsch's proficiency in the German language to increase his salary. Hirsch wanted to know who exactly would test him on his German proficiency (Yüksel, 2014, p. 34).

²⁴⁶ Hamide Topçuoğlu (1918 – 2009) was a Turkish jurist. She was a 1938 graduate of the Istanbul University Faculty of Law. She started her career in law in 1939 after returning from France when World War II officially began. Later, she became an assistant in administrative law at the Ankara University Faculty of Law, and began to study Philosophy of Law and Sociology of Law. She earned her doctorate in 1949 with a thesis on Avoidance of Law, and was an associate professor in 1951. By 1961, she was a professor, and in 1965 became the founding dean of the Ankara University Faculty of Education, and later in 1968 founded the *Eğitim ve Toplum Araştırmaları Enstitüsü* (Institute of Education and Community Research). She later became a member of the senate of Ankara University. Outside of her academic work, Topçuoğlu founded the Institution for Research on Women's Social Lives with fellow professor Afet İnan, and was influential in the fight for women's education in Turkey. Additionally, she was a member to both the UNESCO National Committee and the Turkish Law Organization. She retired in 1982 (Ankara Üniversitesi (Ankara University), 1995).

Karayalçın²⁴⁷, Ömer İlhan Akipek²⁴⁸ and Tuğrul Ansay²⁴⁹. These former students published the book *Ord. Prof. Dr. Ernst Hirsch'e Armağan* (A Gift for Prof. Ernst Hirsch), in 1964, a 725 page book of collected writings in Turkish, French and German, on the study of law by Hirsch and his many students (Topçuoğlu, Karayalçın, Akipek, & Ansay, 1976). The book contains a seven-page, complete bibliography of Hirsch's work in Turkey and abroad (Topçuoğlu, Karayalçın, Akipek, & Ansay, 1976, pp. XXIII - XXIX). Hirsch's publications, in books and articles, were the various subjects of Trade Law, Law of Obligations, Law of Cooperatives, Intellectual and Industrial Property Rights, Law of Negotiable Instruments, Insurance Law, and Maritime Law. His most notable publications, according to Yüksel, are his two volumes on *Dünya Üniversiteleri ve Türkiye'de Üniversitelerin Gelişmesi* (Universities of the World and the Development of Universities in Turkey), *Pratik Hukukta Metod* (Method in Law Practice), *Hukuk Felsefesi ve Hukuk Sosyolojisi Dersleri* (Lectures on the Philosophy of Law and Sociology of Law). In addition to his academic publications, Hirsch also wrote several expert's reports for the Turkish government, though most of these were authored after his transfer to Ankara (Neumark, 1982, p. 63).

One of Hirsch's major contributions to law in Turkey—and the main reason behind his transfer from Istanbul University to Ankara Law School—was his work on the legal reforms conducted by the new Turkish republic. Hirsch's presence at the capital was requested with the express purpose of using his expertise in writing the new laws that constituted the new legal system, which would be imbued with a secular understanding of the concept of law, as

²⁴⁷ Yaşar Karayalçın (1923 - ?) is a Turkish jurist, specializing in Trade Law. He was a 1944 graduate of the Faculty of Law, and became an assistant to Hirsch after his graduation. He earned his doctorate in 1947, and was an associate professor in 1953 and a professor in 1961. He became the dean of the Faculty of Law twice between 1964 and 1968. He was a contributor in the development of Turkish Trade and Banking Laws, and was among the founders of the Banking Institute at the Faculty of Law, which he also led for many years. He was the head legal advisor for Türkiye İş Bankası (Doğan G. , 2008).

²⁴⁸ Ömer İlhan Akipek (1921 - ?) is a Turkish professor of law. Not much is known of his early life or education. He became Hirsch's (honorary) assistant in his third year at the Ankara University Faculty of Law and following his graduation became an assistant in philosophy of law (though he had been waiting for a similar position in trade law). He taught public international law at Ankara University and was teaching at Bilkent University in 2013, when he was 92 years old (Ankara Barosu (Ankara Bar Association), 2009).

²⁴⁹ Tuğrul Ansay (1930 – on) is a Turkish professor of law. He specializes in comparative law, trade law, private law, law of businesses, arbitration law, and international trade law. Following his graduation from the Ankara University Faculty of Law in 1954, he studied comparative law at Columbia University and earned his *legum magister* (LLM) title from the same university in 1956. He was a visiting professor at the Free University of Berlin, the Academy of International Law at Lahey, Columbia University and Bilkent University, and was dean to the Ankara University Faculty of Law from 1974 to 1977, as well as founding dean to Koç University's Faculty of Law from 2003 to 2008. Between 1998 and 2004, he worked for The Union of Chambers and Commodity Exchanges as an arbitral referee representative to the International Chamber of Commerce, and remains a judge for the ICC International Court of Arbitration since 2009. He is an honorary member of the DAV-TR (German Bar Association, Turkey), and also owns a *Bundesverdienstkreuz, Erste Klasse* (first-degree medal of merit) given to him by the German consul general to Istanbul. He lives in Hamburg. His *Introduction to Turkish Law*, published 1966, has seen several editions (DAV-TR (German Bar Association, Turkey), 2016).

opposed to the old Islamic system. According to Hirsch himself, this was a daunting task, not simply because of the scope of the operation but also the difficulty of implementing it into practical use:

“Comprehensive Turkish laws were written and they were the translations of foreign laws, not based on Islamic principles. All judgments bearing the hallmarks of Islam, all customs and laws that were incompatible with worldly laws, were absolutely abolished. Civil Law and Law of Obligations, Law of Enforcement and Bankruptcy, Civil Procedure Law, were adapted from Swiss Law; Maritime Law and Criminal Procedure Law were adapted from German law; Criminal Code was from Italian Law.²⁵⁰ (...) But at first it remained ineffective. The laws that were abolished remained de facto, because the laws that replaced them were not de facto practiced! These laws, at first, were merely expressions of the ideal order; in the future the actual layout of human relationships and conditions would change and improve in line with this order. This, in turn, would require that the people and legal practitioners use these laws. The majority of the Turkish people were illiterate in the 1920s. A simple proclamation of these new laws on the official newspaper wouldn't have conveyed them to the core of the populace even in the most civilized and advanced nations at the time. As a result, the teaching of law, and the practice of justice, was vital to bring this legal reform to life. And still the central importance that law education and legal doctrine held towards this goal was not realized,” (Hirsch E. E., 1997, p. 226) (Translation mine.)

According to Karayalçın, the government tried to pay Hirsch for his work for the Ministry of Justice, which he refused and promptly returned, saying that he didn't “take tips” (Yüksel, 2014, pp. 34-35). In 1946, on the suggestion of the Minister of Education Hasan Âli Yücel, Hirsch wrote a report on university autonomy, to be delivered to the commission responsible for the Law of Universities—which deemed all universities autonomous and moved to a multiple-university system from a single-university with the establishment of Ankara University (Aksoy, 2004, p. 4). In 1948, Hirsch also wrote a manuscript on *Fikir ve Sanat Eserleri Kanunu* (Law of Ideas and Works of Art), i.e. copyright law, which was accepted in 1951 after Hirsch himself presented it to the Grand National Assembly as a representative of the Ministry of Justice, becoming influential in the writing of Turkish trade law as well.

Hirsch applied for Turkish citizenship in 1938, which he received five years later. In his memoirs, he notes that one insistent suggestion he got was that he convert to Islam, and says that he was certain he would have earned his citizenship much earlier if he had (Hirsch E. E., 1997, p. 39). By 1945, Hirsch also had a law practising certificate.

Hirsch left Turkey in 1952. Hirsch's later years in Turkey led to his disillusionment with the country, and most of it was due to his proximity to politics. In 1948, Hirsch witnessed the

²⁵⁰ According to Murat Aksoy, Hirsch called the reformed Turkish law a “homemade *Gesetz*” – homemade law.

purge of academics Niyazi Berkes, Pertev Naili Boratav, and Behice Boran from the Ankara University Faculty of Language, History and Geography on the grounds that they were spreading communism—this invoked bad memories of 1933’s Germany in Hirsch’s mind and he contested the decision, citing the autonomy of universities and the illegality of such an act in a constitutional state. He promptly resigned from his membership of the Ankara University senate. In 1951, Hirsch realized that he “spent more time in the commission rooms of the parliament building than at his faculty” (Akpınar, 2016, p. 4). When another commission requested Hirsch’s expertise to remove “antidemocratic laws”—which, according to Hirsch, was “a political slogan that could be interpreted as one wished according to the “color of the party” speaking it”—Hirsch refused on the grounds that he was a jurist, not a political scientist (Hirsch E. E., 1997, p. 388). Hirsch noted that he saw this belief justified often during the 1950s and 1960s. Later, Hirsch’s disillusionment grew as he joined groups of Western academics in seminars abroad and noticed “how far behind he had fallen”. The fear that his efforts in Turkey had been futile compounded with his longing for Western academia, and with various offers from universities abroad growing ever more insistent, Hirsch decided to leave the country he had called “(his) new homeland, earned through blood, sweat and tears.” He requested—on solid legal grounds—a three year unpaid leave from the Ankara University Faculty of Law, and was refused. Surprised, he requested it again, and was refused again, at which point he went to the Ministry of Education and requested his dismissal as a professor ordinarius at Ankara University, as well as the right to work abroad as a Turkish citizen. This last request was delayed nine months before its acceptance, and by the time it did, Hirsch had already returned to Germany and was elected rector to the Free University of Berlin. Hirsch had not wanted to return to Germany, especially after having lost members of his family in Auschwitz and in Germany after the war, including his sister and daughter (Yüksel, 2014, p. 35). Ernst Reuter, fellow refugee scholar and mayor of Berlin, had convinced him to come back to Germany. Hirsch was granted German citizenship once again, but retained his Turkish passport until his death in 1985.

One of Hirsch’s students, Ünal Tekinalp²⁵¹, recounts a meeting with Hirsch at his Germany home in 1983 after the 1980 coup in Turkey:

²⁵¹ Ünal Tekinalp (1935 – on) is a Turkish professor of law, currently working privately. He is a 1958 graduate of the Istanbul Faculty of Law, and earned his doctorate from the same university in 1962 before becoming an associate professor in 1965 and a professor in 1973. He was the head of the Department of Commercial Law and was the director of the Centre for Research and Practice of European Law. Until his retirement from the university in 2003, he lectured on banking law, intellectual property law, commercial law, company law,

“Our subject of discourse was the latest events in sociology of law... He was focusing on Turkish revolutions, on whether the law and university reforms were in danger. From the way he was speaking, I could tell that the law concerning the Council of Higher Education (YÖK), which came into force a year ago, was a source of great worry for him. (...) He was angry that the Supreme Court ruled universities as “institutions for teaching and learning” instead of “centres that create science”, and prioritized teaching above academic research. To put words to his anger, he said, “I wonder if the Atatürk revolution was an *episode* instead of an *epoche*,” and he said, “an *episode* is a term in theater, and connotes something temporary (...) whereas *epoche* is a term in sociology and history, scientific terminology (...) connotating a period that leaves behind a mark, points towards the future, and has permanent effects. I believed that the Turkish revolution in law and university was an *epoche*. Now I doubt this belief, and I am sorry.”” (Yüksel, 2014, pp. 35-36) (Translation mine.)

Richard Honig (1890 Poznan – 1981 Göttingen) was a German penologist. Originating from the German-speaking region of Poland, he received his habilitation in Germany in 1919. Honig was appointed a professor at the University of Göttingen in 1925, and was working on the fields of penology, history of law, and church law until 1933.

Honig’s professorship at the University of Göttingen was revoked in 1933 on grounds of his Jewish heritage and opposition to National Socialism. In that same year, he was invited to join the Istanbul University Faculty of Law, and emigrated to Turkey with his non-Jewish wife Kaethe and three sons.

Honig became a professor of the history of law and philosophy of law at the University of Istanbul. While he did not stay long, he produced a variety of publications during his stay and was particularly active in social academic circles. He published *Istanbul’un Roma Hukuku ve Hukuk İlminin Tarihçesi* (Istanbul’s Roman Law and the History of the Science of Law) in the first year of his arrival, translated by Halil Arslanlı, *Hukuk Felsefesi* (Philosophy of Law) and *Hukukun Başlangıcı ve Tarihi* (The Beginning of Law and its History) followed in 1935, translated by Yavuz Abadan.²⁵² Two volumes on Roman Law were published in 1938, which

European law, comprising partnership etc. He works as a consultant and is registered with the Istanbul Bar Association as well as the ALLEA All European Academies committee of Intellectual Property Rights. He has worked extensively on the Turkish Trade Law, and is known throughout academic circles for his publication *Fikri Mülkiyet Hukuku* (Intellectual Property Law) and various other textbooks on trade law (Tekinalp Lawyers, 2007).

²⁵² Yavuz Abadan (1905 – 1967) was a Turkish jurist, politician, and writer. He was a 1929 graduate of the Darulfünun Faculty of Law, and received a doctorate from Heidelberg University, returning to Istanbul University as an academic, becoming a professor in 1942. He wrote for various newspapers and journals, such as *Cumhuriyet*, *Son Havadis*, *Ulus*, *Vatan*, *Yeni Gün*, *Yeni İstanbul*, and *Tarihten Sesler*, and later entered politics as a member of parliament representing Eskişehir for CHP, serving from 1943 to 1950. After his political career, he became part of the Ankara University Faculty of Political Sciences, and served as its dean from 1952 to 1954.

were translated by Şemseddin Talib.²⁵³ He is also credited with various articles and series, as well as research on Turkish law.²⁵⁴ Honig's academic pursuits, however, did not merely end with publications. An invitation telegraphed by Honig remains to this day; in it, the Honig family invite their guests to their home at Aslanlı Konak in Bebek on Sunday, April 3, at half past three for tea and the conference on "Aescylus and the Issue of Responsibility" that will follow (at half past five). Fellow refugee Nissen testifies that Honig was a productive artist and painter (Nissen, 1969, p. 216). Neumark also praises Honig for being an important and academically serious person, though not without remarking on his allegedly dull personality (Neumark, 1982, p. 190).

Honig observed the new Turkish republic's legal reforms with great admiration. In *Capitolium*, the journal of law he himself helped establish, he wrote of the Atatürk reforms and legal reconstruction:

"Only twice has the history of a country's law been drawn to a new era, and both times this has been accomplished through a great acumen and by the hand of its stark determination: once, by the Emperor Justinianus, who created the famous *Corpus Iuris Civile* in 530-534, and once, by the great Turkish Chief Gazi Mustafa Kemal, who created Turkey's new law. With his orders to create laws, Justinianus not only maintained the tradition of the old Roman Law, but also ascertained its sustainability in the future; in the same vein, with his orders to create new laws, Gazi Mustafa Kemal established and installed Turkey's current legal culture. And as Justinianus' work survived for centuries, so too shall the Gazi's work define the legal conscience of his nation," (Akar, 2008, pp. 13-14). (Translation mine.)

The Honig family emigrated to the United States in 1939, before the breakout of World War II. Shortly afterwards, Honig was denaturalized and his property in the Reich was seized. After the war, the English Military Government at Göttingen requested the return of Honig to the university, though this would have been impossible as the University of Göttingen demanded all its employees to be German citizens (which Honig clearly no longer was, as he had been denaturalized and leads Şen to believe that this article was a thinly veiled loophole, put in to avoid 'undesirables' like the *Heimatlos* in the first place) (Şen F. , 2008, p. 175). Nevertheless, Honig was awarded a professorship emeritus as per the *Wiedergutmachung* in

He was one of the 147 academics that lost their jobs in the 1960 coup, but his professorship was returned to him later on. He then worked at the Ankara University Faculty of Law and Eskişehir Academy of Economics and Business Administration (Türkiye Büyük Millet Meclisi (Grand National Assembly of Turkey), 2010).

²⁵³ Şemseddin Talib (? - ?) was a Turkish doctor of law. While not much is known about him, he is credited as a translator of books on Roman Law and an editor and contributor to the Istanbul University Journal of the Faculty of Law.

²⁵⁴ Horst Widmann noted that he kept Honig's publications (or a bibliography of them) in his archive, the Archiv Widmann (Widmann, 1999, p. 453).

1954, which he accepted. Honig worked at Princeton University from 1962 to 1972, and permanently returned to Göttingen only in 1974. He remained an American citizen until his death.

Karl Strupp (1886 Gotha – 1940 Paris) was a German jurist. While not much is known of his early life, it is known that Strupp was a specialist in international law and international private law. He had been a professor ordinarius at the University of Frankfurt am Main, and was renowned for publishing five volumes of *Urkunden zur Geschichte des Völkerrechts* (Documents on the History of International Law), which had been translated to Turkish prior to his arrival.

Strupp was dismissed from his position at the University of Frankfurt am Main due to his Jewish heritage. According to Widmann, his interest and previous work on Greek-Turkish relations, such as his 1931 publication *Die griechisch-turkish Beziehungen 1820-1933* (Greek-Turkish Relations 1820-1933), had played a role in leading to his invitation to the University of Istanbul. He was invited to the university as a professor of international law.

Unfortunately, Strupp did not remain in Turkey for very long, as he suffered from a heart condition that only worsened with Istanbul's coastal weather. He stayed in Turkey for only two years and as a result his influence at the university and on Turkish jurisprudence were minimal. He left Turkey for France in 1935, and lived and worked in Denmark, Switzerland, and Holland, especially at the Hague Academy of International Law, but could never truly find permanent stay as a *heimatlos*. He was invited to the Institute of Social Research at Columbia University, but could not reply. He passed away in 1940.

3.5.2 Conclusion

The impact of the refugee scholars' works in the field of law can be seen in the legacy they left behind in the form of their students, publications, and additional work in Turkish law—the most important of which is their undeniable contributions to the Turkish legal revolution. A legal revolution in Turkey had been a goal that spanned centuries. The *Tanzimat* reform movement led to the First and Second Constitutional Eras, which changed the Ottoman Empire's legal systems. The quintessential product of this reform was the *Mecelle*, written by Ottoman scholar and jurist Ahmet Cevdet Paşa and his legal commission, and it signified a

desire for structure in the legal system, though it was based on Islamic principles and had its roots in Sharia law. When the Turkish Republic was declared, it constructed for itself a new legal system entirely, setting its vision and goals on emulating the West. To do so, it built its new legal system on secularism and bid farewell to a foundation of Islamic law, adopting many legislations and regulations from various European legal systems. Western scholars who were already familiar with these systems—and not only because they had studied them, but also grown up in cultures surrounded by them and experienced it for themselves—transferred their knowledge and understanding of the legal systems of the West to Turkey, as well as the academic traditions surrounding it.

As the refugee scholars provided their expertise to the Turkish legal revolution, they did so not only as teachers and experts, but more importantly, also as lawmakers, which demonstrates the respect the Turkish government held for the refugee scholars. It also shows us the scope of the Turkish 1933 University Reform—Turkey did not transfer only knowledge and technology, it even transferred *laws*, and employed refugee scholars to aid it in this task. The fact that Ernst Hirsch once reported on, drafted, and presented to the Parliament the concepts of *Türk Ticaret Kanunu* (Turkish Trade Law) and *Üniversiteler Kanunu* (Law of Universities) is testament to how influential the 1933 University Reform was in shaping Turkey's future. It could even be argued that the 1933 University Reform was not only an educational revolution: its arm was so long that, by utilizing the knowledge base, skills and talents of the human capital it transferred, it became influential even in the country's legal revolution by extension. Education, given enough time, permeates all aspects of a nation; all its systems of law and justice, its constitution, legislation, judiciary, and executive are no different. With the 1933 University Reform, this occurred in a time period so short that it was easily observable.

When the Turkish legal revolution was complete, it was operated, sustained and developed by the academic legacy of these refugee scholars who followed in the Western legal traditions, at least for a time. The efforts of the 1933 University Reform and the Turkish legal revolution may have been marred by Turkey's tumultuous history, and even echo in events today, but it should not be forgotten that one can only learn from history.

3.6 Fine Arts

3.6.1 Architecture

In comparison to most other studies examined so far in this thesis, the study of architecture in Turkey can be said to have been rather unique. The study of architecture in Turkey today was mostly built on the foundations set in the end of the Ottoman period and especially in the early Republican period. The reform in Turkish architecture is also unique because it was caused by very clear-set political and cultural goals, which were similarly present in both the Ottoman and Republican reform attempts.

The first reform in Turkish architecture began in a rather unofficial manner in 1908, and owed its inception to the influences of the times' sociopolitical circumstances. As can be surmised from the date, these were the end times of the once-grand Ottoman Empire. Over the past few decades, the rise of nationalism had caused many nations to declare their independence and break off from Ottoman Empire, which led it to become introspective. In its last fifteen years, the Ottoman Empire began a "search for identity", and ultimately found it in the largest existent group – namely, the Turks. Thus, as with all other nationalist movements, a specific national identity came forward in the Empire: the Turkish identity. This, in turn, reflected in many elements compromising the nation's gestalt, and architecture, as a form of its art, was influenced as well. Attempts were made to devise a "national style", leading to the birth of a movement later called *1. Ulusal Mimarlık Akımı* (First National Architectural Movement). The movement was characterized by the idea of devising a "national architecture" representing the tastes and styles of the Turkish people. It presented itself as nationalistic as possible, while retaining Ottoman architectural elements such as decorations. As a result, it was often even coined an "Ottoman Revival".

The First Nationalist Architectural movement began in the late stages of the Ottoman Empire and continued into the Republican era, where it became much more pronounced. When the Turkish Republic was first founded, one of its greatest goals was to "build a nation", seeking to prove itself a newborn state. While a large part of the First Nationalist Architecture Movement took place in the post-war restructuring efforts in the Republican era, and went on to 1930, later on, the First Nationalist Architecture Movement soon began to draw criticism from the republic. The first movement's use of Ottoman-styled architectural elements and decorations went against the Republic's wishes to – even visually – distinguish itself from the Ottoman Empire. Elements that were traditionally attributed to the Ottoman legacy were shunned, and the First Nationalist Architecture Movement was criticized for being unable to

follow advances in technology, as well as for being elective and stylistic. As a clear visual representation of the new state—which was quite literally “building itself from the ground up”—architecture became one of the first values of the Turkish Republic that, once again, saw substantial reform and restructuring, be it in methodology, education, or straight-up style. This resulted in the birth of the second movement, 2. *Ulusal Mimarlık Akımı* (Second National Architectural Movement), which ran from 1939 to 1950, and according to Tekeli, was a reaction to the “cultural synthesis” approach held by the First National Architectural Movement: the second wave was a more defined desire to adopt Western culture entirely, and as such, it abandoned the first wave in order to implement completely modern architectural styles (Tekeli, 2010).

A singular characteristic that could be found in both architectural movements, however, was that they both utilized significant amounts of foreign human capital. In its earliest days, while the Turkish republic had grand goals in architecture – including among them the desire to move the capital to the then small city of Ankara – it lacked the manpower to succeed at these tasks alone. Beginning in 1927, the Turkish republic specifically started targeting foreign experts in Europe, particularly German-speaking architects, and sought to bring them in to take part in large-scale architecture and city planning projects, in particular the construction of Ankara.

It should be mentioned that the foreign architects in Turkey who arrived during this time were unlike the other refugee scholars, because the majority of them were not targeted to specifically serve academic purposes like the scholars at Istanbul University were. The architects who came to Turkey were invited to serve as foreign experts employed at various construction projects – to conduct the Republic’s new architecture program, as Dölen words it (Dölen, 2010a, p. 481). It came later that they were distributed to institutions that could house them and make them raise newer generations of Turkish architects, such as *Güzel Sanat Akademisi* (State Academy of Fine Arts) and *Yüksek Mühendis Mektebi* (Engineering College). In this regard, the architecture reform took precedence over the architecture education reform; Dölen notes that as a result they should not be classified as part of the University Reform.²⁵⁵

²⁵⁵ Dölen also has a number of scathing criticisms to offer on the selection of the architects, and they are not unfounded.

Education of architecture during these periods took place in institutions that were capable of fine arts or engineering teaching, namely at the *Güzel Sanatlar Akademisi* (State Academy of Fine Arts) and the *Hendese-i Mülkiye Mektebi* (Civil Engineering College). The State Academy of Fine Arts was established in 1882 as *Sanayi-i Nefise Mektebi* (School of Fine Arts) to focus on fine art, including painting, sculpture, architecture and calligraphy, with a specific focus on art history.²⁵⁶ Like many other early Ottoman educational institutions at the time, its student population was all male, and mostly comprised of minority groups, forming a small student base that numbered around two hundred in 1890. As many of these students also did not practice architecture specifically, it can be argued that the success of architectural education at *Sanayi-i Nefise Mektebi* was limited (Uzun Aydın, 2014). The most important point to make here is that at the time, architectural education was not centralized, and also had no opportunity to specialize. This was more evident at the other institution that taught architecture formally, *Hendese-i Mülkiye Mektebi*. *Hendese-i Mülkiye* began its academic activities in 1884, and was established to cater to the Ottoman Empire's needs for civil architects and engineers. At *Hendese-i Mülkiye*, architecture and construction were considered to be the same profession, and particular attention was given was to the dire needs of the time, such as the construction of roads, bridges, and various buildings. As an art form, or simply as an academic endeavor, architecture was overshadowed at the *Hendese-i Mülkiye*: the school was later renamed *Yüksek Mühendis Mektebi* (Engineering College) in 1928, and the purpose the school was meant to serve should be evident by the new name – it was a school that specifically focused on engineering, not architecture. Further, the first graduates of *Yüksek Mühendis Mektebi*'s architecture program did so in 1940, after the First Nationalist Architecture Movement, and well into the second. Evidently, formal education of architecture in Turkey was in a developmental stage, but over the course of several decades it was spurred on by practice. The practice of architecture was the late Ottoman Empire's and the Republic of Turkey's dire need, brought on by the sheer structural needs of the country, and the existent problems were addressed first. It can be argued that in architecture, formal education did not take as much precedence as sheer practice, and that Turkey developed its architectural traditions through experimentation rather than formal education in specifics. Lacking the means to start experimentation alone, however, the late Ottoman Empire and Turkish

²⁵⁶ *Sanayi-i Nefise Mektebi*, later renamed the *Güzel Sanatlar Akademisi* (State Academy of Fine Arts) in 1928, was the precursor of Mimar Sinan Fine Arts University (MSÜ), established 1982.

Republic made extensive use of foreign architects – who were either invited to the country or came as refugees.²⁵⁷

As related to University Reform, it should be stressed that, in architecture, practical purpose mainly overshadowed educational purpose. As related by Uğur Tanyeli, professor of history of architecture at Istanbul Technical University, none of the architects invited to Turkey during the reform were invited with the university reform specifically in mind—they were not necessarily meant to serve educational functions so much as they were to be utilized as experts responsible for conducting the government’s new architectural program (Kazancıgil, Tanyeli, & Ortaylı, 2000) The refugee architects who nevertheless found homes in the aforementioned institutions and took academic positions to raise the new Turkish architectural generations were as follows:

REFUGEE ARCHITECTS AND ARTISTS		
NAME	INSTITUTION	DURATION OF STAY
Bruno Taut	Engineering College, State Academy of Fine Arts	1936-1938
Franz Hillinger	State Academy of Fine Arts	1937-1939
Clemens Holzmeister	Engineering College	1940-1946
Gustav Oelsner	Engineering College, State Academy of Fine Arts	1939-1952
Ernst Arnold Egli	State Academy of Fine Arts	1927-1940
Rudolf Erwin Belling	State Academy of Fine Arts	1937-1954
	Engineering College	1951-1967

Source: (Dölen, 2010a, p. 480)

Bruno Taut (1880 Königsberg – 1938 Istanbul) was a German architect and urban planner. Born in Königsberg in Prussia, he graduated from the Kneiphof gymnasium and later pursued education in architecture in the *Baugewerkschule* (Building Trades School) as well as in Berlin and Charlottenburg. Following his graduation, he worked at several architecture offices in Hamburg and Wiesbaden, and later became a coworker of the prolific German architect Bruno Möhring in 1903. There, he became acquainted with the “new style” known in Germany as *Jugendstil*, which is more commonly known in the English speaking world as Art Nouveau. Additionally, he became a follower of contemporary architecture, and learned the then-new methods of construction via the combination of steel with stoneworks. In 1904, Taut

²⁵⁷ The Turkey branch of the Goethe Institute has an extensive archive related to the works of foreign (and mainly German-speaking) architects who were invited to Turkey in the early years of the republic. Details regarding their works in Ankara in particular, and the contributions of Austrian, German, and Swiss architects are available on their project website (Goethe Institute, 2017). As per limitations of this thesis, however, only the architects who were refugees and those who took academic positions at Turkish educational institutions are examined in this chapter.

went to Stuttgart to study urban planning, and in 1908, he returned to Berlin to study art history and construction. Prior to his emigration to Turkey, he was an honorary professor at the *Technische Hochschule Berlin* (currently Technical University of Berlin) as well as a member of the Prussian Academy of Arts (Reisman, 2006, p. 56).

Taut was considered an artist in addition to an architect, and was classified as a Modernist, in particular an Expressionist. His artistic spirit was reflected in his architecture; his ‘Glass Pavilion’, built out of concrete and glass in 1914 for an exhibition, had glass staircases, backlit waterfalls, and prisms reflecting outside sunlight so that the structure resembled a kaleidoscope: it was “built more to provoke something in someone rather than serve any practical use”, and the whole structure, allegedly, meant to signify the start for a new world view (Architectuur, 2013). Taut became a follower of the utopian “garden city movement” during this period as well.²⁵⁸ During World War I, he was a conscientious objector, though not openly; considering himself a pacifist, Taut avoided serving in the war by taking over the construction project for a gunpowder factory (therefore classifying himself as indispensable to be personally sent to service). By 1917, he was writing anti-war manifestos. His publication, *Alpin Architectur* (Alpine Architecture), conceived a utopian city built in the Alpine Mountains, envisioning it as a remote and safe starting point for society after the rest of known civilization was ravaged by war. Taut exclaimed:

“PEOPLES OF EUROPE! CREATE FOR YOURSELF SACRED POSSESSIONS – BUILD! The Monte Rosa and its foothills down to the green plains is to be rebuilt. Yes, impractical and without utility! But have we become happy through utility? Always utility and utility, comfort, convenience – good food, culture – knife, fork, trains, toilets, and yet also – cannons, bombs, instruments of murder!” (Fabrizi, 2015)

In the post-war period, and especially following the November Revolution, Taut also became sympathetic to the socialist world view and became a proponent of socialist political policy. This, too, reflected in his work as he sought to translate the ideas of the revolution into architecture. At the time, post-war Germany was incidentally also suffering a severe lack of efficient, economic housing for the use of the working class—naturally, Taut took up the task, becoming the lead architect of several large-scale housing projects. His work on Berlin’s

²⁵⁸ The garden city movement, also called garden town, was a city planning system sprung from the works of British urban planner Ebenezer Howard, who wrote a book titled *Garden Cities of To-morrow* in 1898 (initially published as *To-morrow: A Peaceful Path to Real Reform*). Inspired by utopian novels such as *Looking Backward* and economic treatises such as *Progress and Poverty*, Howard’s book envisioned the “garden city”, which combined the benefits of both urban and country living: as a city it would be full of economic, social and cultural opportunity, and as a garden it would retain beauty, relaxation, and low costs. This vision was built within the framework of a capitalist system, and aimed for the fulfillment of both individual and community needs simultaneously (Lucey, 1973).

Modernism Housing Estates, projects of the state-founded housing company GEHAG, are now among UNESCO World Heritage Sites (UNESCO, 2016).

In addition his outspoken pacifism and his sympathy for socialism, Taut was of Jewish descent. The rise of National Socialism meant that Taut needed to remove himself from the country quickly, and he did in 1932, moving to the USSR for a year where he directed an architect's studio. He returned to Germany in 1933, however. Then, he was warned that he was to be arrested, and thus fled to Switzerland. During this time, he was discharged from his position at the university for political reasons, and in 1934 was also removed from his membership at the Prussian Academy of Arts. By this time, however, Taut was an internationally renowned architect. He received an invitation to move to Japan through the International Union of Architects and stayed there from 1933 to 1936, acquainting himself also with Eastern architecture during that time.

Taut was among the refugee scholars who were not unfamiliar with Turkey. He had previously been in Istanbul in 1916, for a competition held to decide the design of the “Turkish-German Friendship Home” (Tümer, 2007). In 1936, Taut was offered a position at the State Academy of Fine Arts in Istanbul through the suggestion of fellow architect Martin Wagner. Taut became a professor of architecture at the Academy and directed its department of architecture. He also worked as a foreign expert as the director of the construction department of the Ministry of Education. Taut's position was somewhat unique in that he was both a refugee academic as well as an refugee expert. Widmann points out that Taut had previously taught at a variety of locations, including the Technical Colleges of Berlin and Moscow, and had an identity as an educator. However, most literature on Taut shows that his popularity as an architect and artist far outshone his identity as a professor (Widmann, 1999, p. 205). This is also observed in the lack of literature on Taut's academic activity in Turkey—he is known to have directed the department of architecture at the State Academy of Fine Arts, and he lectured at *Yüksek Mühendis Mektebi*, but further information is rare. In 1938, he published *Mimarlık Öğretisi* (Teachings in Architecture) for his Turkish students. Taut's student Mehmet Ali Handan²⁵⁹ testified that the education of architecture in Turkey—

²⁵⁹ Mehmet Ali Handan (1915 – 1990) was a Turkish architect. A graduate of Galatasaray High School, he became a student at the State Academy of Fine Arts in 1933. Following his graduation, he pursued an academic career and started lecturing on the topic of urbanism. When Gustav Oelsner, the émigré scholar teaching urbanism, left Turkey, Handan was appointed to take over his lectures. In 1968, Handan was a professor, and became the first professor to hold the chair of urbanism when it was established. In 1982, he became the director of the department of city and town planning. Later, he headed the Institute of Urbanism Research. He retired in 1984. Handan's prominent works include *İstanbul Vakıflar Oteli* in Taksim (currently Ceylan Intercontinental

specifically modern architecture—started with Taut (Şen F. , 2008, p. 230). Maruf Önal²⁶⁰ was also one of Taut’s students.

Taut’s contributions to Turkey were more practical than academic. In Turkey, Taut was among the architects employed to transform the new republic’s architecture, based on the notion that “modern Turkey required modern architecture.” Tanyeli criticizes that the new republic’s architectural program was basic, even rough, and claims that there was no significant cohesion in the styles practiced by the experts invited to Turkey (Tanyeli, 2007).²⁶¹ For example, a 1936 brochure, published by the State Academy of Fine Arts and distributed to its students, promoted the architecture department and in doing so, lauded Taut as “a new mentor... who will combat the ugly cubic buildings that are violating our provincial centers and rural areas in the name of modern architecture” (Dölen, 2010a, p. 481). This, incidentally, was a significant misunderstanding on the government’s part, because Taut was a stalwart forerunner of the modern architectural style that the government despised. As a result, some of Taut’s work was received unfavorably and labeled cubic, which Taut later lamented in a letter to a friend as “(...) they are calling all modernism cubic.” However, in the same letter, Taut also praises the freedom given to him to pursue his craft, and signifies a desire to adapt his work to be more compliant in response to received criticism, noting that he wishes to integrate Turkish motifs in his new building. Thus, Taut’s work also inspired the desire to find a synthesis between traditional and modern elements. Taut commented on this notion:

“What we must accomplish is a synthesis between old tradition and modern civilization. (...) I think that is our greatest charge here, in Sinan’s homeland. It is for this task that I try to inspire enthusiasm in the Turkish youth I find so sympathetic, and my initial experiences have given me hope that I can accomplish it with my Turkish colleagues.” (Şen F. , 2008, p. 230) (Translation mine.)

Hotel), considered one of the defining works of modern Turkish architecture (Mimar Sinan Üniversitesi (Mimar Sinan University), 2016).

²⁶⁰ Maruf Önal (1918 – 2010) was a Turkish architect. He was a 1943 graduate of the Architecture program at the State Academy of Arts, which he was also an assistant to from 1943 to 1946. In 1958, he became a lecturer at *Yıldız Teknik Okulu* (Yıldız Technical College, a precursor of Yıldız Technical University), and headed its architecture department from 1960 to 1963 and 1966 to 1969. In 1971, he became a professor. When the college was restructured as *İstanbul Devlet Mühendislik ve Mimarlık Akademisi* (Istanbul State Academy of Engineering and Architecture), Önal was the founding chair of its Construction and Projects department. He was also the dean of the architecture department in both the IDMMA period (1976-1979) and the Yıldız Technical University period (1982-1985) when the school was restructured. Önal was a founding member of IMA, considered one of Turkey’s largest and oldest architecture firms. He was also a founding member of the Chamber of Architects. He received a National Prize in Architecture from the Chamber in 2000. Önal’s architecture projects included housing, factories, offices, cinemas, gas stations, municipality buildings, hotels, and cultural buildings (marufonal.com, 2016).

²⁶¹ In addition to these criticisms, Tanyeli notes that the invitation of architects to Turkey was as if the country invited any architect it could find. As an internationally renowned architect and artist, Taut was an outlier with his considerable fame (Tanyeli, 2007).

Taut's significant construction projects in Turkey included the building of *Dil Tarih Coğrafya Fakültesi* (Faculty of Languages, History and Geography) in Ankara, later to be a part of Ankara University. As director to the construction office at the Ministry of Education, Taut also designed and built a number of schools, using local materials and staying true to modernist tradition. Taut's construction projects included *Mekteb-i İdadi* (lit. Senior High School, currently Trabzon High School) in Trabzon, and Atatürk High School and Cebeci Middle School in Ankara, the latter two of which were finished by Taut's colleague Franz Hillinger. For himself, he built a villa in Ortaköy, a building which put together elements of his exile and presented it as an art form; the building has Turkish elements in addition to German ones, his studio resembles the Einstein Tower in Potsdam, and the front of the villa resembles a pagoda, a symbol of Taut's exile in Japan.²⁶²

Taut also designed Mustafa Kemal Atatürk's catafalque following his death, and refused to be paid for the task. In place of payment, he requested a simple letter of recognition for his work, intending to pass it onto his children.

“To even make such a suggestion wounds me deeply. Receiving monetary compensation for such a task—that fell on me by chance, following the death of one of the greatest men of our time—is out of the question.” (Şen F. , 2008, p. 230) (Translation mine.)

Taut's stay in Turkey was very short. Having battled asthma attacks for several years, he succumbed to a final one in December of 1938. He was interred at the Edirnekapı Martyrs Cemetery, a Muslim martyr's cemetery which had a new section opened in it to 'accept people of all religions' (Şen F. , 2008, p. 230). As of today, Taut is the only non-Muslim interred in the cemetery.²⁶³

Franz Hillinger (1895 Nagyvárad – 1973 New York) was an Austro-Hungarian architect. Born to a Jewish family in the former multinational state of Austria-Hungary, Hillinger was educated in architecture at the University of Budapest following his service in the military. His education, however, was cut short by the riots of the Aster Revolution (in which Hungary

²⁶² This red-domed villa is visible from Boğaziçi Bridge when crossing over from the Asian side of Istanbul to the European side. It stands out with its unique, Japanese-inspired architectural style.

²⁶³ There is some confusion concerning Taut's burial at Edirnekapı in some literature, and unfortunately, a lot of news articles concerning Taut seem rife with error. There seems to be some popular culture interest in “the mysterious case of a non-Muslim interred at a Muslim cemetery”, but the articles discussing this issue also often make the mistake of calling Taut Christian, and some even mention that he was married to Margarete Schütte-Lihotzky.

succeeded from the Austro-Hungarian Empire) and rising anti-semitism. Hillinger then went to the Technical University of Berlin for his studies and graduated from its architecture department in 1922. Hillinger was a student and coworker of Bruno Taut, and worked with him at GEHAG on the Modernism Housing Estates as well as other projects. From 1931 to 1932, he was an assistant to Taut as a lecturer of architecture (Goethe Institut (Goethe Institute), 2010).

Following the *Machtergreifung*, Hillinger could no longer work at the state company GEHAG due to his heritage. He continued working underground, accepting private projects for clients. Later in 1937, due to his Jewish heritage and membership of the *Sozialdemokratische Partei Deutschlands* (SPD), Hillinger was professionally disqualified from the Reich Chamber of Fine Arts and legally forbidden to work as an architect in Germany.

Hillinger emigrated to Turkey in 1937, and his wife and children followed him three months later. He was initially employed as an architectural expert at the Development Office tied to the Ministry of Culture, and also lectured at the State Academy of Fine Arts on architecture, moving from Ankara to Istanbul. Later, he directed *Ankara Mimarlık Okulu* (Ankara School of Architecture) from 1940 to 1943. Further details on Hillinger's academic work in Turkey are unfortunately minimal.

Hillinger cooperated with Taut on many of his projects, and following Taut's death was responsible for their completion. Hillinger is thus also credited with the Ankara DTCF building, Trabzon High School, Ankara Atatürk High School, and Cebeci Middle School, in addition to other projects in Ankara.

Hillinger moved to Canada in 1951. In 1953, he returned to Turkey, and spent three more years in Ankara overseeing the construction of the building of the Grand National Assembly, which was fellow refugee architect Clemens Holzmeister's design. In 1956, he moved to the United States permanently. Hillinger passed away in 1971.

Clemens Holzmeister (1886 Fulpmes – 1983 Hallein) was an Austrian architect. Holzmeister was born to a family of German-Brazilian emigrants who had returned to the Austrian state of Tyrol. Holzmeister was educated in Innsbruck, and after developing an interest in architecture, studied at the Technical University of Vienna. Following his graduation, he received a degree as a doctor of technical sciences, and was subsequently appointed as a

lecturer at the state trade school in Innsbruck in 1919. Holzmeister's work on the Simmerhalle Crematorium at the Viennese *Zentralfriedhof* (lit. Central Cemetery) was highly commended and brought him considerable fame in the Viennese architectural circle. In 1924, he was appointed to a professorship at the masters school of the Vienna Academy of Fine Arts, and was the director of its department of architecture until 1938. He also served as the rector of the Viennese Academy from 1933 to 1937. From 1928 to 1933, Holzmeister was also a member of the Düsseldorf Academy of Fine Arts.

Holzmeister was dismissed from the Düsseldorf Academy of Fine Arts in 1933 due to the rise of National Socialism. Following the *Anschluss* in Austria in 1938, he was expelled from all positions at the Vienna Academy of Fine Arts as well. Holzmeister's reason for dismissal from Nazi Germany and Austria was unique: he wasn't expelled due to the usual suspects of his heritage and/or political opinions but rather the quality of his modern architecture, which was deemed undesirable (Goethe Institut (Goethe Institute), 2010). When Holzmeister was 'forced into retirement' as dictated by his undesirability, all his offices, properties, journals and all publications were seized by the Nazis (Widmann, 1999, p. 206). Luckily, he was in Turkey at the time, and he thus became an émigré refugee in the same year. Prior to his emigration, Holzmeister had hardly been a stranger to Turkey—he had visited Turkey frequently from 1927 on, as he had been responsible for numerous construction projects there, especially in the new capital Ankara. His expulsion in 1938 only made him settle in Turkey, semi-permanently. While the majority of his work was centered in Ankara, Holzmeister made his home—and studio—in Tarabya in Istanbul.

From the first time he was employed by the government shortly after the declaration of the republic, Holzmeister was initially known as the architect behind various ministry buildings and military facilities (Şen F. , 2008, p. 174). Throughout his stay in Turkey, however, Holzmeister came to be regarded as the (literal) architect of modern Turkey (and its government). A list of Holzmeister's prominent projects can be given as follows: Ministry of Defense (1930), Turkish Armed Forces General Staff Building (1930), Ministry of Public Works (1934), Ministry of Interior (1934), Ministry of Education (1934), Ministry of Commerce (1934), Supreme Court (1934), Emlak Kredi Bank (1934), Austrian Embassy (1936) and so on. Additionally, Holzmeister was the architect of Atatürk's personal mansion in Çankaya, the *Pembe Köşk*²⁶⁴ (Pink Mansion) in the presidential campus in Çankaya, which

²⁶⁴ There are two mansions bearing the name *Pembe Köşk*, and both are closely affiliated with early Turkish government: one is the *Pembe Köşk (Çankaya Köşkü)* mentioned here, and the other is *Pembe Köşk (İsmet İnönü*

was constructed in 1932. According to Holzmeister's own words, he gained the trust of the Turkish government by completing eleven projects without the smallest hint of complaint or reproach, and was rewarded with the "crowning achievement" of being requested to design and build Atatürk's personal mansion (Reisman, 2006, p. 55).²⁶⁵ While the architect himself recounts the mansion as his greatest work, another most laudable project by Holzmeister must be the entire Grand National Assembly of the Turkish Republic complex. In 1938, a contest was held to define the design of a new building to be constructed for the Grand National Assembly, which would "have monumental value, and represent the continuity of the Turkish Republic, all in accordance with the architectural characteristics of the 20th century". The project Holzmeister submitted to the contest made it to the final three, and was chosen upon Atatürk's request. The project to build the assembly building began in 1939, and following delays incurred by the outbreak and effects of World War II, was completed in 1960. Holzmeister also submitted a design for *Anıtkabir*, Atatürk's Mausoleum, but it was not chosen. Holzmeister commented that the winning design was neo-classicist, and was chosen by a neo-classicist jury consisting of German architects invited from abroad. The design, Holzmeister commented, was "as if it were designed as a monument for a German national hero" and "disregarded the fact that Atatürk himself was against all Hellenistic influences". According to Holzmeister, his project had incorporated elements of the mausoleum tradition of early period Turks (Kotran, 2007).

Holzmeister's work in Ankara, and the rest of Turkey, coincided with the wave of change in Turkish architecture during the early Republican period. The new capital of the Turkish republic, and its various governmental constructs and buildings, represented the desire to transform the country into a modern, civilized nation. Initially, Holzmeister faced some difficulty adapting to the movement, as he had academically been brought up in the classical tradition of architecture, trained to include the historical elements the Turkish government wanted to replace. Holzmeister, however, was capable of integrating the fundamentals of these historical elements into his modern architecture, and by isolating them from the traditions they were so bound to, smoothed out the striking clash between tradition and

Evi). The former was designed by Holzmeister in 1932, while the latter *Pembe Köşk* belonged to İsmet İnönü. İsmet İnönü's *Pembe Köşk* is currently a museum, and is more well-known.

²⁶⁵ Holzmeister was acquainted with Mustafa Kemal Atatürk. According to an anecdote offered by Reisman, one aspect of the new construction project that was the subject of much debate was whether the new mansion should be built on a new area, or on the site of the extant, old villa. Holzmeister voted for the site of the old villa, noting that the old villa "represented a significant part of new Turkey's history", which won him Atatürk's heart (Reisman, 2006, p. 55). According to Atatürk, Holzmeister remarked, respect for the professional expert was above all, and if the said expert earned this respect through hard work, everything else became much simpler.

modernity—in so doing, he and his architecture adapted to the trends of the contemporary Turkish National Architectural Movement. The simple prismatic shapes of Holzmeister's architecture, in particular the government buildings, are often symmetrical, orderly, and dignified, befitting the task of governance; it is also symbolic of the value of function over form (Biçer, 2013).

In addition to his architectural practice, Holzmeister was also employed as an academic at *Yüksek Mühendis Mektebi*, and directed its department of architecture from 1940 to 1954. Holzmeister was not particularly prolific in publishing like academics belonging to other fields. His work was concentrated on construction projects which, by the time of his death, numbered around 700 complete buildings in Turkey, Austria, Germany and Brazil. After Holzmeister's death, a textbook summarizing his lectures at Istanbul Technical University, titled *Mimarlık Tarihi Ders Notları 1951-1952* (Lectures on the History of Architecture) was published by Behruz²⁶⁶ and Ayşegül Çinici.

Holzmeister's dismissal from his positions in Austria was rescinded during the war. He received an invitation to return to his position at the Vienna Academy of Fine Arts, but as he was busy with a variety of projects in Turkey at the time, he did not move back. Instead, he moved back and forth between Austria and Turkey for several years while his projects came to an end, and in 1950, he returned to his home country. The rest of his family returned to Austria in 1954, and in the same year in Austria, they published the book *Bilder aus Anatolien* (Pictures from Anatolia). Holzmeister retired in 1961. In 1963, he was awarded an honorary doctorate by Istanbul Technical University. Holzmeister did not stop visiting Turkey, even when his work and exile there came to an end. His final visit occurred in 1978, where he worked as an advisor on a project to expand the complex of the Turkish Grand National Assembly. He passed away in 1983, and was buried in the St. Peter cemetery in Salzburg.

²⁶⁶ Behruz Çinici (1932 – 2011) was a Turkish architect. A 1954 graduate of the Istanbul Technical University Faculty of Architecture, he became an assistant at department of Urbanism within the architecture faculty, and worked as an academic until 1961. Some of Çinici's prominent architectural projects included Erzurum Atatürk University (1957), Ankara *Petrol Ofisi Yönetim Binası* (Petrol Ofisi Administrative Building) (1957), Ankara *Devlet Su İşleri Genel Direktörlüğü* (General Directorate of State Hydraulic Works) (1958), Istanbul Eminönü Bazaar Center (1959), and Middle East Technical University (1960-1981), which he worked on together with his wife Altuğ Çinici. Çinici was a follower of modern architecture in Holzmeister's tradition, and valued "function over form" as shown by the "raw concrete" formations of many of his designs. In addition to his projects, Çinici was also active in the development of legal and organizational frameworks for architecture in Turkey, and was a member of the Urban Planning Committee of *İmar İskan Bakanlığı* (Ministry of Urban Development) from 1964 to 1966. He also served as the Senior Advisor of Urbanism and Architecture for the Prime Ministry from 1963. Çinici won the Aga Khan Award for Architecture for his work on the Mosque of the Grand National Assembly in the 1993-1995 cycle, with his son Can Çinici. Both his son Can and daughter Ayşegül Çinici are prominent Turkish architects (Karataş, 2011).

Gustav Oelsner (1879 Poznan – 1956 Hamburg) was a German architect and city planner. Oelsner studied architecture at the *Technische Hochschule Charlottenburg* (currently the Technical University of Berlin) and, following his graduation in 1900, began his practice in Berlin. In 1907, Oelsner was appointed as a city planner and inspector for national administration in Wroclaw, and was also responsible for the construction of its university (currently the Wroclaw University of Science and Technology) and a number of other official buildings (Gryglewska, 2008). Later in 1911, Oelsner was appointed to the town council of Katowice, and held this title until 1922 (at which point the region became a part of the Second Polish Republic). During the later years of Oelsner's work in Katowice, he became acquainted with Bruno Taut, a fellow city planner and architect, who would later become his companion in exile. After seeing Taut's example of such an urban plan over an abandoned mining area in Katowice's borders, Oelsner became invested in the urban city planning philosophy of the garden city movement. Oelsner also was a follower of the *Neues Bauen* (New Building) movement in Germany, which was typically found in social democratic municipalities. The movement was closely associated with economics of construction, and aimed to minimizing lavishness and wastefulness. Common features were the usage of newer, cheaper materials, buildings with simple cubic shapes, and clear aesthetics. Oelsner's architecture thus reflected his general philosophy.

In 1924, Oelsner became the city planning director under the social democrat mayor Max Brauer of Hamburg-Altona.²⁶⁷ Following the *Machtergreifung* in 1933, Brauer was deposed, and Oelsner along with him. The Nazi government then put Oelsner on trial, charging him for malfeasance in office and waste of public funds. The charges were dropped the next year due to a lack of evidence. In 1937, Oelsner again became a target of Nazi authorities, and was forced to use the first name "Israel" due to his Jewish origins. He left Germany then, and went to the United States, where he stayed with Max Brauer, who was also in exile. Brauer convinced him not to return to Germany.

Oelsner was contacted by the Turkish government as early as 1937. In 1939, he accepted an offer to work as an expert advisor on city planning at the Ministry of Public Works in Ankara. Oelsner was later also called to work at the *Yüksek Mühendis Mektebi* in Istanbul, where he established the chair for urban development; in addition to this, he also lectured at the State

²⁶⁷ Altona is currently a part of Hamburg, but it was an independent city until 1937.

Academy of Fine Arts. Working in two different cities and two different universities, Oelsner soon became a well-liked figure in Turkish architecture. According to the testimony of his student, translator and coworker Kemal Ahmet Arû, Oelsner was the architect that set forth the concept of modern urban planning. Oelsner was later awarded an honorary doctorate by the senate of Istanbul Technical University for his work in Turkey.

Oelsner remained in Turkey until 1951. After the war, authorities in Hamburg contacted Oelsner multiple times to organize his return. In 1950, Oelsner accepted their offer, and took a semester off from his work at Istanbul Technical University to visit Hamburg for a half-year. He returned to Turkey for the fall semester of 1950-1951, but by spring had decided to return to his homeland permanently. Oelsner passed away in Hamburg in 1956.

Ernst Arnold Egli (1893 Vienna – 1974 Meilen) was an Austrian-Swiss architect. Born to a Swiss father and an Austrian mother, Egli grew up in Austria, and graduated from the architecture department at the University of Vienna in 1918. After working independently for a while, Egli became an assistant to Clemens Holzmeister at the Academy of Fine Arts Vienna in 1924.

By 1927, Egli's mentor Holzmeister had taken the mission to aid Turkey in its quest for architectural reformation, specifically in their new capital Ankara. Egli arrived in Turkey Through Holzmeister's reference, the Turkish government employed Egli as the chief architect for the construction department at the Ministry of Education. Egli would also serve educational purposes, with the specific job description to "reform and improve the programs of the Istanbul *Sanayi-i Nefise Mektebi* (School of Fine Arts), hold conferences, and teach". When Egli arrived in Turkey in 1927 at the age of 34, he was among the youngest foreign experts employed in Turkey. He would later be remembered for his services as an architect, an educator, and an administrator.

At his office at the Ministry of Education, Egli was responsible for the employment of the academic staff who would then go on to conduct the many important construction projects in Ankara. Egli and his team were very productive with construction work, and a great many of the new public buildings in Ankara bear his architectural signature. Egli's work included buildings for educational institutions in particular, with specific examples such as the Ankara State Conservatory, Ticaret Lisesi (Trade High School), İsmet Paşa Kız Lisesi (Ismet Pasha

Girls' High School), Ankara Kız Lisesi (Ankara Girls' High School), Gazi Lisesi (Gazi High School), two important buildings that would later be part of Ankara University, Ziraat Fakültesi (Faculty of Agriculture), Siyasal Bilgiler Fakültesi (Faculty of Political Sciences), and two buildings that would later be part of Gazi University, the Jimnastik Okulu (Gymnastics School) and Yapı Usta Okulu (Builders' School) at the Gazi Educational Institute. Egli's projects also included state buildings such as the Swiss and Iraqi embassies, the center for Türk Hava Kurumu (Turkish Aeronautical Association) and Etimesgut Uçuş Okulu (Etimesgut Aviation School). He was also the architect for Atatürk Orman Çiftliği (Atatürk Forest Farm) complex, and the beer factory in it (Goethe Institute, 2010). Egli worked as a city planner, and was the architect of many buildings in the Etimesgut region of Ankara (at the time considered a "sample village"), and later also provided city plans for Edirne, Balıkesir, and Niğde. According to Alpagut, Egli was the most prolific of all refugee architects invited to Turkey, with a total of around seventy-five works to his name (Alpagut, 2010, p. 132).

Egli's teaching efforts began with his restructuring of the educational program of the *Sanayi-i Nefise Mektebi*, where he reformed it to meet to the standards of a typical German *Technische Hochschule*, giving it the direction and organization of a technical school. For this task, Egli moved to Istanbul in 1930 and became a professor, in addition to his various construction projects still going on in Ankara. Egli had learned Turkish from a translator provided to him in his early days in Turkey, and was capable of going through his educational facilities with ease. At the renamed State Academy of Fine Arts, Egli worked with the faculty (removing two architects from service as they were 'stylistically narrow-minded'), and employed both foreign and local architects who showed promise. The German-educated Arif Hikmet Holtay²⁶⁸ and Sedad Hakkı Eldem²⁶⁹ became his assistants. Egli traveled in Turkey

²⁶⁸ Arif Hikmet Holtay (1896 – 1968) was a Turkish architect and educator. He was educated in architecture in Germany at the Stuttgart *Hochschule für Technik* (currently the Stuttgart Technology University of Applied Sciences), and he became an assistant at the State Academy of Fine Art in 1930 after his return to his home country. Holtay was among the leading Turkish architects during the architecture reform, owing to his German style education and the German *ecole* present at the Academy. Initially, he became a follower of the 1930s modernist "new architecture", and later adopted a more nationalist style in the 1940s after a series of "National Architecture Seminars". His prominent works include the Istanbul University Observatory, the Esplanad Apartment, Mersin İş Bankası and Bursa İş Bankası buildings (Küreğibüyük, 2011).

²⁶⁹ Sedad Hakkı Eldem (1908 – 1988) was a Turkish architect. Educated in Geneva and Munich during his early life, Eldem became a 1928 graduate of the State Academy of Fine Arts following his return to the country. He became an assistant at the Academy in 1932, and through the 1930s became a proponent of European functionalism in Turkish architecture, leading to works such as the Maçka Firdevs Hanım Manor, the Yalova Thermal Hotel, and the Ankara Customs Building. As per the Second Nationalist Architecture movement, Eldem's style gradually changed in the 1940s, and he became one of the leading figures in the "National Architecture Seminars". Eldem examined the 18th and 19th century Ottoman palaces and manors with an

extensively in order to study the local Turkish architecture. He later established the chair of Urbanism at the academy, and was also influential in the founding of the departments of Ceramics and Graphics. Due to his work both in academy and his many construction projects, Egli became increasingly influential in the development of the republican Turkish architectural style.

Egli's architectural style was shaped in the likeness of his mentor Holzmeister. According to Batu, Egli's works included examples of both modernist and purist architecture, and was fit for a developing country like Turkey, which required a more realistic approach to architecture as opposed to monumental and often ostentatious designs. This showed in particular in his economic approach to education buildings, which were in turn representative of a country that not only lacked materials but also space (Batu, 1997, p. 503). In Turkey, Egli's style was a great influence in the second wave of the second National Architecture Movement. As a representative of Western modern architecture, Egli was often consulted on the path Turkish republican architecture should take. Egli held the opinion that a new architectural style for new Turkey should incorporate well-defined Anatolian themes, and not disregard its traditional roots. Egli was thus a proponent of an architectural style that wouldn't feel 'out of place', like an architectural style that seemed as if it were merely imported from another country. According to Egli, the architectural style for the Turkish Republic would blend the functionality of modernism with respect for the traditional Anatolian-Turkish identity.

Egli's years of stay in Turkey were quite unlike those of other refugee scholars. He arrived in 1927 as a foreign expert, but after a few years of work in Turkey, soon found out he couldn't simply return to his homeland—Egli's wife was Jewish, and returning to Austria would be dangerous for his family. Meanwhile, his contract with the Turkish government was renewed multiple times. Egli also switched to Swiss citizenship in 1937. He then decided to return to Switzerland in 1940; thankfully, Switzerland's neutrality in World War II kept the Egli family safe. Egli was nevertheless drafted into military service in Switzerland, though his age and

academic eye, and pioneered the reintroduction of traditional motifs into architectural design. When modernism became dominant in the 1950s, Eldem's architecture was a synthesis of the traditional Turkish civil home architecture, combined with structuralism. Examples of his works from this period include the Zeyrek headquarters of the Sosyal Sigortalar Kurumu (Turkish Social Security Institution), the Atatürk Library in Taksim, and the Alarko Holding building. Eldem also worked extensively with fellow Turkish architect Emin Onat, with whom he had many projects in the style of the Second Nationalist Movement, including the Arts & Sciences Faculty building for Istanbul University and the Science Faculty building of Ankara University. Eldem's academic works included many publications, often derived from his research into traditional Turkish civil architecture. Examples include *Türk Evi Plan Tipleri* (Turkish House Plans and Types), *Köşkler ve Kasırlar* (Manors and Estates), *Türk Bahçeleri* (Turkish Gardens), *Topkapı Sarayı* (Topkapı Palace), among others. Eldem was the 1986 recipient of the Aga Khan Award for Architecture (mimarlikmuzesi.org, 2017).

ailing health condition required that he be given to secondary jobs. Even during this time, Egli was undertaking construction projects in Turkey (he was busy drafting a city plan for Balıkesir at the time he was drafted into the military in 1941). In 1941 and 1942, Egli traveled to Turkey to deliver his city plans for Balıkesir and then Samsun respectively. He then became a professor at the Zurich Technical School, though he faced difficulty advancing his career. In his own words, he was not ready for the Swiss type of architecture. Egli had been educated in the Viennese school, and adopted an Eastern style from his work in Turkey. While he did not believe he was returning to Switzerland empty-handed after his experiences in Turkey, he had still missed out on a lot of the architectural developments that had been happening in Europe while he was away. Distraught, Egli moved away from architectural projects and focused on city planning, gradually losing hope of advancing his career in Switzerland. He went to Lebanon in 1940, where he stayed for seven years before returning to Switzerland once again. Egli returned to Turkey in 1953 as a representative of the UN Technical Assistance Administration, and lectured on urbanism and regional planning at the Public Administration Institute for Turkey and the Middle East. According to Alpogut, Egli's second permanent arrival to Turkey greeted him with a style of Turkish architecture that had come into its own, though it was marked by a period of strife as it coincided with the Democrat Party administration that felt foreign to him, which caused Egli to return to Switzerland once again (Alpogut, 2015). Egli passed away in 1974.

Rudolf Edwin Belling (1886 Berlin – 1972 Munich) was a German sculptor. Hailing from a family of conservative origins, Belling was educated in the Berlin-Steglitz primary school and later attended a military boarding school in Saxony, Luisenstift. Initially, Belling was educated in business; in his later life he would disregard his formal studies in favor of a passion for art. Instead, he became an apprentice in an artisan workshop, and later entered a craftsmanship school, furthering his studies in art by taking evening courses on drawing, modeling, and anatomy at the Veterinary School of Berlin. In 1908, Belling established a small sculpture studio, and worked on stage design for various theaters. Despite his activities, Belling was not considered a professionally trained artist until he drew the attention of Peter Brauer, a professor of sculpture at the Berlin-Charlottenburg Academy of Fine Arts, who admitted him into the sculpture master-class despite the fact that he had no previous training and did not meet the specific requirements set by the school. Brauer supplied Belling with his own student atelier, and Belling focused on his studies with an enthusiasm that only one with

true passion can. He followed his academics, continued stage designing, and became interested in the philosophy of art as a reaction to German sculptor Adolf von Hildebrand's "*Der Problem der Form in Verbildenden Kunste*" (The Problem of Form in Fine Art). Belling developed a distinctive modern abstract style, and in 1919 became the first German artist to make a structuralist-avant garde sculpture, *Dreiklang*. He was also a founding member of the art movement-group *Novembergruppe*, a group of expressionist German artists who took their name from the German revolution; politics was thus embedded in the philosophy of Belling's art as well as in his style. From the 1920s onward, Belling became very famous in Germany—his name had become somewhat of a "war cry", to quote Reisman—with his sculptures often becoming the topics of "numerous heated debates", according to his daughter Elisabeth Weber-Belling (Reisman, 2006, p. 113). In 1931, Belling was appointed a member of the Prussian Academy of Arts.

After the *Machtergreifung* in 1933, Belling's abstract art found very little favor with the Nazis. His work was immediately coined degenerate, and a great number of his works were either melted down or broken (which prompts Reisman to comment that the only sort of sculptures Nazis allowed were bas reliefs depicting muscular, blond farmers) (Reisman, 2006, p. 114). Some of his works that weren't destroyed were displayed in a "Degenerate Art" gallery. Thus, the *Machtergreifung* effectively forced Belling out of Germany's art life, and he began to sculpt store mannequins to get by. The disruption of his artistic career, combined with his political leanings, also forced him out of the Prussian Academy of Arts, and Belling resigned from his position before the Nazis had the chance to expel him (Şen F. , 2008, p. 149). In 1935, Belling went to the United States, and spent eight months in New York where he presented his most monumental works at the Weyhe Gallery and lectured on his artistic theory. The problem, however, was that Belling's wife and son were left behind in Germany, and as his wife was Jewish, Belling feared for both their lives. Belling returned to Germany in 1936. The following year, he received an offer to work in Turkey. Two years later, his now-separated wife had emigrated to Shanghai, and Belling managed to get his son out of Berlin and into Turkey (albeit illegally).

Belling was suggested to the Turkish Government by the architect Hans Poelzig²⁷⁰, and his task was to establish and direct the sculpture department at the State Academy of Fine Arts, a

²⁷⁰ Hans Poelzig (1869 – 1936) was one of the architects who had been invited to Turkey as an expert advisor. He arrived in Turkey in 1935 to discuss his contract, incidentally traveling alongside the musician Paul

task which he started in 1937 and ended in 1954. Belling's work at the State Academy of Fine Arts is alleged to have been definitive of the identity of republican Turkish sculpture. According to Şen, Belling's teaching of sculpture did not allow his students to completely surrender to modernist trends. At the same time, it was not purely academic, and demanded that they stay open-minded towards the changes and developments in the artistic world (Şen M. , 2016, p. 5). Reisman notes that Belling's work in Turkey was especially influential: the Turkish Republic's predecessor, the Ottoman Empire, had been entirely ruled by Islamic Law, which prohibited the depiction of human figures. This had confined Ottoman sculpture to a very limited frame, such as bas reliefs, whereas figure sculptures were almost entirely nonexistent up until the early 19th century, where the Tanzimat reforms, aiming towards Westernization, allowed for the depiction of human figures (Reisman, 2006, pp. 114-115). As such, it would not be unfair to claim that Belling came to a place where he could very easily shape the future of its tradition of sculpture—to that end, it must be also be mentioned that the Turkish Republic was very eagerly receptive towards this new, Western modern art. Belling's work, and those of his students, thus heralded a new wave of artistic expression in Turkey. Belling was catalytic in introducing both new styles and technicalities and methodologies to his students. Belling raised a whole new generation of Turkish sculptors—his students included Kamil Sonad²⁷¹, Şadi Çalık²⁷², Hüseyin Gezer²⁷³, İlhan Koman²⁷⁴, Hakkı Atamulu²⁷⁵,

Hindemith and fellow architect Clemens Holzmeister. He accepted the offer to work in Turkey, but upon his return to Germany, fell ill and died before he could emigrate. He was 66 years old.

²⁷¹ Kamil Sonad (1914 - ?) was a Turkish sculptor. Most of his work depicted female figures in classical forms. One of his statues was placed in the Gülhane garden in 1973, and was removed recently in 2016 (Ak, 2016).

²⁷² Mehmet Şadi Çalık (1917 – 1979), a prominent figure in modern Turkish sculpture, was a graduate of the State Academy of Fine Arts and a student of Belling. Çalık worked in Paris from 1950 to 1951, and after his return, became an assistant at the sculpture department at the academy. While he began as a follower of neoclassicism, Çalık's definitive style later became abstract minimalism, and was hailed for its simplicity. His works were made of a variety of materials including plaster, bronze, iron and wood. The Istanbul Art and Sculpture Museum houses many of his works, as do some collectors. Examples include the Atatürk monument at Middle East Technical University, bronze and marble reliefs made for the Istanbul Chamber of Commerce, sculptures at İzmir Kültür Park, and decorations at the Istanbul Municipality Building at Saraçhane (Çalık, 2004, p. 346).

²⁷³ Hüseyin Gezer (1920 – 2013) was a first-generation Turkish sculptor. Gezer's artistic talents were realized by his teachers at a young age, and he held his first exhibition at the Balıkesir Öğretmen Okulu (Teachers' School) when he was in tenth grade. After he finished his education, Gezer was drafted into the military, and while he applied to the State Academy of Fine Arts, it was denied as he had mandatory service pending. Gezer then pleaded with the Minister of Education, Hasan Ali Yücel, presenting him some of his work. Yücel then arranged for Gezer's service to be canceled, and Gezer entered the Academy, becoming a student of Belling and graduating at the top of his class in 1948. He received a scholarship from the French government, and moved to Paris where he enrolled at the Academie de Beaux-Arts and the Academié Julian. Gezer later testified that "Belling had already taught them what the French instructors wanted to teach". Following his return to Turkey, Gezer became an assistant at the State Academy of Fine Arts. By 1955, he became an assistant manager and teacher, by 1966 he was the president of the academy, and by 1969, a professor. While he testified to disliking administrative work, he took over the direction of the sculpture department in 1976, and held the position until 1987. Gezer was a founding member of the Turkish Sculptor's Association,

Hüseyin Anka Özkan²⁷⁶, Zerrin Bölükbaşı²⁷⁷, Turgut Pura²⁷⁸, Yavuz Görey²⁷⁹, and Teoman Germaner²⁸⁰ among others. Belling and his students enjoyed a wide sphere of influence, with

²⁷⁴ İlhan Koman (1921 – 1986) was a 1941 graduate of the painting department of the State Academy of Fine Arts. Koman's leanings towards copies of antique sculptures and ornaments shone through through his education, and on the suggestion of his professors, he continued his fine arts education by becoming a student of Rudolf Belling at the department of sculpture. After graduating from the academy with a second degree in sculpture, Koman went to France on a state scholarship, where he studied at the Academie Julian and the l'Ecole de Louvre, at the end of which he held his first installation in Paris. Like Gezer, Koman was also of the opinion that the classical teaching he received from Belling at the Academy was enough, and that his education at the Parisian academy only repeated it. Therefore, Koman's art developed with a love for the abstract. After his studies in Paris, Koman returned to Istanbul, and as mandated by the scholarship, he became an assistant at the academy. One of Koman's most prominent works are the reliefs on the east wing of the steps leading to the Anıtkabir in Ankara; they are an artistic depiction of the Battle of Sakarya, with a distinct Mesopotamian-Egyptian style, which Koman was influenced by during his time in Paris. His other prominent work is the Akdeniz Sculpture (Mediterranean Sculpture), a landmark at Levent, Istanbul, which depicts a "Vitruvian woman" in an abstract style, opening its arms: in the artist's own words, is "open, welcoming and friendly, like the Mediterranean sea itself". Koman moved to Sweden in 1958, where he became an instructor at the Stockholm University of the Arts. His abstract style there grew deeper, with focus on geometry (he attempted to create surfaces which included multiple golden ratios and pi) and moving installations, as well as diverse materials. In Sweden, Koman became the artist of a relief of the Swedish Coat of Arms, behind which he wrote, "*Hayatın bir cilvesi, sizin devletin alamet-i farikasını da bir kara kafalı yaptı.*" ("C'est la vie... a man with a head full of black hair made the trademark of your state.") Many of Koman's abstract works are displayed in Stockholm. He died there, at the age of 65, and his ashes were thrown into the Baltic Sea. A documentary on Koman was commissioned by Turkish Radio Television (Özlu, 2012).

²⁷⁵ Hakkı Atamulu (1912 – 2006) graduated from the State Academy of Fine Arts in 1938. Sent to Germany to continue his studies in the fine arts, Atamulu worked with Arno Brekker, a prominent Nazi artist. Atamulu returned to Turkey after the outbreak of World War II. His work in Turkey included the Atatürk and İnönü sculptures in Malatya, the *Gençlik Anıtı* (The Youth Monument) at Istanbul University, the statues of Atatürk and Damat İbrahim Pasha in Nevşehir, the *İlk Adım Anıtı* (First Step Monument) in Samsun, and the Atatürk sculpture and congress monument in Erzurum. Following a lengthy career, Atamulu retired to his hometown of Derinkuyu, where he later became mayor and devoted his time to transforming the small town into a place of art appreciation, establishing a culture centre that included a park, walking paths, sculptures, taverns, and an open theater. This centre also included a mosque that was built with a peculiarly modern triangular minaret—the locals dubbed it "the Devil's Minaret", and refused to use the mosque. Many of Atamulu's works remain in place (Kuzucular, Hakkı Atamulu, *Hayatı ve Heykelleri*, 2017).

²⁷⁶ Hüseyin Anka Özkan (1909 – 2001) was a Turkish sculptor. Educated in a school for teachers, Özkan drew the attention of early Education Minister Mustafa Necati Uğural, and was transferred to Istanbul where he then gained the opportunity to enroll at the State Academy of Fine Arts. A student of Belling's, Özkan worked freelance following his graduation, and focused on monumental sculptures, and drew influence from antique, classical Greek sculptures. Özkan's most prominent works are featured in Anıtkabir, Atatürk's Mausoleum. He has a matching pair of sculpture groups consisting of trios of men and women respectively, which symbolize the Turkish people in a specific modern-Hittite style. Özkan was also the sculptor of the *Aslanlı Yol* (Road with Lions) at the mausoleum, which are also Hittite-influenced depictions of lions, representing Anatolian roots. Other works by Özkan include a sculpture of Mithat Pasha in Ulus, a sculpture of Mimar Sinan in front of the Faculty of Language, History and Geography, and his more experimental, abstract work *Yankı* (Echo). Özkan was hailed a Turkish State Artist in 1991 (Kuzucular, 2017).

²⁷⁷ Zerrin Bölükbaşı (1919 – 2010) was one of Turkey's first female painters and sculptors, and the first one to engage in abstract art. Her art typically included distorted forms that nevertheless retained form even despite exaggerations, and include examples such as *Dansöz* (The Dancer) and *Arapbaşı* (Black Head). Bölükbaşı was also influential in organization and management of art; she was the manager of the Beyoğlu City Gallery and the founding president of the Turkish branch of the International Association of Women Artists. She was also known as a poet, and her various works are found in galleries in Turkey, New York, Paris and Mexico. Her *Figür* (Figure) remains at the Harbiye Orduevi (Ketenci, 1995).

²⁷⁸ Turgut Pura (1922 – 1979) was a Turkish painter and sculptor. A 1948 graduate of the academy, Pura's career suffered numerous setbacks before he could properly contribute to Turkish art: he suffered illnesses, could not find employment, and had financial troubles to the point that he made fishing his main profession. Working as a private art tutor on the side, and occasionally lecturing at the İzmir Education Institute, Pura's luck turned when he became the director of the İzmir State Art and Sculpture Gallery in 1963. The gallery flourished under Pura's

their work displayed publicly in gardens, parks, and installations. A famous work by Belling still in display is the statue of İsmet İnönü before the Veterinary Faculty of Ankara University (Ankara University Faculty of Veterinary Sciences, 2017). Another of Belling's works, a statue depicting İnönü mounted, was not as fortunate. This statue, which was completed in 1943, spent thirty-nine years in storage before being placed in Taşlık Park in 1982—and within that time period, it was moved from storeroom to storeroom, eventually being discovered damaged and headless. By then, it cost almost 14 million liras to repair the 10-ton, 5-meter statue (Çağlayan, 2015).²⁸¹ Belling was also a member of the Turkish government commission that designed Atatürk's mausoleum. In addition to his work at the State Academy of Fine Arts, Belling also lectured at the newly established Istanbul Technical University from 1949 onwards, teaching modeling to architecture students. Belling was then officially appointed to the architecture department at the technical university in 1952. He held this position until 1956.

When diplomatic relations between Turkey and Nazi Germany ceased in 1944, the German government demanded that Belling return to Germany. Belling refused—vehemently, if his testimony that he phrased his refusal “in the tradition of Götz von Berlichingen” is of any

management and became the home of exhibitions by many Turkish artists, and eventually became a museum of art and sculpture in 1973. Pura's works typically included subjects local to İzmir, such as nature and fishing, traditional issues such as bride kidnapping, local handcrafts, local dances, and tributes to Turkish folk artist Aşık Veysel. Turgut Pura Vakfı is a non-profit foundation that bears his name and focuses on art and sculpture (Pura, 2017).

²⁷⁹ Yavuz Görey (1912 – 1995) was a Turkish sculptor. Born the son of Ahmet Hulusi, a famous architect in Ottoman Egypt, Görey was educated in architecture in Belgium and later studied design at Lausanne. In 1941, he entered Belling's studio at the State Academy of Fine Arts. Görey was one of the Turkish forerunners of modern and abstract art. Görey was also one of Belling's academic assistants, and taught design and modeling at the Architecture Faculty of Istanbul Technical University, from 1958 to 1981, at which point he retired (Kuzucular, 2017).

²⁸⁰ Teoman Germaner (born 1934) is a Turkish sculptor. Germaner was a student of Belling as well as the Turkish sculptors Zühtü Müridoğlu and Ali Hadi Bara. A 1957 graduate of the State Academy of Fine Arts, Germaner was sent abroad to France on a scholarship received from the French government, and studied and worked at the Ecole des Beaux Arts in Paris until 1965. Following his return to Turkey, he became an assistant at the Mimar Sinan University department of sculpture, becoming an associate professor in 1970 and a professor by 1976, and worked there until 2001. Germaner's works were presented in over 20 national and international exhibitions, as well as 14 personal exhibitions; his works are commonly found displayed in İstanbul, Ankara and the İzmir State Art and Sculpture Museums. Germaner's unique style eschews monumentalism, and he works in smaller sized sculptures, commonly depicting fantastical animal figures, such as birds and snakes and mythological creatures. Germaner continues his work at his private studio, which is a part of the Istanbul Museum of Graphic Arts (IMOGA) (Kurun, 2015).

²⁸¹ The delay in the placement of the statue was undeniably political, and was a deliberate cause of its lengthy misfortune. Dalaman notes that one of the first policies enacted by the Democrat Party, who won the elections in 1950, was to outlaw the placement of statues depicting living politicians. This law implicitly targeted İnönü, then only a CHP representative (Dalaman, 1998, pp. 238-239).

indication (Şen F. , 2008, p. 149).²⁸² Belling remained in Turkey for twenty more years after the war, continuing his artistic and academic work. While still in Turkey, he received a German medal of merit, and became a member of the West Berlin Academy of Arts. Belling didn't return to his home country until 1966, by which point he was 80 years old. He passed away peacefully in 1972.

3.6.2 Conclusion

The practice of modern architecture in the newly established Republic of Turkey was symbolic of the new state's desire to reinvent itself in accordance with modern norms. The works of the German architects, refugee or invited, were as physical manifestations of the spirit of the new state. The establishment of Ankara as a new capital required that the region—which had, until then, remained in the background—be built almost from the ground up. The once-small city was to be transformed and become the new decision-making center of the Turkish Republic, and in so doing, it was also to represent the best qualities of the new modern life, serve as an example of the modern Turkish city, and become a role model for other cities in the republic (Tekeli, 2010).

The efforts of the refugee architects were pivotal in accomplishing the goal of invoking a new state both in body and spirit. A certain number of criticisms are made of the invitation of German architects in particular in the case of the 1933 University Reform, such as the fact that many of those invited were not academics by profession or particularly scholarly; in the case of architecture, it can be said that during the reform, practice took precedence over class-hall theory. It is also often criticized that the invited architects did not particularly adhere to a specific style and were haphazardly chosen to fulfill the dire need of constructing state buildings without much thought given to stylistic choices, but it can also be said that this allowed Turkey's newer generations of architects and artists to find styles of their own without being too influenced by a single, particularly strong *ecole*.

In response to these criticisms, however, the contributions of the refugee architects are real enough for anyone to see—literally, if one considers that they are actual buildings and works of art that remain to this day. The refugee architects working in Turkey introduced their modern methodology and contributed their technical expertise—transferring their technology,

²⁸² The reference here is to Goethe's play of the same name; where the titular character Götz responds to an offer of surrender with profanity, i.e. "kiss my behind". Known colloquially as the Swabian salute or the Götz quote, this quote prompted Mozart to write a canon inspired by it, titled similarly.

so to speak—but kept local elements intact, and so too did their students. As a result, the combination of technique with local style culminated in a unique architectural tradition and accomplished the goal of cultural technology transfer masterfully. For example, the Anıtkabir complex is said to be the ultimate monument of the Turkish architectural reform, and exemplifies the synthesis of modernity with tradition: its symmetrical, whole-stone architectural style is certainly reminiscent of the architectural adage that form follows function, while its more ornamental features, such as its statues, reliefs, and altogether workmanship are all Hittite, Anatolian, Seljuk or Ottoman in spirit and represent the country's roots. Altogether, it cannot be denied that the arts flourished following the arrival of refugee architects and artists into Turkey, allowing the country to renew itself physically while finding an artistic spirit all of its own.



3.6.3 Music

The study of music in Turkey has a long and proud history if its own traditional establishments are considered. Consider its location alone: as a crossroads of the old world, the geographical regions of Anatolia and Europe-Thrace were home to many diverse peoples and their cultures throughout history, and embedded in those cultures, the musical traditions of its peoples were equally diverse as well. It has been home to Byzantine music, later Seljuk music, then Ottoman music and even later westernized Turkish republican music. Influenced by many factors through the years, and ranging from a wide variety of musical types such as single instrument, multiple instruments, and so on. As it ties to the music of Turkey today, however, historians of music studying the traditions of the region typically categorize the major influences as being Pre-Islamic, Post-Islamic, and contemporary post-Republic Turkish Music (Körükçü, 2017). As it is today, modern Turkish music is almost entirely founded on the Westernization movements the Ottoman Empire and the Turkish republic went through.

In the early 19th century in the Ottoman Empire, the Tanzimat reforms, in their bid to Westernize and Europeanize the country, introduced many changes to the country's makeup, including the introduction of orchestral music to Ottoman cultural life. Formal teaching of music in the Western tradition began with the establishment of *Musika-ı Hümayun* (lit. The Sultan's Music) in 1831. As the literal translation of *Musika-ı Hümayun* may seem confusing: it should be clarified that it was essentially a music group belonging to the Sultan, performing at the Sultan's pleasure. *Musika-ı Hümayun* was a reformation of the traditional Ottoman marching band *Mehter*, which was a part of the army, and changed accordingly during the long-reaching military reforms of the Tanzimat period. The reformed band was meant to emulate the European style, and became an orchestra encompassing both new and old elements: within the *Musika-ı Hümayun* were a harmonic and philharmonic orchestra, a *fasıl* group and a *müezzina*, and they were capable of performing acts such as opera or operettes, theater, *orta oyunu*, acrobatics, and traditional Turkish shadow theater. Ultimately, it was the perfect combination, and according to Uçan, the *Musika-ı Hümayun* was successful in raising many musicians who could then carry over their artistic and musical knowledge to the Turkish Republic (Uçan, 1993, p. 121). Initially, the various institutions experimenting with orchestral music in the Ottoman Empire were centered around Istanbul, since the introduction of Western-style music into the empire was largely spearheaded by the sultans (and the aristocracy who surrounded them). Though it can be argued as to whether these new musical styles were mainly catered towards and enjoyed only by the elite, the activities of the artistic

and musical performance groups spread far and wide, especially in important Ottoman centers such as Bursa, İzmir, and Trabzon. As such, the new music gained traction, and began to institutionalize as the band traveled far and wide and introduced the Sultan's favorite pieces to far-off aristocracy. *Musika-ı Hümayun* was thus successful in that it continued practicing music, and spreading its students across the empire to present it, for well over a hundred years.

In the republican era in 1924, *Musika-ı Hümayun* was renamed *Riyaseti Cumhur Musiki Heyeti* (Presidency of the Republic Music Group) and moved Ankara from Istanbul. Its new name reflected the change in the regime as the new capital became its institutional center. Also similar to what happened in the Tanzimat period, the head of the state gave great personal support to the establishment of a new musical institution and the introduction of new musical styles to the country, though this time the reforms were more widespread, and aimed further. In the same year that the renamed *Riyaseti Cumhur Musiki Heyeti* was moved to Ankara, a music school named *Musiki Muallim Mektebi* (School of Music Teachers) was opened as part of the new education laws that were setting the scene for substantial education reform. In this, it must be stressed that *Muallim Mektebi* was not meant to perform music as the *Musiki Heyeti* did—it was meant to teach music itself, as well as educating those who would become music teachers. Seeking to reform the existing Turkish music by implementing international methodologies to its study and performance, the first things the *Muallim Mektebi* administration did was to send musically talented students abroad for European-style music education. Upon their return, the students were tasked with traveling throughout their homeland and using the western musical notation system to 'store' local melodies and tunes according to the new methodology. They were also responsible for publishing books on music theory. When such solid foundations in music education were achieved in the form of materials, equipment, and capable teachers, *Musiki Muallim Mektebi* then opened its doors to the public, acting similar to a public education center for music. All things considered, *Musiki Muallim Mektebi* thus became the educational foundation of music in Turkey. Its facilities did not end there, however, as music needs an audience: *Musiki Muallim Mektebi* also eventually became a performing center, and held open concerts held every Friday and at the end of every year. *Musiki Muallim Mektebi* continued teaching, and performing, until 1984.

It could be said that the *Musiki Muallim Mektebi* was not considered to be enough for the music reform, however. A congress was held in the Turkish Grand National Assembly in 1934 on music and the future of music in Turkey. In this congress, music education, musical

preservation and music law were considered (Turkish Grand National Assembly, 1934). Eventually, it was decided that a new establishment was necessary to determine the country's artistic and musical needs, and that the same establishment should then also serve to fulfill these needs as an educational institution for all music and performing arts. Pointing towards a restructuring of the existing foundations, the congress then deemed that *Musiki Muallim Mektebi* be turned into *Milli Musiki ve Temsil Akademisi* (National Music and Theater Academy) by merging with the *Riyaseti Cumhuriyet Filarmoni Orkestrası* (Presidency of the Republic Philharmonic Orchestra) and a new foundation called *Temsil Şubesi* (Theater Department). This culmination of Turkish musical powers aimed to perform national music with scientific methods, advance it and spread it, and educate expert artists in musical and performing arts (Çakar, 2015, p. 17). With these goals set in stone, the Turkish music reform was set in motion, and to this end, the expert aid of German musician Paul Hindemith was employed. All this led to the establishment of the biggest Turkish musical institution to date, Ankara State Conservatory, and also to the arrival of many refugee musicians, who set foundations and standards for music education in Turkey.

A total of twenty-one German or German-speaking musicians were employed at the Ankara State Conservatory. Regrettably, records on the activities of many of them are minimal. The most prominent refugee musicians at the Ankara State Conservatory were as follows:

ANKARA STATE CONSERVATORY		
REFUGEE ARTISTS		
NAME	FIELD	DURATION OF STAY
Paul Hindemith	Musical Pedagogy, Composition, Conduction	1935-1940
Ernst Praetorius	Musical Pedagogy, Conduction	1935-1946
Carl Ebert	Performing Arts	1933-1949
Licco Amar	Violin	1933-1937
Eduard Zuckmayer	Musical Pedagogy, Composition	1937-1951

Source: (Dölen, 2010a, p. 491)

It should be noted that the music reform envisioned in Turkey was no mere whim. If the Ankara urban plan made in 1928 by German expert Hermann Jansen is examined, for example, one can note the existence of a plan for an opera building. Here, it should be realized that at the time, opera was not a style familiar to the Turkish population—like many

other technologies imported from the West, it was strictly confined to the practices of elite minorities and therefore rare. Through this example, it can be argued that a reformation of musical tradition towards a Western European style was in the new republic's thoughts before the arrival of refugee scholars of music.

Paul Hindemith (1895 Hanau – 1963 Frankfurt am Main) was a German composer, conductor and music educator, with a performing specialty in the viola and the violin. Hailing from a working-class family of merchants and craftsmen, Hindemith started taking violin lessons in elementary school along with his younger brother Rudolf. On the suggestion of his violin teacher, Hindemith was later formally educated in music in the Hoch Conservatory in Frankfurt am Main, where he studied the violin, conducting, and composing. Hindemith's music career began in earnest when he became the concertmaster²⁸³ of the Neues Theater in Frankfurt am Main in 1913. He later became the concertmaster of the Frankfurt Opera in 1915, and held this title until 1923. Even if he was a musician and an artist, however, Hindemith had to serve in World War I. In 1918, he was sent to the Infantry Regiment in Alsace as a military musician, and was dismissed later that year when the war ended. Back in Frankfurt am Main, Hindemith joined the Amar Quartet in 1921 alongside Licco Amar (who would follow him to Turkey), Walter Caspar, and his brother Rudolf Hindemith. By 1922, Hindemith had become a widely acclaimed musician, and was touring Europe extensively. He also worked formally as a music educator, becoming a Professor of Composition at the Berlin Academy of Music in 1927.

In the height of his career, Hindemith was a prominent German artist, internationally renowned for his expertise and creativity. He was capable of playing every instrument present in his orchestra, and his compositions were often hailed as technical masterpieces, with influences from a variety of musical traditions. Hindemith was trained and specialized in chamber music, which he explored throughout his early career. Later, he experimented with a variety of forms, writing for unprecedented instrument groups, and in unusual styles that are hard to pin down in one specific style even today (Pimentel, 2003). Hindemith also wrote

²⁸³ After the conductor or the director, a concertmaster (from the German *Konzertmeister*) is the second-most significant person in an orchestra, band or other such musical ensemble. The term concertmeister, as it is used in orchestras, typically refers to the head of the violin section. A common translation of the term into Turkish is therefore *baş kemancı* (lit. head violinist). The usage of the word *konzertmeister*, however, is widespread in Turkish music academia, which is probably a legacy of the German *ecole* in the Ankara State Conservatory.

operas prolifically as his chosen method of expression, and was considered Brechtian in his approach towards the duty of the artist to art itself (Reisman, 2006, pp. 104-105).

Beginning with the rise of National Socialism in Germany, Hindemith became targeted for a number of peculiar reasons, and he seemed to fall in and out of favor with the reigning government. Unlike the usual and unfortunate subjects, Hindemith was not of Jewish heritage, and while his wife had some Jewish ancestry she was hardly cause for termination at the time. Due to Hindemith's national and international successes he was even hailed by some among the Nazi Party as a model German composer, while others in the party deemed Hindemith's music "degenerate"²⁸⁴ and "Jewish-connected". Hindemith's work was ideologically suspect, deemed "culturally Bolshevik" and thus banned in Nazi Germany (Yavuz E. D., Paul Hindemith ve Türkiye'de Müzik Yaşamının Yapılanması (Paul Hindemith and the Structuring of Musical Life in Turkey), 2013, p. 33). When the Berlin Philharmonic Orchestra presented Hindemith's new (and then unfinished) orchestral work *Symphony: Mathis der Maler* (Matthias the Painter), a work that had been banned by the Nazi party for underlining the theme that it was an artist's duty to pursue his art divorced from politics, there was a quick and sudden backlash. Hindemith was chided, but he wasn't alone in this: the conductor of the orchestra, the high-profile Wilhelm Furtwängler,²⁸⁵ also came under fire by the Nazi party. Furtwängler defended Hindemith in an article he wrote in the *Deutsche Allgemeine Zeitung*, as he had defended free art (including free art that was created by Jews) before, and the situation escalated to the point that Hindemith resigned from his position at the Berlin

²⁸⁴ This was quite possibly due to Hindemith's earlier works, which gained him some notoriety for being sexually charged. The opera *Sancta Susanna*, which Hindemith wrote when he was twenty-four, for example, is the most notorious for "dealing... with the sexual frustration and fantasies of a nun" (The Opera Platform, 2017). Hindemith's opera was chastised for being perverse and immoral to the point that he initially couldn't find anyone to direct it, and even the director that directed it found it obscene. Even so, the opera was lauded for its technical brilliance.

²⁸⁵ Wilhelm Furtwängler (1886 – 1956) was a German conductor and composer. He was the first person considered by Turkish authorities to lead Turkey's musical reform, though he proved to be unavailable. Furtwängler was considered to be among the greatest conductors of the 20th century and a was very respected icon in Germany. He was, also, a controversial figure in that he never left Germany despite not being an adherent of the Reich. In open opposition to party policies such as the expulsion of Jewish artists, and with easy access to high-ranking Nazi officials, Furtwängler is alleged to have attempted to persuade Hitler himself that antisemitic policies were damaging Germany's cultural life. When his efforts failed and the Hindemith case caused him to resign from all positions, Furtwängler decided to leave Germany. He was prevented from doing so by the Nazis, however, and mostly due to the efforts of Propaganda Minister Joseph Goebbels, who saw the benefit in keeping him in the country. The iconic Furtwängler was kept on a tight leash, with the image of his handshake with Hitler distributed heavily across Germany, though he would openly refuse to give Hitler the Hitler salute, avoided him regularly even when asked to perform at his birthday parties, and remained a reluctant and resistant figure throughout his stay in Germany even through the war years. Furtwängler fled to Switzerland in 1945, and was subject to denazification trials, in which he was charged with holding two Nazi-themed concerts. A documentary on Furtwängler's life and work is available in (Furtwängler, 1968). The movie *Taking Sides* is based on Furtwängler's life and is in turn based on Ronald Harwood's play of the same name (Szabó, 2001) (Harwood, 1995).

University of the Arts, while Furtwängler also resigned from his many official duties. The Nazi party's open hatred towards the two musicians was clear, and could be easily exemplified in the way Goebbels called Hindemith an "atonal noisemaker", while Hitler and Himmler openly wanted to send Furtwängler to a concentration camp²⁸⁶ (Reisman, 2006, p. 105).

It would not be too unfair to claim that Hindemith's work in Turkey was less complicated than the situation in Germany. It was difficult for the Turkish government to find and procure his aid for the education reform, however. Hindemith was unique in that he was not contacted by the Emergency Committee for German Scholars Abroad or suggested to Turkish officials by fellow refugees. Cevat Dursunoğlu, an official from the Turkish education ministry, who was sent to Germany in a semi-diplomatic mission to find Western educators that would be beneficial to Turkey's education reform—in this case music education reform—was responsible for contacting Hindemith. According to Dursunoğlu's own testimony, he had long been dismayed in his quest to find music educators as the German officials he spoke with only offered him names of "second-rate" musicians (Yavuz E. D., Paul Hindemith ve Türkiye'de Müzik Yaşamının Yapılanması (Paul Hindemith and the Structuring of Musical Life in Turkey), 2013, p. 28). Even after Dursunoğlu found out Hindemith's name—from Furtwängler, incidentally—tracking him down proved difficult. Like Furtwängler himself, Hindemith was also trying to keep a low profile, and no one wanted to tell Dursunoğlu where he was for fear that he'd put Hindemith in danger. After a lot of effort, Dursunoğlu managed to find and convince Hindemith to help Turkey's young republic in its music reform. Hindemith would be employed as an official foreign expert for the Ministry of Education, examine the situation regarding music life in Turkey, aid the reorganization and structuring of Turkish music institutions, set the foundations of the conservatory, and provide detailed reports for the Ministry. With these goals set, Hindemith arrived in Ankara in 1935 (alongside the fellow experts Hans Pölzig²⁸⁷ and Clemens Holzmeister).

It should be mentioned that Hindemith's work in Turkey was unlike that of many other refugees because he could not technically be classified as a refugee. Unlike the others,

²⁸⁶ In the words of Friedelind Wagner (Richard Wagner's granddaughter), on Furtwängler's denazification trial: "I remember Hitler turning to Furtwängler and telling him that he would have to allow himself to be used by the party for propaganda purposes (...) and I remember Furtwängler refusing. Hitler got angry and told Furtwängler that in that case there would be a concentration camp ready for him. Furtwängler was silent for a moment and then said: 'In that case, Herr Reichschancellor, I will be in very good company.'" (The New York Times, 1946)

²⁸⁷ Hans Pölzig (1869 – 1936) was a German architect. A non-émigré, he was contacted by the Turkish government for his advice and expertise regarding architecture and was invited to Turkey as a foreign expert. He arrived in Ankara only once in 1935 and passed away shortly after his return to Germany.

Hindemith operated more like a visiting professor, arriving in Turkey for months at a time, conducting his research and delivering the developed report towards the end of his trips. Hindemith made four such trips, and his reports were collectively titled *Vorschläge für den Aufbau des türkischen Musiklebens* (Suggestions for the Structuring of the Turkish Musical Life). The reports were translated by Cevad Memduh Altar from the Ministry of Education, who worked alongside Hindemith in these reformist endeavors²⁸⁸ and were collectively published in Turkish the 50th anniversary of his passing (Kahramankaptan, 2013).²⁸⁹

Hindemith made his first research trip in Turkey in April 1935, staying until the end of May, and was initially concerned with observation and gathering information regarding the state of music institutions and their situations in Turkey. After the organizers at the *Musiki Muallim Mektebi* presented him with demonstrations of alla turca and folk music, the results of Hindemith's early observations were related by Dursunoğlu as follows:

“I have listened to every variation of your music. Your master musicians in the alla Turca style, *Sanat Musikisi* (Classical Turkish Music) have all come and gone. This way of art has lost its creativity because it remains in a closed environment—it won't evolve, no matter what you do, it will only repeat itself. I suggest that you therefore preserve it as a historical legacy, like we do with our music before Bach. You would conduct it on special occasions, with the instruments that were used in its time, as an artifact loyal to its true form. I think your true treasure lies in the music you call *Halk Musikisi* (Folk music). It has a rare richness that few nations can boast to having. It is as diverse as your climate, among them are polyphonics. Your future composers would be able to take advantage of the motifs used in folk songs and folk music... don't forget that many great Western composers went through this phase as well.”

²⁸⁸ Cevad Memduh Altar (1902 – 1995) was a Turkish music historian, educator and administrator. After completing his primary education in Istanbul, Altar was sent abroad to Germany to study at the Leipzig State Conservatory, focusing on music theory, art history, violin and the viola. Upon his return to Turkey in 1927, he became a proficient music educator. Altar taught a great variety of subjects including music theory, art, music and opera history, aesthetics, and art philosophy at almost all of Turkey's new music institutions, including Musiki Muallim Mektebi, Ankara Gazi Eğitim Enstitüsü, Ankara Kız Teknik Yüksek Öğretmen Okulu, Ankara State Conservatory, and Mimar Sinan Fine Arts University State Conservatory. Additionally, he was employed by the Ministry of Education, the Directorate of Press and Information, the Directorate of State Theaters, the Directorate of Fine Arts, and Turkish Radio Television (TRT). Altar was a founding member of the UNESCO Turkish National Commission and was a member of the International Association of Art Critics (AICA). Altar was also awarded the title of Officer d'Académie in France and won the Schiller Medal in Germany, as well as nationally with the Honor medal of the Seveda-Cenap And Music Foundation. In 1988, Mimar Sinan University declared him an honorary professor. Altar was a prolific academic active throughout 1930 to 1985, and is credited with dozens of publications including translations, papers, books, conference proceedings and journals; examples can be his four-volume series *Opera Tarihi* (History of Opera), *Goethe ve Sanatı* (Goethe and His Art), and *Sanat Yolculukları* (Artistic Voyages). He was also very active in radio and television, and ran a program titled *Açıklamalı Müzik* (Music Interpreted) in the Ankara Radio from 1939 to 1950. Altar's focus as a musicologist was on history of opera, opera in Turkey, art philosophy, music aesthetics and Bela Bartok. A complete archive of Altar's his life, works, and bibliography is available online and was edited by his daughter İnci Kut, who is a linguist, translator, and writer (Kut, 2011).

²⁸⁹ According to Dieter Rexroth, Hindemith's various suggestions for musical life weren't completely specific to Turkey but also to Germany as well. Indeed, Hindemith's opinions regarding musical pedagogy, theory and culture were equally valuable to any community (Altar & Rexroth, 25-29 April 1983).

(Yavuz E. D., Paul Hindemith ve Türkiye'de Müzik Yaşamının Yapılanması (Paul Hindemith and the Structuring of Musical Life in Turkey), 2013, p. 35) (Translation mine.)

Something that may also be of note in Hindemith's first trip to Turkey was that it coincided with the arrival of a group of artists from Soviet Russia. This group included orchestra chiefs, singers, violinists and dancers, and was sent officially by the Soviet government to Turkey as what could be considered cultural envoys. In a letter written to a colleague in 1935, Hindemith lamented:

“The Russian government (...) sent a group that can conquer all hearts, supported by their government and embassy, all too capable of winning this pitched battle. And I sit here all alone with no support and beat my chest. (...) If Furtwängler, Kulenkampff and a few good people were here, we would have won a victory the results of which we could feel for ten years. (...) I'm satisfied with my own work, but the fact remains: I am abandoned.” (Yavuz E. D., 2013, p. 35)

From this quote, it is easy to ascertain that at the time, Ankara had become a cultural battleground in which a variety of musical styles from both Western and Eastern Europe were vying for dominance. Having made itself incredibly open to cultural exchange in its quest for reforming its musical style, Turkey was receptive to cultural influence, which in Hindemith's probable opinion, should have been seen as an opportunity.

Hindemith's second trip to Turkey involved him being appointed as the group chief at the Presidential Symphonic Orchestra. He was then also responsible for finding the musicians that would be employed at the new conservatory (Ankara State Conservatory), procuring the equipment that would be necessary for both the school and the orchestra, and altogether ensuring the requirements of the foundation and establishment of the conservatory. When Hindemith succeeded at these tasks, the Turkish government then requested that Hindemith make his stay in Turkey permanent, which to the Turkish government's disappointment was met with Hindemith's refusal (likely because things were not progressing as fast in Turkey as he would have liked). Hindemith seemed instead to be complacent with the fact that he had negotiated the arrivals of Ernst Praetorius, Carl Ebert, and Eduard Zuckmayer in Turkey.

Aside from his work on the conservatory, a particular contribution by Hindemith to Turkey's musical life was his *Koro Şarkıları Kitabı* (Book of Choir Songs). As a proponent of the idea that new Turkish music should invent itself on the foundation of its folk songs, Hindemith aimed to introduce orchestral music to a community that was otherwise foreign to it by mixing orchestral structure with people's participation. This experimental application, he

figured, would pave the road for the creation of the desired musical style without endangering the traditional forms. Additionally, the establishment of people's choirs aimed to attract community participation, to instill the idea that music was created and molded by the people—Hindemith's notes clearly attest to this fact as he mentions that the successes of musical life in Germany depend on active community participation from all societal classes (Yavuz E. D., *Paul Hindemith ve Türkiye'de Müzik Yaşamının Yapılanması* (Paul Hindemith and the Structuring of Musical Life in Turkey), 2013, p. 40). Another one of Hindemith's contributions was his work on establishing a national gramophone record archive.

By his third and fourth trips, it was clear that Hindemith was becoming disillusioned with the work in Turkey. In his third trip, Hindemith felt that the Ankara State Conservatory was opened prematurely, and refused to attend its opening after his concerns regarding the matter went ignored. Additionally, tensions between the Turkish musicians and the German musicians at the conservatory and orchestra were rising. His fourth trip, and the report following it, addressed these tensions, and reiterated some of his earlier points. When Hindemith's *Aufbau des türkischen Musiklebens* was completed on his final trip, however, Hindemith had provided the Turkish musical community with road markers that could be used by them to find their own musical path. An important aspect of Hindemith's expert suggestions for Turkey was that he never gave a clear 'recipe' of what Turkish music should be—he detested the idea of 'importing' a musical style—but left it to the experiences or Turkish composers within the framework of various technical rules and regulations.

Hindemith's work with Turkey's music education reform was finished in 1939. Ernst Praetorius, who—more or less—succeeded him at the State Conservatory, attempted to contact and persuade him to come to Turkey, even after Hindemith had left Germany for the United States. Hindemith then worked at Yale and Harvard University, converting to American citizenship in 1946. He later returned to Europe in 1953, and lectured at the University of Zurich for a time before passing away in 1963.

Ernst Praetorius (1880 Berlin – 1946 Ankara) was a German historian of music, lecturer, conductor and music director. Born in Berlin as the son of the Orientalist scholar, the semitist and Hebraist Franz Praetorius, Ernst Praetorius started an early education in music at the age of seven, and adopted a scholarly outlook towards his passion. Drawn towards theoretical and historical studies of the field, Praetorius studied musicology and music history at the

University of Berlin, and received a doctorate after publishing a thesis titled *Die Mensuraltheorie des Franchinus Gaffurius* (The Masculine Theory of Franchinus Gaffurinus). Following his promotion, from 1906 to 1909, Praetorius worked as the director of a museum of historic music instruments in Cologne, which would later be moved to Leipzig and eventually become the foundation of the Museum of Musical Instruments of Leipzig University. Then, Praetorius decided to go back to performing, and worked at a variety of operas and theaters from 1909 to 1924, traveling actively throughout Germany. His places of work included: the Cologne Opera, *Schauspielhaus* Bochum (Theatre Bochum), the *Neues Theater* at Leipzig, Stadttheater Breslau (City Theater of Breslau), Theater Lübeck, Theater des Westens, and the Berlin State Opera, in order. Eventually, Praetorius became so proficient and well-known that he became the general music director of the German National Theatre at Weimar. According to Reisman, he was even about to become the director of the Berlin Philharmonic Orchestra before Nazi disapproval denied it to him (Reisman, 2006, p. 107).

Starting in 1928, Praetorius became a target of rising national socialism and its cultural constructions as to what sort of music should be acceptable and what shouldn't. When Praetorius appeared on a showing of Ernst Klenek's *Jonny spielt auf* (Jonny Plays), a 'jazz opera' about the life of a jazz musician, the Nazi paper *der Nationalsozialist* wrote a hit article on Praetorius and expressed a strict distaste for the contemporary music he admired. In 1930, the NSDAP tried to get him removed from the National Theater, and while the pressure was overruled by a council decision, ultimately Praetorius' dismissal seemed only stalled. Praetorius' presentation of the controversial Hindemith opera *Cardillac* seemed to be the last straw, and following the *Machtergreifung* Praetorius was immediately removed from his position.²⁹⁰ In addition to his unacceptable music, Praetorius was also married to a Jewish woman, the pedagogue Käte Ruhemann—whom he even de jure divorced in 1935 due to political pressure, though they still lived together. Praetorius could never find work in Germany again. To describe his dismal situation, he is even quoted as saying:

“Visiting conductors have a place to work in Berlin's opera houses all the time, but there's no chance for me, 'unfortunately'. It seems I'll either starve alongside my eight-person family or stick the coal gas pipe in my mouth.” (Zimmermann-Kalyoncu, 1985, p. 238)

²⁹⁰ Widmann notes that he resigned, while other sources note that he was forcibly removed (Widmann, 1999, p. 230) (Reisman, 2006, p. 107).

Unemployed and left with no options, Ernst Praetorius even worked as a taxi driver in Berlin for two years before Hindemith contacted him and invited him to Turkey.

Praetorius arrived in Turkey in 1935, and was the first refugee musician to arrive in Turkey through Hindemith's negotiations. And as Hindemith set the framework of the Turkish musical reform, Praetorius arrived to organize it and make sure it all fell into place—the two contacted each other regularly, even when Hindemith was abroad, and judging by the detailed information Hindemith was receiving in regards to the situation on the Turkish front, it could be said that Praetorius thus became Hindemith's eyes and ears in Turkey (Yavuz E. D., 2010). Praetorius' contract with the Turkish government was signed on September 27, 1935. Following this, on September 28, he was appointed the conductor of the newly established *Riyaset-i Cumhuriyet Senfoni Orkestrası* (Presidency of the Republic Symphony Orchestra)—and was immediately asked to conduct the presentations at the national celebration, without getting to practice even once (Hirsch E. E., 1997, p. 349). Praetorius' initial focus became the Presidency of the Republic Symphonic Orchestra then, and his given goal was to elevate the Presidency of the Republic Symphony Orchestra to international standards and ensure their technical expertise. Additionally, he was also employed at the *Musiki Muallim Mektebi*. As an early arrival, however, Praetorius had a problem: many of the musicians that Hindemith envisioned would come to Turkey were not there yet, and as a result, work at the school was proceeding very slowly. This was all in addition to Praetorius' duties with the orchestra—within the year he arrived, Praetorius was managing every activity of the orchestra, teaching its musicians, teaching specific instruments at *Musiki Muallim Mektebi* while also simultaneously supervising the teaching of other instruments, and he was reporting on the situation in Turkey to Hindemith. It has to be added that he was not reporting to Hindemith alone: apparently, Atatürk had also once requested that Praetorius join him at his dinner table so that he could ask him questions on musical matters at eleven o'clock at night (Hirsch E. E., 1997, p. 349). When the hardworking Praetorius' contract was extended for three years in 1936, he had to contend with the rising tensions between Turkish and German musicians at the orchestra and school, and in 1937, he also had to lend a helping hand to financial matters at these same institutions. Later in 1938, when Hindemith began signaling that he wanted to end his work in Turkey, Praetorius appealed to Turkish authorities that Hindemith should instead be invited to Turkey, but was brushed off with financial excuses or told that such a thing would only be possible the 'next year'. Praetorius still prevailed amidst this chaos, and was widely renowned in Turkey for his concerts with the orchestra and fellow refugee

musicians who arrived later, such as Carl Ebert²⁹¹, Licco Amar, and Eduard Zuckmayer. The various concerts Praetorius held were regarded as the demonstrations of the efforts started in Turkish music reform. Praetorius also stayed true to idea that new Turkish music should retain its identity while also adopting influences from modern styles; he integrated both Turkish culture and classical European music into his performances. Modern Turkish composer Ulvi Cemal Erkin's²⁹² pieces were among Praetorius' favorites to conduct, perhaps for the reason that they presented Turkish elements in orchestral music very well.

The Nazi party attempted to denaturalize Praetorius in 1940, on the grounds that he was still living with his Jewish wife and was active in aiding Jews abroad. As Praetorius still held his reputation as a musician, however, this did not come to pass; and when it did not, another problem reared its head in 1944 when Turkey declared war on Nazi Germany. As he remained a German citizen, Praetorius was set to be interned in Kırşehir among the other German 'enemy' nationals. Due to the intervention of president İsmet İnönü (who is said to never have missed one of Praetorius' concerts), however, this was avoided.

Praetorius died in 1946, succumbing to a four-day battle with a sudden disease. He was buried in Cebeci Asri Cemetery, in the Protestant ward. Ernst Hirsch, who was a guest at Praetorius' home for a year and a half, laments that Praetorius' funeral had to be carried out "without music." (Hirsch E. E., 1997, p. 346)

²⁹¹ Praetorius and Ebert had their differences. They co-operated the theater and opera department at the State Conservatory and Praetorius was always suspicious of Ebert's teaching methods and doubted his artistic abilities.

²⁹² Ulvi Cemal Erkin (1906 – 1972) was a Turkish composer and music educator, and a member of the Turkish Five, the first generation of Turkish musicians to pioneer western classical music in Turkey. Erkin was an orchestra chief, piano teacher and an administrative official in the Turkish republic's music reform. Born the son of a high-ranking diplomat, Erkin took piano lessons from a French teacher named Mercenier, graduated from Galatasary High school, and was sent to Paris in 1925 on a state scholarship as one of the promising students who would lead Turkey's music reform. Upon graduating from the Paris Conservatory and the Ecole Normale de Musique, Erkin returned to Turkey five years later, and became a teacher at the *Musiki Muallim Mektebi*. Upon the establishment of Ankara State Conservatory in 1936, Erkin became the chief pianist, and led the orchestra from 1949 to 1951. Erkin took part in the music reform's efforts to travel throughout the country and classify and archive samples of Turkish folk music—in order to incorporate them into western-style compositions, achieving the synthesis of Turkish classical music that was western but still local in spirit. Erkin's *Köçekçe* suite, for example, includes samples from traditional *Köçek* (male dancer) jigs. Among Erkin's other famous works are his Piano Concerto, Two Dances, and Symphonies No. 1 and 2. As a music educator, Erkin is also credited as composing the "Sinfonietta" in order to help his instrumentalist students overcome certain rhythmic and modal difficulties that were present in western classical music but foreign to Turkish music. Erkin also translated the operas *Carmen*, *Aida*, and *Fidelio* into Turkish alongside fellow Turkish Five member Necil Kazım Akses. Ulvi Cemal Erkin's works were incredibly influential in arousing the Turkish populace's enthusiasm for western classical music; his works were inherently traditional in nature despite its utilization of an ultimately foreign system. Erkin's music was international and was often performed abroad—it was often conducted by Praetorius as well. Erkin was heralded a state artist in 1971, held two French *legion d'honneur* medals, an Italian decoration, and an honor award from the Sevda-Cenap And Music Foundation, which he received for "his incredible contributions of inspiration towards the creation of modern Turkish music, the exemplary works he left for future generations, and his peerless students" (Çalgan, 2017).

Carl Ebert (1887 Berlin – 1980 Santa Monica) was a German actor and stage director. Adopted by the Ebert family in Berlin, Carl Ebert was initially receiving education to become a banker before receiving a scholarship from Berlin School of Dramatic Art and studying under the prominent Austrian director Max Reinhardt. Changing his path, Ebert then pursued drama and continued a career in theatre, working as an actor in a variety of theater shows as well as in film and television. World War I briefly interrupted Ebert's career, and he was drafted for military service before being released to public life due to a request by the Frankfurt Opera. Ebert instead became a leading actor for the Frankfurt Opera and remained in Frankfurt for seven years, ultimately cofounding the Frankfurt Drama College. In 1922, he returned to Berlin, and joined the Berlin State Drama Theatre. By this time, Ebert was in the limelight of the German theater scene as a leading actor. Additionally, he took an educational role, and was appointed as a director and professor at the *Hochschule für Musik* (Music College) in Berlin. Later, Ebert moved to Darmstadt, where he became the general director of the Darmstadt State Theatre, and began to focus his attentions on opera. At the height of his career, Ebert's base of operation was his native Berlin and the Deutsche Oper Berlin.

Following the *Machtergreifung* in 1933, Nazi sentiment towards the popular Ebert seemed mixed. He was treated differently by various factions within the Nazi party, much like Hindemith was. While some among Nazi circles defamed him as a “music Bolshevik”, Hermann Göring offered Ebert the direction of all opera houses in Berlin. However, Ebert was strictly opposed to National Socialism, and his response was clear and quick. Instead of taking the Nazis up on their offer, Ebert chose to leave Germany instead, and moved to Switzerland, later moving to England, and eventually got a job in Argentina to lead the German Opera in Buenos Aires. It was in 1935 when Hindemith reached Ebert with a proposal to work in Turkey.

Ebert's contract with the Turkish government was, at first, on a temporary basis. He operated much like Hindemith initially, making short research trips to Turkey to serve as a foreign expert rather than a full-fledged refugee living in Turkey. Ebert's first trip occurred in early 1936, and mostly served as a way for him to examine the situation in Turkey first, without diving headfirst into the desired reform. Ebert collected information, learning the various theater performances in Turkish art and familiarizing himself with the development of the Turkish theater. He then identified immediate problems, and defined the steps to take.

Meanwhile, the Turkish Ministry of Culture also tasked Ebert, Hindemith, and the architects Jansen and Poelzig with finding a spot in Ankara that would be ideal for the placement of an opera house (Widmann, 1999, p. 225). Later that same year, Ebert made a trip to Turkey again to join the opening of the State Conservatory. Ebert then returned to non-German Europe, and then moved to Buenos Aires, but he was still visiting Turkey frequently, with at least three more trips between 1936 and 1939. When World War II broke out in earnest in 1939, Turkish Minister of Culture Hasan Ali Yücel made the offer that Ebert make his stay in Turkey permanent. Ebert accepted this offer, and moved to Ankara, where he would spend the next nine years.

True to the undisruptive philosophy of cultural transfer that Hindemith suggested, the approach Ebert adopted in his teaching of theater and opera was respectful of indigenous norms while introducing new methods and techniques. According to Altar, Ebert's teaching involved the use of common techniques from modern science and were used alongside a foundation of the existing traditions (Altar, Cart Ebert'in Ardından... (After Carl Ebert), 1980). Students from the State Academy's Vocal Performance and Theater departments were expected to be capable of performing Turkish-language adaptations of classical Western theater within a couple of years. When word of this reached the Turkish president's ear, the then-Minister of Education Saffet Arıkan related his question to Ebert, asking his opinion as to when "(their) children... would be capable of presenting an entire opera, in Turkish, from start to finish". Ebert replied that it would take five years, perhaps giving his students some leeway in order to allow them to mature. Even so, presentations of various theater and opera pieces began within three years of the State Academy's establishment. The first opera staged in Turkish by academy students was the comic-opera *Bastien und Bastienne* in 1939. As *Bastien and Bastienne* is a very early work of Mozart's, the selection could even be considered symbolic of the youngness of Turkish opera. Other plays followed this presentation, including Molière's *Les Précieuses ridicules* (The Affected Ladies) and Maeterlinck's *Intérieur* (Interior). Turkish-language opera was first staged in 1940, and was an adaptation of Puccini's *Madame Butterfly*, and was later followed by a staging of *Tosca*. The performances garnered significant media attention at the time.

Altar mentions that Ebert was a firm believer in the fact that, in order to establish a State Theater and Opera based on national culture, it was important to familiarize oneself with and introduce to others strong examples drawn from internationally acclaimed classical literature (Altar, Cart Ebert'in Ardından... (After Carl Ebert), 1980). The practice of this resulted first in

the establishment of a translated—and where possible, adapted—repertoire, which in turn would inspire the production of national works. Modern national Turkish plays, operas, and ballets took this inspiration from the State Academy's early works, and Carl Ebert's efforts in preparing, training, and directing these performances laid out the foundations for the production of new art. On the stage, the music reform's dreams became a reality as the State Academy trained composers, musicians, singers, and ballet dancers.

In addition to his work at the Academy, and theater and opera, Ebert was employed by the Ministry of Culture as an advisor throughout his stay in Turkey.

Ebert left Turkey in 1945 when his contract was not renewed. He moved to London taking up a long-standing offer to direct and organize the yearly Mozart Festivals at Glyndebourne. The reasons behind why his contract wasn't renewed aren't entirely clear, but can be assumed to have been caused by tensions between German and Turkish scholars and politics. In 1952, the new Minister of Education tasked Ebert's longtime colleague and friend Altar to go to England and find Ebert, in order to relate apologies on behalf of the government and convince him to come back to Turkey. Such a thing was impossible, however, as by that time Ebert had returned to post-war (and post-Nazi) Germany and taken over the direction of the Berlin State Opera. He instead agreed to visit Turkey on short trips to inspect the state of the State Academy, State Theaters and Opera, taking on his previous role once again. When he arrived in Turkey in 1952, he delivered his expert opinion and report to the Ministry, and also directed a Turkish performance of *A Midsummer Night's Dream*, which he noted was "the fondest memory of his life". He visited again in 1958, shortly after his 70th birthday, and delivered another report, keeping tabs on the state of Turkish theater and opera well into what for most people would have been retirement age. When Atatürk Kültür Merkezi (Atatürk Cultural Centre) was opened in 1969 in Istanbul, the 82-year old Ebert arrived from Los Angeles to attend, and continued to keep contact with his colleagues for many years hence. Ebert passed away peacefully at the age of 93 in his Santa Monica retirement home.

Licco Amar (1894 Budapest – 1959 Freiburg im Breisgau) was a Hungarian violinist. Born to a family with roots in Macedonia, Amar began learning the violin at a young age and pursued a formal education in music at the Franz Liszt Music Academy in Budapest, later moving to Germany to attend the Berlin University of the Arts. Amar settled in Germany, and was the concertmaster of the Berlin Philharmonic Orchestra from 1916 to 1920 before doing the same

with the State Theater of Mannheim from 1920 to 1923. Around this time, he also founded the Amar Quartet in 1922, where he played alongside Paul Hindemith, Rudolf Hindemith, Maurits Frank and Walter Kaspar. Amar's acquaintance and longtime friendship with Paul Hindemith would get him invited to Ankara.

Amar's successful career in Germany ended with the *Machtergreifung*. Amar was Jewish, and this meant that he could never find work in Germany again after 1933. Within the year, Amar emigrated to France. An invitation from Hindemith to join him in Ankara reached him in 1934, and Amar moved to Turkey in the same year.

In Turkey, Amar initially moved to Istanbul, where he became a violin teacher. Later in 1936, when the State Conservatory opened, Amar moved to Ankara, and became responsible for the establishment of the Department of String Instruments within the conservatory. According to Reisman, Amar came to be regarded as one of the most famous refugee violinists; Neumark testifies that Amar had an incredible repertoire and was a follower of modern music (much like his other refugee counterparts at the Conservatory, since their dalliances with modern music put them into disfavor with Nazi authorities without them being Jewish or otherwise politically suspect at all). Additionally, Amar was lauded as a brilliant teacher, who educated internationally renowned Turkish artists such as Edip Günay,²⁹³ Ayla Erduran²⁹⁴ and Suna Kan²⁹⁵ (Jackson, 2013, p. 74). Amar continued to educate Turkish violinists for twenty years

²⁹³ Edip Günay (1931 – 2010) was a Turkish musicologist and educator of music. Educated in the violin at the Ankara Gazi Educational Faculty's department of music, Günay became an assistant at the same department after his graduation, and was eventually sent to Germany on a state scholarship to study orchestral music. When he returned, he enrolled in Hacettepe University, and earned a doctorate with a thesis on the effects of background music in human workspaces. Günay became a prominent music educator as well as a music sociologist, becoming an associate professor in 1988 and a professor in 1995. Günay worked at a variety of Turkish music education institutions including Dokuz Eylül University and Marmara University. He was credited with many lectures, conferences, and seminars on the subject of research, musicology, and music psychology; his publications included the eleven-volume book "Keman" (Violin), as well as many papers and published articles (Cumhuriyet, 2010).

²⁹⁴ Ayla Erduran (born 1934) is a Turkish violinist. Erduran began her career as a violinist at the age of ten, and traveled the world performing the violin at countless concerts and tours. She was a graduate of the National Conservatory of Paris, and later went to the United States to study under prominent American violinists like Ivan Galaiman and Zino Francescatti. Erduran's career in Europe included highlights such as her performances with the Warsaw Philharmonic Orchestra and her work with the Moscow Conservatory. In Europe, Erduran performed the works of the Turkish Five, introducing western classical Turkish music to European audiences. Erduran also toured Turkey, promoting the new style through performance in Anatolia as well. She was the recipient of a Beethoven award in 1970 and was titled a State Artist of Turkey in 1971. Erduran also had a career as a music educator, and taught at the Swiss Conservatoire Populaire and the Conservatory of Lausanne. She is currently retired (Çapa, 2015).

²⁹⁵ Suna Kan (born 1936) is a Turkish violinist. Born the daughter of Nuri Kan, violist at the Presidency of the Republic Symphony Orchestra, Kan's talent was discovered at an early age and she was considered a child prodigy. Like Ayla Erduran (with whom she would share a competitive rivalry), Kan performed her first recital at the age of ten. In an unprecedented event, Kan's performance led the Turkish government to prepare a law to enable a scholarship for her education abroad—the "Child Prodigy Law", written for Suna Kan and İdil Biret,

at the conservatory; unfortunately, there are no further records of his works or students. He is known to have delivered reports on his work to the Ministry of Education much like other refugees.

After twenty years of work in Turkey, Amar accepted an offer to teach at the Freiburg Conservatory of Music, and went back to Germany in 1957. He passed away shortly after in 1959.

According to a quote related by Gündüz and Doğan in an article criticizing Turkish education reforms, Amar said:

“I couldn’t do what I wanted. I presented an immeasurable number of reports, and the likewise immeasurable number of officials I talked to—they all agreed with me without presenting but a single objection. Ultimately they could never do anything. You can put a man in jail, and even if the walls are made of steel he’ll use hands, teeth, nails, anything to escape. Even if he can’t pierce the steel walls he’ll dig a hole. In Turkey, the walls are made of rubber. You punch it and it shapes itself accordingly, you remove your fist and everything goes back to how it was before. How are you supposed to fight that? If there were any resistance, you could fight to change it. There isn’t any. How are you supposed to fight people who listen to you till the end, and agree with everything you say?” (Gündüz & Doğan, 2011) (Translation mine.)

Amar’s criticism presents the failures of the Turkish education reform clearly in this quote: it can be said that the Turkish officials were open to change and heeded expert advice to a fault, which ultimately lost them the ability to accomplish anything that left lasting impressions. From this quote, it seems that Amar was of the opinion that change should be hard-won or it wouldn’t last. It would be fair to assume that this observation, among the other troubles at the conservatory, got him disillusioned with his work in Turkey. After two decades, Amar thus returned to post-war Germany.

gave Kan a state scholarship for her to be sent to the Paris Conservatory. Kan graduated from the conservatory at the top of her class, and followed up by competing in, and winning, a number of international competitions such as the Geneva Competition, the Viotti competition, and the Long-Thibaud Paris competition. Kan returned to Turkey in 1956, and joined the Presidency of the Republic Symphony Orchestra as a soloist. She continued a career of performance, often alongside Ferhunde Erkin and later Gülay Uğurata. Kan was a founding member of the Ankara Symphony Orchestra, which throughout its history held over a hundred international concerts. Suna Kan is considered to be among the stars of Turkish classical music, and was a prominent figure in popularizing western classical compositions via performance, such as the works of the Turkish Five. She was heralded a State Artist in 1971, and also holds a golden honor badge from the Sevda-Cenap And Music Foundation. An international violin competition held in her name is set to begin in 2017 (Ankara University Faculty of Veterinary Sciences, 2017).

Eduard Zuckmayer (1890 Nackenheim – 1972 Ankara) was a German composer, pianist, and music pedagogue. Born to a wealthy family, Zuckmayer started his music education early, beginning with the piano at the age of six and starting his forays into composing at the age of twelve. After his early education, he then studied law and music in Munich, and later moved to Berlin where he was privately educated further in piano and composition. Zuckmayer graduated from the composition school of the Conservatory of Cologne in 1914, and following his graduation became a conductor at the Mainz Opera House. Zuckmayer served in World War I as a volunteer, and was gravely wounded in battle, for which he earned the decorations of the First and Second Iron Cross. After the war, he returned to a peaceful life in music, and pursued his work as a pianist, conductor, and music educator in Frankfurt am Main, while also working at the Mainz Conservatory as an educator until 1925. Zuckmayer then relocated to the *Schule am Meer* (School by the Sea), a private boarding school in an island in the Free State of Prussia, which had a unique reformist approach to education focusing on the arts, music, physical education, and craftsmanship. Zuckmayer adopted the reformist philosophy of the school, believing that its approach to education would provide younger generations with what they needed in the politically turbulent situation in Germany.

The Free State of Prussia was seized by the Nazi government in 1933. The Nazi government then also closed down the *Schule am Meer* in 1934, on the grounds that it did not fit their educational principles. Zuckmayer then moved to the *Odenwaldschule*, a private boarding school in Odenwald and had to present his war decorations to get employment there. While Zuckmayer wasn't even Jewish, having been raised Catholic, having a mother that had converted to Protestantism from Jewish origins would have been cause enough to dismiss him from government service. Knowing this, Zuckmayer also sought other options, including work at a Quaker school in the Netherlands. In 1935, when the *Berufsbeamtengesetz* was revised, Zuckmayer was completely dismissed from service.

Zuckmayer was contacted by Hindemith the same year. Accepting the offer to help Turkey in its music education reform, Zuckmayer arrived in Turkey in 1935 and was initially employed as the chief of the student orchestra at *Musiki Muallim Mektebi*. When the Ankara State Conservatory was opened, Zuckmayer was transferred there, and was this time responsible for educating the newly established Madrigal choir at the conservatory. Later on, Hindemith asked Zuckmayer to take on the responsibility of directing the newly established music

department at *Gazi Terbiye Enstitüsü* (Gazi Institute of Education)²⁹⁶—the Turkish Republic’s foremost institution responsible for training secondary-level educators. The Institute’s music department was to take over the task of educating music teachers from the State Conservatory as the music reform matured; and for this, it needed a guiding hand. Zuckmayer’s formal education and lifelong practice as a music pedagogue thus shone in his work in Turkey, as he essentially became tasked with educating music teachers who would continue the new musical traditions for generations to come. Zuckmayer was among the longest-serving refugee scholars, and throughout his decades of work in Turkey, Zuckmayer became immensely famous in Turkey as a music educator, so much that the following was quoted about him:

“There’s no music teacher in Turkey who wasn’t trained by “Profesör Sukmajer”, and there is no music teacher in the country for whom he didn’t care about, musically or pedagogically. [...] He is known in the most distant part of Anatolia, or at least his name is. One may not be able to name a minister, but every teacher in the country knows who Zuckmayer is.” (Verein Aktives Museum, 2008)

Zuckmayer is thus credited with the education of hundreds of Turkish music teachers. He was the teacher to many famous Turkish musicians, among them Bülent Arel²⁹⁷, Hikmet Şimşek²⁹⁸, and Ferid Tüzün.²⁹⁹ Zuckmayer spoke and wrote Turkish with excellent

²⁹⁶ *Gazi Terbiye Enstitüsü* later took on the more modern name *Gazi Eğitim Enstitüsü* (Gazi Education Institute). It was the foundation of Gazi University.

²⁹⁷ Bülent Arel (1919 – 1990) was a Turkish composer, considered a pioneer in electronic music. Arel was a 1947 graduate of the Ankara State Conservatory, where he studied piano and composition. He also later studied sound engineering in Paris. Arel began his career as a music educator at the Gazi Institute of Education and the conservatory, though he later also became a known figure for the Ankara radio as its first music director. He also founded the “Helikon Quartet”. In 1959, following a performance by the quartet, Arel received a scholarship from the Rockefeller foundation to move to the United States. He would spend most of his career in the United States, beginning with the Columbia-Princeton electronic music center (currently the University of Columbia Computer Music Center), where he composed the early electronic works “Stereo Electronic Music Nos. 1 and 2”. Arel then continued music education at Yale University from 1961 to 1970, where he was also responsible for the design and installation of its electronic music laboratory. Later, he established the electronic music program at the State University of New York, and continued educating there until his retirement in 1989. As an early experimenter in electronic music, Arel is credited with the invention of the splicing tape dispenser and other such devices for tape handling and looping. While his electronic music works were often in the spotlight, Arel also composed classical pieces, chamber music, vocal works and symphonies; music historian Filiz Ali classifies Arel’s works in three categories: compositions made for traditional instruments and specific forms (such as his works for the musical *Bulvar* (Boulevard)), compositions made for traditional instruments alongside electronic tools (such as “Music For String Quartet and Tape”), and completely electronic compositions (“Stereo Electronic Music”). Arel’s many international students included the composers Daria Semegen, Conrad Cummings, Jing Jing Luo, Joel-Francois Durand, Frederick Bianchi and John Tabacco (Bali, 2002) (The New York Times, 1990).

²⁹⁸ Hikmet Şimşek (1924 – 2001) was a Turkish musician and conductor. Şimşek originally trained in military school, but left to pursue his artistic endeavors. He was a 1953 graduate of the Ankara State Conservatory, where he studied composition. After his graduation, Şimşek became a teacher at the conservatory, and later also became the chief of the conservatory orchestra and choir. His successful work with the conservatory orchestra had him sent abroad to take formal training as a maestro. After he returned to Turkey, Şimşek became an assistant chief at the Presidency of the Republic Symphony Orchestra. Through his career, Şimşek became a

proficiency, and was said to have integrated himself into Turkish culture much more than his fellow refugees.

As Zuckmayer was never denaturalized by the Nazi government, following the Turkish Republic's declaration of war on Nazi Germany in 1944, he was given a two weeks notice to either return to Germany or be interned in Kırşehir. Interestingly, when Zuckmayer wanted to return to Germany at this time, the Nazi German government actually denied Zuckmayer entry to Germany on accounts of his "mixed heritage" (Reisman, 2006, p. 109). With the situation being as it was, Zuckmayer was eventually interned alongside other German citizens in Kırşehir. Even in his internment, however, his activities in music didn't stop—he continued his cultural activities with the group of interned Germans, establishing a choir that he led. Gerhard Ruben, son of the refugee scholar Walter Ruben, describes their internment:

“We had just so much time... and obviously Zuckmayer knew everything about classical music. We sung Church music. There was a Catholic priest interned, and a couple of nuns from Austria too. They held a service every Sunday. We eventually sung a mass of Palestrina's.³⁰⁰ In the middle of Turkey!” (Berliner Morgenpost, 2017)

When the war ended, Zuckmayer was asked to return to his duties, and he did so seemingly without any complaint at all. In 1946, he became a lecturer of music theory and choir director at the State Conservatory.

pioneer in introducing classical music to Turkey. *Pazar Konseri* (Sunday Concert) was a television program on the state-run channel TRT 1, and ran for fifteen years, playing international pieces of classical music. It was orchestrated and presented by Şimşek, and prior to the performance of the songs, he would introduce and give details about the pieces. The program also had an international version, called *Çağdaş Türk Bestecileri* (Modern Turkish Composers), which ran for five years and introduced new Turkish compositions to international audiences. Şimşek's services to Turkish musical organization included the establishment of the Ankara Radio Orchestra and Choir, as well as its television-music department; additionally, he was a founding member of the İzmir State Symphony Orchestra, the Çukurova State Symphony Orchestra, and the Bursa Symphony Orchestra. Şimşek also toured nationwide and internationally, conducting around two hundred international concerts, and he also held the title of being the first Turkish musician to record the Turkish orchestras' international performances. For his services to Turkish musical life, education, and popularization, Şimşek received a number of international medals of merit, and was heralded a State Artist in 1981 (BİA Haber Merkezi, 2001).

²⁹⁹ Ferid Tüzün (1929 – 1977) was a Turkish composer. Tüzün graduated from two programs at the Ankara State Conservatory, studying both piano and composition. He later earned a scholarship from the Ministry of Education which enabled him to continue training at the Munich Music Academy for five years. During this time, Tüzün composed works such as *Anadolu Suiti* (Anatolia Suite), *Türk Capriccio'su* (Turkish Capriccio) and *Humoresque (Nasreddin Hoca)*, which owed their first performances to the Munich Philharmonic Orchestra. Following his return to Turkey in 1959, Tüzün became the orchestra chief at the Ankara State Opera and Ballet, and prepared the first Turkish ballet, *Çeşmebaşı* (At the Fountain). He continued composing stage music for Turkish Radio Television, such as the opera *Midasın Kulakları* (Midas' Ears) and the orchestra work *Esintiler* (Inspirations). Tüzün taught at the Ankara Conservatory from 1974 to 1977, at which point he became the director of the State Opera and Ballet. He passed away later that year due to a sudden heart attack (Şenel, 2006).

³⁰⁰ Referring to Giovanni Pierluigi da Palestrina, an Italian Renaissance composer of religious music.

Zuckmayer never left Turkey, even though he could have when his wife and adopted daughter returned to Germany in 1950. Zuckmayer stayed in Ankara and continued working at the State Conservatory until his retirement in 1970, at which point he started working privately as a pianist and conductor, while also serving as an advisor to the Turkish government. He passed away of natural causes in 1972.

3.6.4 Conclusion

The Turkish arts reforms essentially sprung from the idea of building a new Turkey, with a new state, a new capital and a new nation, with the new citizens to populate it and form its core. This idea, held in particular by Atatürk, led the arts reform, and could be considered the cultural branch of the 1933 university reform—or of the Republican revolution in general. In the case of the music reform, for example, the words of German music educator Wilhelm Kempff summarized the grand idea thusly:

“Kemal Paşa... focused on the importance of the spread of classical music in Turkey, deeming it inseparable from the Western European culture that was the basis of (Turkey’s) modernization efforts and many reforms in law, education, and other areas. (...) He said he was worried that the reforms made in other areas would be rendered impermanent and remain lacking unless similar reforms could be made in music. (...) He wanted to know my opinions on how (Turkey) could accomplish this—what sort of schools and institutions needed to be established, which esteemed musicians and musicologists could be invited to Turkey to set the foundations for (the education of) classical music. I told him that he could ask Wilhelm Furtwängler for advice, and even told him to invite him to Turkey for *the systematic transfer to and diffusion of classical music in Turkey*.” (Yavuz E. D., Paul Hindemith ve Türkiye’de Müzik Yaşamının Yapılanması (Paul Hindemith and the Structuring of Musical Life in Turkey), 2013, p. 29) (Translation mine.)³⁰¹

Something that needs to be stressed in this quote is also this: in relating this story, Kempff uses the specific words “the systematic transfer to and diffusion of classical music in Turkey”, which sounds peculiarly close to technology transfer terminology. From the choice of these words alone we can ascertain that the music education reform envisioned by Atatürk—and spoken of between him and Kempff—was indisputably a direct attempt to transfer cultural elements in order to compound technological reformation. Atatürk was keenly aware that culture was an inseparable factor of the technologies and ideas the new Turkish republic was transferring from Western Europe. Ultimately, the Turkish republic did not want to merely adopt new technology—it also wanted to adopt a new way of life.

³⁰¹ Incidentally, Kempff suggested the name of Wilhelm Furtwängler to Atatürk.

In the case of Turkish musical reform, the adoption and implementation of a hitherto unfamiliar style saw profound success: this is evidenced in the sheer amount of works in the western classical style that were composed and performed by Turkish artists. The results of the music reform were proof that local culture could be preserved and maintained while utilizing new methodology, the combination of which produced art that was unprecedented and fresh. The synergy achieved between the Turkish artists who were committed to the new style led to the creation of many works that were representative of both modern and traditional qualities. While it is impossible to sample music in written text, readers should be convinced the new Turkish classical music that was the result of the reform incorporated elements that were at once both local and international, and continues to do so. This tradition, established in the early years of the Republic by Turkish students and their foreign instructors, has carried on through generations of Turkish musicians. As Ulvi Cemal Erkin's *Köçekçe* suite was such a work—a local melody, shaped into a modern symphony—when it was composed in 1943, so too is Fazıl Say's 2003 *Kara Toprak*, sixty years later.

While the Turkish leaders of the Turkish musical reform, in particular the Turkish Five, may not have been direct students of the refugee musicians themselves, they were all educated abroad in specific western European styles as per the general direction the music reform intended. It can be argued that with the refugee musicians' presence in the country, this effect was compounded, as they provided these young Turkish artists with an environment in which their new style could thrive.

A similar effort in reforming cultural elements in order to bring new life to a new state was obvious in the reform of Turkish architecture: it was the Turkish Republic's express intent to modernize its architectural styles, and display it visually by using the new styles. The particular attention given to the use of a modern style in the shapes and forms of state buildings is the most obvious indicator of that: it was the republic's goal that this should be communicated visually that these buildings belonged to the new state, to the new Turkey, which had now embraced modernism.

The resulting dilemma of the new Turkish republic can thus be seen easily in the case of the arts reforms in Turkey. While the Turkish republic had turned its face towards the west and embarked on a quest for modernization based on Western European culture, it was also intent on maintaining and preserving its national identity despite the tremors of revolution. It was Turkey's intention to add its identity to the European culture it had deemed representative of

modern civilization, to adapt to it, because it was aware that it could not reap the benefits of this civilization unless it became a part of it. Well-defined cultural policies were conducted to this end—and while the results as are undoubtedly arguable, it is obvious that the arrival of refugee scholars and experts led to a transfer (and even exchange) of artistic styles and cultural values, all as part and parcel of the bundle of technology that was moved from Western Europe to Turkey. Ultimately, if art is defined by the human ability to create, what occurred in Turkey in the 1930s following the education and arts reforms was the mixture of cultures, which resulted in the production of the new and hitherto unseen.



4. General Conclusion

The 1933 University Reform conducted in Turkey as part of the Republican revolution coincided with the dismissal of highly trained scholars from universities and other institutions in Nazi Germany due to racial, political, or arbitrary reasons. The circumstances, which were unfortunately defined by one of the worst blemishes on human history, provided an opportunity for the Turkish government to receive an influx of individuals with high levels of education, training, and experience in scientific research. Through a stroke of fate that forced many valuable academics into exile, Turkey gained the scientific and artistic abilities of over a hundred academics which, if they had not been gained from abroad, would have been almost impossible to obtain.^{302,303} Therefore, when these academics were forced into exile from Europe, the Turkish government seized this opportunity with remarkable commitment. Turkey took in significant human capital, and the grateful refugees provided their full potential to the newborn Turkish Republic. In helping the country in its many social, political, economic, legal and educational reforms, the refugee scholars became human agents of technology transfer from Europe to Turkey.

4.1. Technology Transfer in the 1933 University Reform: A Summary

In this section, we will briefly go over the technology transfer enabled by the 1933 University Reform and the arrival of refugee scholars. In particular, we will examine specific examples of how the various aspects of technology transfer were reflected in the 1933 University Reform.

4.1.1. Absorptive Capacity

In the context of absorptive capacity, it must be remembered that the 1933 University Reform examined in this thesis was, first and foremost, an educational reform. It was conducted with the basic purpose of elevating Turkish higher education to international standards, and was part of an envisioned long-term education reform plan that would be carried out in stages. The

³⁰² Such human capital would have cost the country much investment in both time and money: many years would have gone towards their formation, education and training, which in turn would have required considerable amounts of national resources. As we mentioned before, developed countries are often loath to let go of their human capital because human capital not only costs money, but also time. This was disregarded by the Nazis, however.

³⁰³ According to Ege and Hagemann, the arrival of the refugee academics can be outright considered *positive externalities* for the system of higher education in Turkey (Ege & Hagemann, 2012, p. 968).

decision makers in the Turkish government were keenly aware of the fact that educational reforms were vital to many of the systemic reforms that had taken place following the declaration of the Republic—without attaining a certain education level, the Republic would not be able to maintain many of the systems mimicking their technologically advanced peers, just as it couldn't pursue further technological development without capable domestic human capital. The memory of the Ottoman Empire's decline, especially, was still fresh in the Turkish Republic's memory: the republic's predecessor, the Ottoman Empire, had suffered much (and for far too long) due to its inability to keep up with changing technology. In its last few decades, the Empire had attempted to catch up with its peers in Europe through educational reforms of its own, but these smaller-scale reforms had not been as successful as people had hoped. They had produced some of the human capital the Empire needed, but it had not sufficed.

The arrival of the refugee scholars, however, provided the Turkish Republic with the significant amounts of human capital that was able to compound the efforts towards a sweeping educational reform. The 1933 University Reform was the result: it was the culmination of a series of attempted education reforms, the final reform whose effects were far more powerful and lasting. With the supply of 'imported' foreign human capital and educational level, this education reform was kick started, and it transformed the Turkish higher education system into a productive academic environment. The new educational institutions that were established after the reform were capable of training further domestic human capital, and continued to consistently elevate education levels to the point where it was no longer as difficult to import more technology from abroad. The education reform of 1933 thus provided the newborn Turkish Republic with extended absorptive capacity, opening a channel to the technological levels of the modern world, and giving the country an opportunity to close the technology gap.

4.1.2 Diffusion

In the case of the 1933 University Reform and the refugee scholars, the diffusion of the technologies brought in by the refugees was handled fairly straightforwardly. As the reform was one of foundational education, it sought first and foremost to install the transferred technologies in the very students it produced. The students experienced the refugee scholars' "foreign" teaching firsthand and became familiar with their methodologies, ways of thinking, and academic traditions; their learning was even further compounded as they were also

supervised by Turkish teachers who were assistants to the refugee professors. Many young Turkish scholars also took part in the 1933 University Reform. A majority of them had been educated abroad, and had already adopted the technologies that were set to transfer—being familiar with the mentalities of both worlds, the assistants served as bridges between the foreign teachers and the domestic students, easing the process of transfer. Once both the students and the assistants themselves had adopted these technologies, they were only set to disperse them further to their own students in the future. In addition to students and protégés—the human elements—the artifacts left behind by the refugee scholars, such as textbooks written in Turkish, articles, research, guidelines and the other tangible experiences, would only ensure that the transferred technologies would continue circulating through Turkish academia for years to come.

Academia was also not the only outlet through which the refugee scholars of the 1933 University reform spread their technologies. Their practical work was also spread throughout the country in other places: as many of them served as advisors to the Turkish government, for example, their methods of governance spread to Turkish ministries and administration; when they worked in Turkish hospitals, their ways of doing things became familiar to both hospital staff and patients; as refugee architects planned cities and buildings, it left its mark in Turkish construction and influenced day-to-day life; even their unfamiliar arts were introduced to the general Turkish populace when they went on tours performing music and theater. All this served to gradually inject new ideas, methodologies, and technologies into the Turkish community and system at large, becoming part of the system by acclimatizing to the environment and hoping to remain sustainable.

4.1.3 Sustainability

For the case examined in this thesis, the 1933 University Reform, the sustainability of the technologies adopted from refugee scholars was crucial. As a foundational effort to elevate the country's university education to international standards, and to remain up to date with those standards for years to come, it was intended and hoped that the reform would produce the necessary academic system, trained individuals, and mentality required to render the adopted technologies sustainable. It was obvious that the refugee scholars would only remain in the country for a specific period of time before eventually leaving (or dying); therefore it was imperative that the technologies they brought and enabled—whether it be the organizational system they devised in the form of academic programs, the ways of thinking

they imbued on their students, or the research methodologies they left behind—would remain in the country for a long time. The fact that the case was one of educational reform seemed to make this achievable, as education reform, when conducted accurately, provides deep and successful results in time.

The circumstances surrounding the 1933 University Reform and the technology transfer accomplished through it, however, were not without flaws. Many of the factors that typically contribute to unsustainability—confusion, infrastructure, political commitment—were seen in the reform, and while it did not completely disable the reform movement, it did lead to impediments and resulted in less-than-ideal consequences. For example, after many years working at the Faculty of Letters, the philosopher Hans Reichenbach began to grow increasingly disillusioned with his work in Turkey and criticized many factors contributing to the unsustainability of the technology transfer into the country: Reichenbach noted that the academic level of the students was too low, which led to the academic program being ‘toned down’ year after year to accommodate bad students (failing educational infrastructure); he commented on how the university administration was failing to understand the concept of scientific education, pointing out that academia was being left in a bureaucratic stranglehold (institutional and administrative failure); he also noted that, materialistically and unfortunately, the country was simply too poor to sustain the scientific environment technological advancement required (lack of economic foundations); and last but not least, the forced, “from above” mentality reform movement (political lack of foresight). These factors contributed to errors in the technology transfer process and eventually impeded sustainable technological development. Unfortunately, such criticisms not all that rare in the later years of the 1933 University Reform. Even so, it would be completely unfair to claim that the 1933 University Reform resulted in unsustainable technology transfer; the reform increased Turkey’s technological capability in the years to come, enabling both further technology transfers and the creation of domestic technology.

4.1.4 Technological Capability

As an education reform, the 1933 University Reform examined in this thesis was the most successful of Turkey’s decades of technological catch-up attempts. After receiving an influx of highly qualified refugee scholars, all of which unmistakably raised many students of their own, setting off a chain reaction that enabled Turkey to create technological accomplishments of its very own, meager as they may have been. The refugees’ academic and practical works

were emulated by their students, peers, and even the common populace in many different areas. Unlike the results of previous education reform attempts, the 1933 University Reform resulted in the emergence of many scientific journals, articles, research projects, books, all written by Turkish scientists of the next generation.

4.1.5 Sociocultural Context

The sociocultural context of the technology transfer that occurred with the 1933 University Reform presented itself in a myriad of ways. The act of transferring a hitherto unfamiliar, foreign academic mentality to Turkish academia took several decades and was subject to many alterations in order to ensure its adaptation. In many cases, the result was a combination and synthesis of cultures. In the transfers of art, in particular musical and architectural traditions and methodologies from Europe, for example, the cultural aspect of technology transfer presented itself most strongly. In these examples, great care was taken to adopt the foreign technology (methodology, artifacts, mentality and approach) without disrupting the domestic, familiar quality of the works that were the results of centuries of accumulated knowledge. Music was performed using European instruments and written down in universal European forms, but were inherently still Turkish and Anatolian melodies, which eliminated the strange, foreign quality of the new art form. Buildings constructed and monuments erected in likeness of European styles still incorporated elements of local architecture, and depicted Turkish heroes and figures from Anatolian mythology—all of which allowed the transferred technologies to remain local while still being foreign in origin.

There were also examples to the negative effects posed by sociocultural context in the technology transfer facilitated by the 1933 University Reform. A long-standing clash between the different cultures of Europe and Turkey had presented itself before in earlier attempts at technology transfer, and they did so through the reform as well. In a previous, predecessor attempt by the Ottoman Empire to reform the education of medicine, for example, it had been almost impossible for foreign scholars to teach their Turkish students anatomy by dissecting cadavers because working on dead bodies was considered a religious affront in the country and was, for all intents and purposes, illegal—overcoming that particular sociocultural boundary required that the Sultan himself be petitioned to legalize cadaver experimentation, and he had to issue a religious decree to allow it. Similar cultural attitudes, resistant to change as they were, persisted through the 1933 University Reform as well. In one example, we learn from the testimony of refugee ophthalmologist Joseph Igersheimer that he could not conduct

as many cornea transplant surgeries as he could have, because upon learning that the corneas to be transplanted were to come from dead bodies, some patients refused to have the operations at all, citing their religious and cultural sensibilities as their reasons for doing so. In such examples, the sociocultural context served as an impediment to the complete acceptance of transferred technologies; in many cases, it took the environment many years to adapt to them, during which period it slowly acclimatized to cultural change.

Additionally, it must be mentioned that the success of the technology transfer done by the 1933 University Reform and its relative lack of trouble with sociocultural issues owed to the sociopolitical state the new Republic of Turkey had found itself in. As a newborn country, Turkey was going through a series of sweeping cultural reforms at the time of the university reform, which served to help ease and often act catalytic towards the acceptance of new technologies. Western Europe, as a whole, was being emulated in the new Republic of Turkey in many aspects of life, and as a result adopting their technologies was not as difficult as it might have been. Starting with the Tanzimat period of the Ottoman Empire in the late 19th century, Turkey had been going through attempts of Westernization for over a hundred years with varying levels of success, the most powerful of which was the declaration of the Republic and the reforms it resulted in. Turkey's relative ease in adopting European technology into its own sociocultural system was due to decades of being culturally primed for the task.

4.2 The Refugee Scholars' Contributions

4.2.1 Academic Contributions

The refugee academics contributed greatly to academic activity at Istanbul University and to Turkish higher education. The first and most obvious contribution by the refugee scholars was their efforts towards solving the problem of academic resources in the Turkish university. The dearth of available educational material, such as textbooks, course materials, lecture notes, related papers, supplementary publications, and other scientific resources had been a significant problem prior to the reform and the arrival of the refugee scholars. This was, naturally, an issue the refugee scholars were requested to address. As stated in their contracts, the refugee academics were responsible for writing textbooks in their respective fields in the Turkish language for their students, and a great majority of them did so. The refugee scholars therefore contributed greatly to the establishment of an available knowledge stock in the form

of academic resources: oftentimes, they did this firsthand by writing textbooks and providing other publications, but not only that, they also played roles in acquiring these required materials from abroad as well. The refugee scholars' presence and connections in Europe meant that they were in a place to import necessary resources and equipment, and they often wrote reports directed at the Turkish government, providing them with lists of the books, periodicals, or publications that they deemed vital for the development of their institutions' libraries. Many of the refugee scholars also often brought their materials with them; in some cases, the refugee scholars provided entire libraries' worth of materiel in their chosen fields. Examples for this included the business economist Alfred Isaac, who established much literature in the then-fledgling field of business administration in Turkey, and the sociologist Gerhard Kessler, who is known to have catalogued a great deal of the material at the library of the Faculty of Economics. In the Faculty of Medicine, the internist Erich Frank and ophthalmologist Joseph Igersheimer were known to have transported the contents of their own personal libraries from Germany to Turkey. The refugee scholars' arrival was therefore catalytic in enhancing (and oftentimes creating) Turkey's knowledge stock, which would be used for generations by Turkish academia.

The refugee scholars' second most prominent contribution was their effort towards raising the next generation of Turkish academics who would follow in their example. In many cases, this was the essence of the 1933 University Reform realized; the culmination of the technology transfer effort was the endowment of technological capability in the local academic community. The refugee scholars successfully raised an entire generation of Turkish academics; they were direct mentors to some, and colleagues and brothers in science to others. Notable examples among those who were educated, trained and influenced by the refugee scholars included the economists Ömer Celal Sarç, Şükrü Baban, and Sabri Ülgener; the doctors Tevfik Sağlam, Naci Bengisu and İhsan Doğramacı; the mathematician Cahit Arf; the astronomer Hatice Nüzhet Gökdoğan; the physicist Mustafa Fahir Yeniçay; the chemist Ayşe Saffet Rıza Alpar; the biologist Lütfiye Irmak; the philosophers Macit Gökberk, Nusret Hızır, and Takiyeddin Mengüşoğlu; the sociologist Niyazi Berkes; the romanists Azra Erhat and Mina Urgan; the psychologist Mümtaz Turhan; the historian Fuat Sezgin; the archeologist Ekrem Akurgal; the Sumerologue Muazzez İlmiye Çığ; the musicians Ayla Erduran, Suna Kan, and Bülent Arel; the architects Behruz Çinici and Sedad Hakkı Eldem; the sculptors Şadi Çalık, İlhan Koman, and Zerrin Bölükbaşı ... the list is as if endless. There were so many invaluable names attached to the refugee scholars in Turkish academic history—it would be

almost impossible to name them all. Further, as many of the scholars from this generation pursued academic careers and raised students of their own, it can easily be said that the arrival of the refugee scholars led to a revolution in the Turkish academic legacy. Countless Turkish academics, even today, can trace their academic lineage back to the refugee scholars. Altogether, the refugee scientists laid a solid foundation for Turkey's future human capital by endowing skill, knowledge, and the modern academic mindset in the many young Turkish scientists, politicians, lawmakers, entrepreneurs, artists, writers, and more.

Another significant academic contribution by the refugee scholars, and among the most desired, was their transfer of the Western and European academic mentality and attitude towards learning. Prior to the reform, teaching at *Darülfünun* had been often criticized for being loaded with encyclopedic qualities that required students to memorize information from textbooks without having any chance to absorb knowledge properly. Further, the methods used in the classroom also prevented the students from developing a scientific mindset and making scientific inquiries of their own, as communication in the classroom was limited and discouraged discourse. These outdated—"medieval", according to Malche—methodologies were largely replaced by the refugee scholars, who used more effective, active modern learning methods in the classroom. These methods were also passed on to the refugee scholars' coworkers, assistants, and students by example. Following the reform, the classrooms at the modern Turkish university became more open environments that commended student activity and participation. By using methods that required both the student and the teacher to be more active, by using practical learning and seminar discussion methods, by rewarding students' questions and by compounding discussions with examples from daily life, teaching activities became far more efficient in urging students to think, talk, research and experiment. Having come from an academic tradition where this was the norm, many of the refugee scholars were efficient in these methods. A very strong example can be given in the case of the physicist Harry Dember: Dember's students noted that his classroom became quite oppressive, in fact, because of the way he constantly sought to involve his students in the task at hand. Also, in his first arrival in Turkey, Dember must have seemed quite the odd professor, for he was fond of the hitherto unknown method of rehearsing his lectures before giving them—an efficient method that prevented him from wasting both his own and his students' time by allowing him to divulge his knowledge productively. Such eccentricities made the university classroom a much more efficient teaching environment. The refugee scholars' teaching culture, discipline and styles became absorbed in the teaching

tradition of the Turkish University, and such efficient technology resulted in far higher levels of success in Turkish higher education.

The arrival of the refugee scholars and their work at the 1933 University Reform also led to a surge in academic productivity. While the years that immediately followed the reform were focused mainly on efforts towards establishment and administration, and the primary purpose was to endow the institution with academic capability, which required careful planning to bring the reform to a satisfying conclusion. After the first three years, however, academic activity began to increase, and there was a marked growth in both personal and institutional scientific capability. In the second year of its reform, Istanbul University began to publish scientific journals, beginning with the Journal of the Faculty of Law and the Journal of the Faculty of Arts and Sciences in 1935. The Journal of the Faculty of Medicine followed shortly after in 1938, and in 1939, the Journal of the Faculty of Economics began to be published. Beginning with Istanbul University, Turkey adopted a robust tradition of scientific research and publishing in academic journals. Over the years, the number and quality of Turkish academic journals increased exponentially. As of today, Istanbul University has published a cumulative of 762 different scientific journals during its lifetime. Like the university itself, many of these journals are still alive and active, and continue their academic tradition of research and generation of knowledge (TÜBİTAK, 2017). As for the contents of these journals, and those who wrote them, we can turn to a quote by İnönü:

“The numbers of scientific research articles published in Turkey in the fields of astronomy, mathematics, physics, chemistry, biology, geology represent a continuous increasing trend after 1933. The publications of the first years were achieved essentially by German scholars (...) But progressively the number of the publications of invited academics decreases and those by local scholars increases. For example, in the field of physics, between 1933 and 1960, the productivity curve increased by a factor of two in 6.5 years. In other scientific fields the situation is the same. Today we know that the number of scientific articles published by Turkish researchers places them number 20 in the world. On the basis of this result I can assert calmly that from the research productivity point of view the invited German scientists’ work, after the 1933 reform, responded to our expectations.” (İnönü, 2007, p. 88) (Translation by Ege and Hagemann).

Through the works of the refugee scholars, the establishment of a respectable knowledge stock, the nurturing of human capital in human capital, the installation of a system of academic thinking oriented towards research and development, the ultimate goal of technology transfer was achieved: Turkish higher education became capable of creating technology of its own.

4.2.2 Work with the Government

In addition to their academic activities, many refugee scholars also served as advisors to the Turkish government. As experts of a great variety of fields, a large number of refugee scholars advised the Turkish government in matters regarding the economy, finance, agriculture, etc... and worked for the relevant ministries. The economist Fritz Neumark, for example, was a financial advisor to the Ministry of Economy, and aside from providing a constant stream of reports and publications full of advice, took part in many of its commissions and organizations. Neumark's works later formed the cornerstone of an Income Tax Reform. The politician and municipal scientist Ernst Reuter—who later became the mayor of Berlin—worked for the Turkish Ministry of Transportation, advising the government on matters of trade and logistics and tariffs.

The refugee scholars' work with the government also often had physical manifestations. This is evident in Ankara's many government buildings, as they were—along with a large part of the city itself—commissioned by the government from refugee architects and other foreign experts. A great many of the buildings are still in place today, and monuments like Atatürk's mausoleum still carry the marks of the refugee scholars as they do those of their students.

As advisors, many of the refugee academics were highly active in helping the Turkish government put their reforms into law. As such, the refugee academics' footprints can be seen even in Turkish lawmaking. The refugee jurist Andreas Bertalan Schwartz was a prominent figure in the adoption of the Turkish Civil Code, as it was his translations of concepts and terminology that the Turkish government later used in their writing of the law. The economist and sociologist Gerhard Kessler, for example, was highly influential in the development of Turkey's labor laws; not only did he take a role in the writing of the Law of Trade Unions and the Law for the Institution of Labor Security, he was also a contributor to the establishment of Turkey's labor organizations such as the Institution for Labor Security and the Governmental Employment Agency.

Some of the refugee scholars also helped out other institutes and projects of the revolution. The jurist and sociologist Ernst Hirsch took part in the Turkish Language Revolution, creating new words for law-related concepts and terminology in common Turkish rather than the old Arabic. The chemist Fritz Arndt did the same for chemistry concepts, terminology, and notation.

4.2.3 Sociocultural Contributions

Aside from their academic and advisory contributions to Turkey, many of the refugee academics introduced new social and cultural phenomena to Turkish life as well. There were a significant number of altruists among the refugee scholars—possibly brought on by their own suffering in a strange land, and possibly simply due to being human. The sociologist Gerhard Kessler was a notable example in his altruism: during his stay in Turkey, he devoted considerable time to urging the government towards acts of social security such as the establishment of rehabilitation centers for criminals and beggars and support institutions for the homeless, and he also campaigned to prevent child labor. Together with the business economist Alfred Isaac, Kessler was also an important member of the Istanbul Society for the Protection of Animals, which was founded after the arrival of the refugees.

The contributions of refugee artists and musicians, of course, fell notably into this category. They were responsible for introducing whole new art forms to the Turkish community. As they did not necessarily keep their artistic activities to the strict confines of academia, their work brought methodologies and understanding of art to Turkish people around the country—in showcasing their new methodologies and understanding of art, they introduced new and different ways of enjoying life. The conductor Ernst Praetorius toured Turkey with his orchestra of both foreign and Turkish musicians constantly; and the works of the sculptor Rudolf Belling (and those of his many students) were displayed all over the country.

Some of the refugee scholars were even responsible for the popularization of new sports activities. It must have seemed strange to Turkish people in the 1930s when strange foreigners like Hans Reichenbach took up to climbing the country's highest mountains for mere enjoyment. It might even have looked stranger when Alfred Kantorowicz decided to take up a pair of odd wooden plates and skate down the mountain for the thrill of it. Effectively, groups of refugee scholars popularized mountaineering and skiing—it even led to the discovery that Uludağ would make a fine resort destination.

4.3 Criticisms of the 1933 University Reform

Despite the successes examined throughout this thesis and the earlier sections, the 1933 University Reform was not without fault. There were a number of errors made in the planning, administration, and implementation of the technology transfer event, which

interfered with its sustainability. As the reform also depended heavily on the refugee scholars, any problems they had also impeded the success of the operation. This is why many scholars consider the reform effort to be a modest success—while the 1933 University Reform accomplished much in its own right, its success was only partial, and was conducted in a less than ideal manner. Two sides can be analyzed to account for the limited success of the reform: problems faced by the refugee scholars themselves, and problems arising from the Turkish side in the planning, administration and implementation of the reform.

4.3.1 Problems faced by Refugee Scholars

As the agents of technology transfer and embodiments of human capital, the refugee scholars were invaluable to the success of the reform. They were, however, often beset by problems that could have been addressed but often were not. These problems sometimes led to the refugees leaving Turkey early, which crippled the reform movement.

4.3.1.1 Pecuniary Problems

According to Widmann and many other sources including Neumark and Reisman, the refugee scholars' financial problems were the least of the issues they faced during their stay in Turkey. The *Notgemeinschaft* demanded one month of the refugee scholars' salaries as negotiation fees, but on average, the refugee scholars were paid very well by the Turkish government. Their salaries ranged from 500 to 1000 Turkish liras which, at a rate of 2 Reich Marks per lira, was a significant amount for many of the refugees. Neumark notes that if the purchasing power of the lira was also considered (everything in Turkey was considerably cheaper than in Germany) the refugee scholars were being paid substantial amounts. In fact, compared to Turkish professors of the same rank as them, the refugees were being paid double, often even four times the local scholars' salaries (Neumark, 1982, pp. 16-17). Naturally, this led to a major issue. The refugees' Turkish colleagues grew jealous, which was exacerbated by the fact that they had major financial problems of their own: the Turkish assistant professors and assistants who worked under the refugee scholars earned about one tenth of the refugees' wages (Dölen, 2010b, p. 409). This led to a repeat of the error once encountered in *Darülfünun*. Due to a lack of funding, many of *Darülfünun*'s lesser ranked scholars were underpaid, which made them shirk their academic duties in favor of taking other jobs. A similar situation occurred in Istanbul University. When this issue was further compounded by the fact that many of the refugee scholars seemed to favor their own German assistants over Turkish ones, this quickly led to resentments.

4.3.1.2 Social Issues

Being renowned academics didn't make the refugee scholars completely exempt from social issues commonly faced by refugees. Tensions between Turkish and foreign academics started early. Many issues stemmed from the hurts incurred during the reformation of *Darülfünun*, where many Turkish scholars lost their jobs to refugee scholars. This made some Turkish scholars wary of the reform movement as well as the refugees directly. Neumark notes that they "opposed the courageous (reform) plan," and "among these were doctors who were (rightfully) wary of foreign competition, and some traditionalist-conservative scholars in higher education" (Neumark, 1982, p. 14). Many academics and administrators in Turkish circles feared that the refugee scholars might not be up to the task ahead of them, and doubted if they could even adopt to life in Turkey. During the first year of the reform, there were numbers of articles in Turkish publications that displayed significant xenophobia. In technology transfer through the movement of people, this would be an example of an undesired sociocultural reason for rejection. Thankfully, it did not take root, and most of the social problems were solved as a result of government support for the refugees and through time as they earned the trust and respect of their communities.

4.3.1.3 Psychological Issues

For all intents and purposes, the refugee academics were in exile. While many of them had a certain amount of gratitude for having found a "second home" away from home, the refugee scholars also suffered greatly from the uncertainties posed by their situation. In this context, the human element of the concept of human capital showed. The refugee academics were always haunted by the situation back home; it wasn't rare that they received news that they had lost family members, friends or loved ones. A heartbreaking anecdote that exemplifies the refugees' human situation can be given of the pedagogue Albert Eckstein: Eckstein once treated the child of a Nazi official in Ankara, who then offered to 'do something to help' his relatives in Germany, to which Eckstein replied, "All of them have been killed already. All of them!" (Akar, 2008, p. 111). As a result of this, many of the refugee scholars suffered from psychological problems, with some falling into deep depression, such as Tibor Petérfi and Ernst Magnus-Alsleben. The chemist Oliver Herzog committed suicide during an academic visit in Zurich. The uncertainty of the 1930s reflected most personally on all the refugee scholars, and caused problems that could never be truly treated, only mollified, through psychological aid.

4.3.1.4 Social and Cultural Isolation

In exile and far away from the environments they were used to, the refugee scholars found solace in each other—in most cases, at least. Unable to integrate instantly into a culture that had hitherto been all but foreign to them, many of the refugee scholars created their own enclaves where their social circles were kept restricted by the other refugee scholars who were brothers and sisters in exile. While it would have been impossible to dictate one's choice of company, especially in times of such dire need for camaraderie like in the 1930s, one can still be driven to wonder if the sociocultural transformation of the Turkish community would have been expedited, had the refugee scholars not been so tightly restrained in their own communes. The desire to stay within a familiar, comfortable sociocultural environment was prevalent among the refugee scholars, presenting an example of the sociocultural contexts often faced in technology transfers, this time made more personal through the human mode of transfer.

4.3.1.5 Academic Isolation

For many refugee scholars, being in Turkey meant academic isolation. While the young Republic was adamant in its efforts towards establishing an academic community of its own, the fact was that it had no significant extant scientific environment comparable to what the refugee scholars had left behind in Europe. As a result, many refugee scholars were left bereft of the scientific communities that had once enabled academic discussion and made it possible for ideas to bounce back and forth and therefore thrive. The philosopher Hans Reichenbach, for example, had been a founding and prominent member of the Berlin Circle of philosophy back in Germany; he found no environment to continue his discussions on logical empiricism in Turkey, and although he didn't particularly expect to find the Circle's second coming in Istanbul, when he found that philosophy education at Istanbul University gradually got worse instead of better to accommodate the overall level of students, he grew quickly disillusioned. The economist Wilhelm Röpke was another example who constantly lamented the academic isolation from his former communities and, having little faith in the establishment of a Turkish academic community, was even accused of shirking his duties towards his contract with Istanbul University. In growing resentment, Röpke was quick to leave four years after his arrival, later becoming a founding member of the Mont Pelèrin society in Geneva. Naturally, Reichenbach and Röpke's criticisms were not unfounded. Turkey could not have

possibly been expected to develop scientific communities comparable to centuries-old European traditions in the span of a few years, and for some refugee scholars, was simply a bad fit.

4.3.2 Problems in the Reform's Planning, Implementation, and Administration

A general consensus reached by many scholars who have studied the 1933 University Reform is that the impact of the refugee scientists could have been much more successful if the reform had been prepared and implemented with less haste and more realism (Ege & Hagemann, 2012, p. 969). Among the most well versed in the subject, Dölen provides a most comprehensive analysis of the first ten years of the reform, and points out several issues that impeded the full success of the reform movement and technology transfer that transpired (Dölen, 2010b, p. 408). We shall examine these criticisms further.

4.3.2.1 Overcrowding in the University

Despite a significant growth in the student body, the number of teaching staff did not increase to accommodate the number of students. In 1933, the number of registered students at the reforming Istanbul University was 2878; by the 1940s this number had more than quadrupled with 12480 students (Dölen, 2010b, p. 408). This slowed down the stable academic growth of the university as administrative and academic activities took the toll of crowding. The professors' time was often consumed with teaching responsibilities such as lectures, seminars, laboratory work, and exams, which prevented them from pursuing more research-oriented activities.

This was likely a result of the reform program's overreaching optimism. As the Turkish government desired to create a generation of highly educated individuals capable of furthering its reforms, it focused on its goal of acquiring many of these individuals at once, hastily and without planning, not considering the problems that would be caused by Istanbul University being stretched to capacity. This resulted in a constant, gradual decrease in academic levels to accommodate the general quality of students. The Turkish government later attempted to solve the problem by specifying a student quota and testing applications, but the damage had been done. While a certain threshold was reached in the quality of education, it could not move past the act of simple teaching. The goal of producing knowledge through research and development was thus not realized to its full potential.

This was a significant failure on Turkey's part, and is an error that Turkey has historically made throughout its various reforms. There are a great number of grand ideas and enthusiastic reforms in both Ottoman and Turkish history. Turkey's inability to properly analyze its political, economic, and sociocultural contexts, compounded with its disregard for proper planning, has led to many a Turkish reform becoming only half as effective as it could be. Overall, Turkey is a country that does not lack for zeal, but it does not have the discipline required to go through with its plans.

4.3.2.2 Inability to Establish A Cooperative Academic Environment

The desired environment of academic cooperation could not be established between the foreign and local scholars. Instead, rivalries and competition began between them. The discrepancy between the salaries of the refugee scholars and the local professors was a significant problem. Also, aside from paying them substantial salaries, the Turkish government made little effort to keep the refugee scholars in Turkey. The refugee scholars grew nervous whenever Turkey grew politically close to Germany, and there was the issue of their 'tenure'. Many of the refugee scholars were employed on temporary contracts that could (or could not) be extended. For many professors, this created an air of uncertainty regarding their futures, and especially their retirements—which was important to scholars who weighed heavily on the 40-55 age group.

The error here was not completely in Turkey's hands, but it was also not unavoidable. We should take into account that, as the refugee scholars came to Turkey at a time of war, it would have been only natural for them to migrate back to their homelands once the war ended and the political situation became more favorable. However, this was not the case for many refugee scholars—many of them emigrated to the United States before the war had ended, simply because universities in the United States offered them better incentives. For a country that had received such substantial amounts of human capital for free, Turkey's goal should have been to provide its newfound assets the incentives to remain in the country for life. The refugees returning to Germany after the war would have been natural. Their departure for better pastures was not.

On the other hand, one must also consider Turkey's capabilities at the time. There were some refugee scholars at a level which, despite any incentives given, would have not been possible to keep on hand. The refugee scholar Friedrich Dessauer was one such example: Dessauer

was trained in physics and electrotechnics, and developed medical equipment such as the X-Ray machine. Despite his specific abilities, which branded him more of an inventor than a doctor, he was employed at a radiology clinic—simply because there was no other place he could be employed. Turkey had a specific technological capacity, and could not ever have provided Dessauer with an environment that would have enabled him to thrive as a scholar.

4.3.2.3 Problems with the Next Generation

The goal of raising the next generation of Turkish professors, who would come to replace the refugee scholars in time, was also realized poorly in some respects, despite the fact that it achieved great success.

The young Turkish scholars, often assistants or assistant professors, were often overlooked in favor of the refugee scholars. Assistant salaries were very low, which made it difficult to find assistants in the first place. Second, due to a lack of assistants, the assistant professors were relegated to subordinate tasks. Third, as the assistant professors were overwhelmed by duties that would have been the responsibilities of assistants, the up-and-coming Turkish scholars could not find the time to conduct academic research of their own. Fourth, as the assistant professors were as underpaid as the assistants, they often took secondary jobs outside the university. This vicious cycle meant that the growth of the next Turkish academic generation was impeded significantly.

A significant number of the refugee scholars refused the terms of their contracts that compelled them to take Turkish assistants. Instead, they preferred to pursue their research with the assistants they had brought with them from their home countries. This also slowed the growth of the next Turkish academic generation. For a country that intended to establish its own local stock of trained human capital by apprenticing its students to the refugee scholars, it was a great oversight by the Turkish government that it failed to intervene in this situation.

4.4 Concluding Remarks

The refugee scholars' greatest and most evident contribution was in the 1933 University Reform, where they helped transform Turkish higher education. The support of the refugee scholars accelerated the higher education reform efforts in Turkey and led to the

transformation of *Darülfünun* into a modern university once and for all—as a result of the 1933 University Reform, and the refugee scholars who contributed to it, a modern academic infrastructure was built in Turkey. During the reform, they represented forces of innovation, creation, realization and production, and contributed greatly to Turkey’s intellectual and social life. According to Irmak, the University Reform of 1933 accomplished the following goals:

1. Established academic and administrative autonomy;
2. Legislated the prospect of an academic career,
3. Administrated the finances of universities via supplementary budgets,
4. Increased the budget to unprecedented levels,
5. Raised scholars and academics of every possible field,
6. Increased the tools and equipment towards education and research (Irmak, 2001, p. 112).

In addition, the reform movement resulted in the establishment of not only Istanbul University but a variety of higher education institutions, all of which were founded after the example of Istanbul University and followed its modern academic model—it would not be unfair to claim that today’s Turkish universities all owe their foundation and infrastructure to the reformed Istanbul University. As the reformed, new model of tertiary education in the new Turkish Republic, Istanbul University is a common ancestor of every Turkish university today. The University Reform of 1933 led to the establishment of many founding Turkish higher education institutions, including not only Istanbul University but also the Higher Institute of Agriculture (1933), Ankara University (out of the Faculty of Language, History and Geography, established 1936), Istanbul Technical University (out of the College of Engineering, established 1944), Mimar Sinan University (out of the State Academy of Fine Arts, established 1982)—many of the earlier Turkish universities are its siblings, such as Istanbul Technical University and Ankara University, and the rest are its children and grandchildren.

The establishment of the modern Turkish university did not wholly solve Turkey’s problems in the areas of academic research, knowledge production, and development, nor did it wholly accomplish its cultural revolution. Nevertheless, it took great steps towards these goals, and formed the foundation and cornerstones of Turkish academia. The 1933 University Reform,

through the efforts of the refugee scholars, formed the foundation of modern Turkish higher education.



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