From the Ottoman Empire to the Turkish Republic: Biology as Politics and Philosophy (1908-1938)

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Abstract

"From the Ottoman Empire to Turkish Republic: Biology as Politics and Philosophy"

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This dissertation is about the reception of the theory of evolution from the late Ottoman Empire to the Early Republican Turkey. It argues that the history of this hotly debated theory in Turkey was related with the attempts to interpret organisms by benefiting from scientific findings. As the secular way of thinking increased in the Ottoman Empire, interpreting organisms without reference to divine will became gradually entrenched among the Ottoman intelligentsia. There was a strong relationship between the development of secularism and the rise of evolutionary theory in the Ottoman Empire. Many Ottoman intellectuals used Darwin and Lamarck to explain the origins of humankind and their nature. Modern Turkey inherited certain aspects of the Ottoman intellectual realm, and consequently the idea of scientism and secularism gained an enormous momentum. The political orientation of the early Republican regime influenced its reception directly. The rise of a secular history and physical anthropology paved the way for the promotion and popularization of Darwin and the idea of biological evolution crystallized in these scientific fields.

This dissertation pays a particular attention to the rise of anti-Darwinism in the late period of the Ottoman Empire and places it into an anti-materialist context. It emphasizes that the main motivation behind anti-Darwinist sentiments were religious and social concerns, rather than scientific ones.

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Özet

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Prof. Dr. M. Asım Karaömerlioğlu, Tez Danışmanı

Bu tez evrim teorisinin Osmanlı İmparatorluğu'nun son döneminden Erken Cumhuriyet dönemine kadarki algısı hakkındadır. Hararetli biçimde tartışılan bu teorinin Türkiye'deki tarihi canlıları bilimsel bulgular ışığında değerlendirme çabalarıyla yakından bağlantılıdır. Seküler biçimde düşünme tarzının Osmanlı İmparatorluğu'nda gelişmesiyle canlıların ilahi iradeye referans gösterilmeden açıklanması Osmanlı entelektüel dünyası içinde giderek kök saldı. Sekülarizm ve Darwin'in Osmanlı'da yükselişi arasında güçlü bir ilişki vardır. Osmanlı'daki pek çok entelektüel insanın kökenini ve doğasını açıklamak için Darwin ile Lamarck'ı kullandı. Modern Türkiye ise Osmanlı'nın entelektüel dünyasının belirli özelliklerini tevarüs etti ve bilimcilik ile sekülarizm düşüncesi 1923'ten itibaren büyük bir ivme kazandı. Erken Cumhuriyet rejiminin siyasi eğilimi Darwin'in teorisinin algılanmasını doğrudan etkiledi. Tarih ve antropoloji bilimlerinin yükselişi bunun yaygınlaştırılmasının önünü açtı ve biyolojik evrim düşüncesi bu gibi bilimsel alanlarda kristalize oldu.

Bu tez Osmanlı'nın son döneminde anti-Darwinizmin yükselişine de özel bir yer ayırıyor ve bunu anti-materyalist bir bağlama oturtuyor. Bu tarz düşüncenin arkasındaki motivasyonun bilimsel değil de dini ve toplumsal kaygıların olduğunu vurgulanmaktadır.

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To my family

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Abbreviations and Acronyms

AGA	American Genetic Association
CUP	Committee of Union and Progress
DNA	Deoxyribose Nucleic Acid
HMS	His Majesty's Ship
OUMNH	Oxford University Museum of Natural History
PMOA	Prime Ministry Ottoman Archives
RPP	Republican People's Party
SPC	Syrian Protestant College
THS	Turkish Historical Society

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1

Introduction

The nineteenth century witnessed the zenith of the idea of biological evolution, which encouraged many thinkers to interpret organisms and the earth from a secular point of view. There arose a considerable scientific interest on the earth and organisms. The scientific revolution and striking developments in areas like geology demonstrated that the earth and nature had their own rules that scientists needed to discover. In addition, the French Revolution played a remarkable role in secular explanations of both the earth and organisms. This revolution paved the way for an attack on traditionalism and idea of the "new" gained momentum. The idea of biological evolution fit well with the intellectual spirit of the nineteenth century. Thanks to the contributions of scientists such as Jean Baptiste Lamarck (1744-1829) and Georges Louis Leclerc, Comte de Buffon (1707-1788), biological evolution gained momentum in Europe. However, Charles Darwin (1809-1882) was the leading figure of the theory of evolution. His main legacy in the field of evolution - the principle of natural selection - had much more power to interpret the origins of organisms on earth. The implications of Darwinian theory of evolution became a hotly-debated issue all over the world. As a significant, distinctive theory in the history of science, it had detrimental effect on divinely ordained nature as it displaced God in the explanation of the origins of organisms. It demonstrated that humankind, which had hitherto been recognized as an exalted species, was the product of millions of years of evolution, rather than a

divine masterwork. Species were not stable and had undergone a process of evolution in the long course of history. They were various from their initial forms.

Religious circles worried about the anti-theological implications of the materialistic interpretation of organisms. Darwin's theory was a harbinger of a long-lasting tension between some scientists and men of religion. Many thought that religion and society were on the line because of the harmful implications of this theory. His revolutionary influence would shake the pillars of religion and desacralize both the earth and humans. Likewise, it was widely believed at that time that applying struggle and natural selection to human societies would bring about doomsday; the theory was believed to have a striking capacity to damage the main values of humanity. In particular, the idea of a common ancestor with apes dethroned humankind from its elevated place, making them savage, like animals. Thus, the anti-Darwinist thoughts arose almost simultaneously all around the world. The introduction of Darwinian theory took place almost simultaneously with its discontent given that its implications were regarded as a danger to the divine interpretation of organisms. Moreover, Darwin had an enormous impact on various fields of science, even though he did not formulate a social theory. His views purportedly played a leading role in the construction of Social Darwinism, although the contributions of Herbert Spencer were more apparent and enduring on this point.

This dissertation sheds light on the reception of Darwinian theory in the late Ottoman Empire and in early Republican Turkey. Evolution was one of the most striking biological issues in the intellectual landscape in this era; Darwin's theory was so wide-ranging that it left an impact on sciences - from embryology to politics. While scrutinizing Darwinian reception in the Ottoman Empire, certain Islamic, I will examine anti-Darwinism in detail. This study contributes to the crystallization of Darwinian theory in the intellectual history of Turkey. How this theory helped intellectuals reinterpret humankind from a secular point of view will be discussed in detail. This dissertation is constructed upon four main arguments.

First, Darwin's influences were not limited to Europe and North America and led to a worldwide controversy. At the time theory was introduced in the Ottoman Empire at the end of the nineteenth century, the state was

undergoing a process of secularizing everything from politics to education in order to survive. Almost all aspects of life were under the influence of Westernization, and certain aspects of Western science, education, and culture were appropriated. New educational institutions and printed materials and increasing contact with European countries helped in the making of a secular mindset.

In the nineteenth century, many Ottomans had a growing sense of decline in many areas from military to economy. The classical Ottoman political ideology seem to be not capable of confronting the political, military and economic challenges that the state and society faced. This ideology was mainly based on "World Order (*Nizam-ı Alem*) and Justice (*Adalet*)." It was believed that as there had to be an order both in universe and society. Political power had to form a social order based on justice. In particular, justice was "a source of legitimacy" for political power.[1] One of the basic duties of sultans was perceived to secure justice in society. Ottoman polity were deeply influenced from Islamic political theory that argued that political power was a "divine" position that Muslims had to "obey" (*biat*).[2] In fact, it was equal to "vicegerency of God"[3] and even some Ottoman sultans called themselves God's shadow on earth (*Zıllulah-ı fî'l-Arz*). Thus, "obedience" to political authority was an enormous political value, but Islamic political theory did not establish "an accepted theory of resistance" against a despotic ruler. On the other hand, ruler had to "consult" (*Meşveret*) with other Muslims in decision making process, but this consultancy was between rulers and leading part of society, rather than ordinary persons.[4] Notables or high ranked officers had more opportunity to convey their opinions to ruler himself in a direct or indirect way.

Islamic political theory was not the sole source that formed the political thought in the Ottoman Empire. In fact, it is fruitful to have a look at the

1 Cemil Oktay, "Bizans Siyasî İdeolojisi'nden Osmanlı Siyasî İdeolojisi'ne," In *Modern Türkiye'de Siyasi Düşünce: Cumhuriyete Devreden Düşünce Mirası Tanzimat ve Meşrutiyet'in Birikimi*, ed. Tanıl Bora and Murat Gültekingil (Istanbul: İletişim Yayınları, 2001), 32.

2 Şerif Mardin, *Yeni Osmanlılar Düşüncesinin Doğuşu* (İstanbul: İletişim Yayınları, 1996), 98.

3 Ibid., 15.

4 Ibid., 442.

political traditions of "Mediterranean, Middle East and steppes of Central Asia." Ottoman political ideology can be called "composition" of these political traditions. In particular, Ottomans maintained "the tradition of law (*yasa*)," a remarkable point of political culture from Central Asia. They founded a state based on both religious and customary laws and were mindful of the fact that customary laws did not conflict with the former.[5] Past and traditions were politically important because they were a kind of guidance for both state and society and legitimized "social action and political authority."[6]

Ottoman political ideology was not just "superimposed image of its immediate predecessors."[7] Islamic political theory and the political traditions of Mediterranean, Middle East and Central Asia shaped considerably Ottoman political theory, but it is noticeable that Ottomans had some peculiarity in their own polity. That is, they established a political theory based on aforementioned traditions and their own "experiences." For example, sultans gradually "isolated" themselves from "social life." Also, Ottomans formed a practice of succession that only one heir could become the sultan, a different point from political tradition of the steppes of Central Asia. That is, the state could not be separated by the sons of sultan after his death and it remained territorially one part.[8]

By the nineteenth century, Ottoman World Order (*Nizam-ı Alem*) was not capable of confronting political, economic and military problems.[9] Thus, Ottoman political ideology began to be influenced by Europe even though it had stayed "outside" from the intellectual and political developments in Europe until this century. When the Young Ottomans (Namık Kemal, Ziya Paşa, Ali

5 Cemal Kafadar, "Osmanlı Siyasal Düşüncesinin Kaynakları Üzerine Gözlemler," In *Modern Türkiye'de Siyasi Düşünce: Cumhuriyete Devreden Düşünce Mirası Tanzimat ve Meşrutiyet'in Birikimi*, ed. Tanıl Bora and Murat Gültekingil (Istanbul: İletişim Yayınları, 2001), 24-26.

6 Oktay, "Bizans Siyasî İdeolojisi," 30.

7 Daniel Goffmann, *The Ottoman Empire and Early Modern Europe* (Cambridge: Cambridge University Press, 2004), 11

8 Cemal Kafadar, "Osmanlı Siyasal Düşüncesi," 27-28.

9 Mehmet Ö. Alkan, "Resmi İdeolojinin Doğuşu ve Evrimi Üzerine Bir Deneme," In *Modern Türkiye'de Siyasi Düşünce: Cumhuriyete Devreden Düşünce Mirası Tanzimat ve Meşrutiyet'in Birikimi*, ed. Tanıl Bora and Murat Gültekingil (Istanbul: İletişim Yayınları, 2001), 381.

Suavi… etc.) appropriated European political ideas, they had a number of serious problems:[10] They did not leave Islamic political theory and preferred to use an Islamic discourse while expressing their political ideas. For instance, Justice (*Adalet*), Obedience (*Biat*), and Consultancy (*Meşveret*) were common terms that they often used in their writings.[11] However, they were relatively open-minded due to their significant attitude to the outside world and had "an increasing eagerness to know, study and to understand" it.[12] In fact, they were enthusiastic about learning and comprehending the methods lying behind the power of Europe.

Ottoman intellectuals were impressed by European civilization in an era when positivism and materialism were permeating through a range of channels such as Western style schools and Translation Chamber (*Tercüme Odası*).[13] Despite the minor or major differences in the Young Ottomans' worldview, they reached a consensus on the idea of progress (*terakki*).[14] As some of them visited Europe and read many books about it, they were cognizant of Europe's material progress and hoped to find solutions for the problems of the empire. During the Tanzimat period, the Ottomans borrowed many terms from Europe. Progress (*terakki*) and civilization (*sivilisazyon*) were two of them, but there was a problem about the term civilization as this word did not have its Turkish equivalence. By the 1850s, the word *medeniyet* was used for civilization. It was believed that the civilized societies controlled the nature of their progress and that humans were evolving from nomadism (*bedeviyet*) to civilization (*medeniyet*). The civilized societies had social, military and religious superiority over nomadic ones.[15] The idea of progress was "a cornerstone of Ottoman thought." The developments in contemporary science was so overarching that many Ottomans believed that they lived a

10 Mardin, *Yeni Osmanlılar*, 15.

11 Ibid., 95.

12 Ibid, 450.

13 Erol Özbilgen, *Pozitivizm Kıskacında Türkiye* (Istanbul: Ağaç Yayıncılık, 1994), 40.

14 Ibid., 52.

15 Gökhan Çetinsaya "Kalemiye'den Mülkiye'ye Tanzimat Zihniyeti," in *Modern Türkiye'de Siyasi Düşünce: Cumhuriyete Devreden Düşünce Mirası Tanzimat ve Meşrutiyet'in Birikimi*, ed. Tanıl Bora and Murat Gültekingil (Istanbul: İletişim Yayınları, 2001), 56.

"century of progress" that completely used science as a guiding light. What is noteworthy at this point is that this notion of "progress had a materialistic meaning." Over time, science and progress became the key words for their political view.[16] While the Young Ottomans and Young Turks were in Europe, they witnessed European progress at first hand rather than through secondary sources. For instance, Namık Kemal, while in London in 1867, often praised the material progress of England. In one of his articles entitled *Terakki* (Progress), he stated that "it is futile to visit civilized countries. If someone look at London with scrutinizing eyes, he or she is astonished by the wonders to see."[17]

While the Ottoman intellectuals were looking for cures for the problems of the empire, positivism offered an intellectual toolkit for the development. Science, "the most significant theme of positivism," became an inseparable part of "Ottoman political ideology" in the nineteenth century. However, the Ottomans were influenced by other positivists such as Herbert Spencer and Ludwig Büchner, rather than Auguste Comte himself, the founder of positivism. Science was considered to be a "magic" to solve the problems of the empire.[18] The Ottomans were engaged in the intellectual life of Europe through positivism and materialism in order to achieve progress (*terakki*), but this process took place thanks to translation, new schools, sending students to Europe ..etc rather than via "a philosophical channel."[19]

While examining the political ideology of both the members of the Young Ottomans and the Young Turks, it is significant to bear in mind that many of them had relatively direct experience of European material progress. Namık Kemal's experience in London shaped his intellectual development. For the members of the Young Turks, the experience of exile played a leading role in the intellectual development. As many members lived in Europe for a long

16 Şükrü Hanioğlu, *The Young Turks in Opposition* (New York: Oxford University Press, 19959, 12-13.

17 Namık Kemal, *Osmanlı Modernleşmesinin Meseleleri: Bütün Makaleleri 1* (Istanbul: Dergâh Yayınları, 2005), 212.

18 Alkan, "Resmi İdeoloji," 383.

19 Murtaza Korlaelçi, *Pozitivizmin Türkiye'ye Girişi* (Ankara: Hece Yayınları, 2002), 163.

time, they had "political links with government or civil society" and had "contact with the European intelligentsia." Their personal experiences played a pivotal role in their intellectual development in Europe.[20] The exile of the leading members of the Young Turks allowed them to gain "recognition" among the European "intellectual elites." While Ahmed Rıza met Gustave Le Bon, Prince Sabahettin Bey met Edmond Demolins. They had a chance to learn positivist thinking from the leading persons at that time. Their personal contact with aforementioned intellectuals and their participation in intellectual milieus of France considerably influenced their point of view and "their mission to save the empire "from debacle.[21]

Many Young Turks appeared in a network in Europe. As they had serious financial difficulties, they had to contact with different organizations or groups to survive and to promote their political ideas. Both Ahmed Rıza and Ibrahim Temo, who was one of the founder of *Ittihad-i Osmani* (Ottoman Union), had considerable contact with politicians, journalists and their counterparts. For example, when Ahmed Rıza was put on trial in Paris, a journalist Georges Clemanceau, who would be the prime minister of France in the following years, was one of Rıza's attesters in the court.[22] Their social and organization network and life in Europe helped them to develop a political idea in the scientific and intellectual milieu of Europe. They were not an isolated group and had partially direct or indirect contact with the leading figures of European intelligentsia. For instance, after leaving Istanbul, Ibrahim Temo practiced his profession as a physician in Romania thanks to his fellow townsman Nikola Naçu from Albania.[23]

The emergence of the elite that followed the latest scientific developments in the West played a leading role in the introduction of Darwinian theory of evolution. Many of them were under the considerable influence of materialism and positivism. This theory fit well with their scientific and philosophical

20 Stefano Taglia, "The Intellectual's Dilemma: The Writings of Ahmet Riza and Mehmet Sabahettin on Reform and the Future of the Ottoman Empire," (PhD diss., University of London, 2012), 38.

21 Ibid., 264-265.

22 Ahmed Rıza, *Ahmed Rıza Bey'in Anıları* (Istanbul: Arba, 1988), 12.

23 Ibrahim Temo, *Ibrahim Temo'nun İttihad ve Terakki Anıları* (Istanbul: Arba, 1987), 55.

views. In particular, the German philosophers Ernst Haeckel and Ludwig Büchner tremendously impacted many intellectuals such as Baha Tevfik and Abdullah Cevdet (Karlıdağ). The secularization and acceptance of science as a guiding light were the hallmarks of the late period of the empire. To be clear, the majority of Ottoman intellectuals did not challenge the teachings of Islam even as they interpreted life from a materialist point of view. Materialism and positivism were their guiding lights, but this approach did not amount to an anti-religious movement. In fact, challenging religion would have been an enormous hindrance for someone trying to popularize his or her thought in a Muslim society, where there was strict censorship undertaken by the state. In the nineteenth century, Ottoman intellectual life gradually and increasingly acquired a secular character.

Second, the growing sense of decline in the Ottoman Empire forced some literate individuals benefit from science to interpret the state, society, and the individual. They sought practical measures to save the Ottoman Empire while pure scientific motivations remained in the background. When evolution was taken into consideration in the Ottoman Empire, Herbert Spencer - who constructed an organicist sociology - was well-known among the Ottoman intellectuals. He offered a framework to understand the state, society and the individual in a progressive manner. In addition, although some of Spencer's books were translated into Turkish, none of Darwin's were. Because of their practical concerns, Ottoman intellectuals prioritized Spencer over Darwin. While *The Origin of Species* was translated into European languages such as French and German within a couple of years of its initial publication, Ottomans read the book in English or learned of it from secondary sources. Even so, Darwin's views were beneficial for interpreting biological issues from a secular point of view for many Ottoman intellectuals. Science was believed to explain both social and biological issues without divine will.

The beginning of Young Turk era (1908-1918) marked an intellectual boom due to the abolishment of the oppressive Hamidian regime. Many journals were issued and many societies emerged. Furthermore, there was no strict censorship of printed material and authors had more freedom to publish. While the subject of Darwin had previously been deemed harmful for a Muslim society, the introduction and promotion of this theory were relatively easy

after 1908. Intellectuals such as Memduh Süleyman, Edhem Necdet, and Subhi Edhem played a leading role in the introduction of Darwinian thought. Much more so than in the Young Turk Era, the popularization of biological evolution accelerated following the establishment of modern Turkey since the new regime wholeheartedly embraced the idea of scientism. One of the main aims of the Kemalist rulers was to shape the state, society, and individual according to science. In this respect, there was a remarkable intellectual continuity from the Ottoman Empire to modern Turkey.

Third, while scrutinizing the place of Darwin in the intellectual landscape of the late Ottoman and the early Republican periods, the rise of anti-Darwinist sentiments cannot be ignored. A strong reaction to his theory emerged due to its anti-theological implications and materialist interpretation of organisms - especially of humankind. The anti-Darwinist thinkers such as Aksekili Ahmed Hamdi and Şehbenderzade Ahmed Hilmi wished to protect their religious community from the corrosive influence of evolutionary thought. They were uncomfortable with probable hazards the fabric of Muslim society. However, their main fight against Darwinism took place in an anti-materialist context because Darwin's theory was regarded as a cornerstone of materialist philosophy. In particular, Haeckel and Büchner, who were known for their materialist thoughts, played a considerable role in the promotion of biological evolution in the Ottoman Empire. Thus, anti-Darwinist sentiments in the Ottoman Empire cannot be comprehended without paying attention to the rise of materialist philosophy. As the Ottoman Empire became exposed to Western culture, some conservative thinkers wished to protect the basic tenets of Islam and Islamic society, and equated Westernism with materialism. As a result, the debates on this controversial subject, unsurprisingly, were put in philosophical and religious terms.

The anti-Darwinists in the Ottoman Empire believed in the benefits of Western science, but advocated its selective rather than complete appropriation. Though they cannot be characterized as ardent supporters of scientism, they accepted certain scientific findings to modernize the Ottoman Empire. The main aim was to appropriate Western science in a way that would not harm the values of Islam and Muslim society. In this sense, they were certainly not unconditional supporters of Western science. The long-lasting tension

between Darwin's theory and religion does not mean that anti-Darwinists were against science. The motivation behind anti-Darwinism in the Ottoman Empire was social, political, religious, and philosophical rather than scientific. On the other hand, Darwin's theory was so well proven that some conservative thinkers like Ömer Faruki attempted to accommodate it into Islamic history in order to demonstrate that Islam was pro-science - that there was no conflict between evolution and this religion. Science adopted in an Islamic setting was considered reasonable and this kind of modernization was preferable.

Last, the Ottoman Empire left an enormous legacy to Republican Turkey in terms of Darwinism and anti-Darwinism. The promotion and popularization of Darwinian theory gained enormous momentum because of the radical, cultural, and educational reforms undertaken to create a secular Turkish identity. One of the most significant values of Republican regime was scientism, which was deeply rooted in the Ottoman past. As Kemalist elites had received their education in Western-style schools, learned foreign languages, and been influenced by European civilization, they accepted science as a guiding light for the creation of a modern state, society, and individual. The period between 1923 and 1938 marked a fundamental cultural revolution, and both organisms and the earth had to be interpreted from a secular point of view. The secularization that characterized the late period of the Ottoman Empire accelerated. There was a direct relationship between the political orientation of the Kemalist regime and the rise of Darwinian theory in Turkey.

§ 1.1 Sources, Methodology, and Outlines

This study concentrates on the place of Darwinism in the late Ottoman Empire and the early Republican period. As it is a dissertation on intellectual history, many primary and secondary sources were examined in detail to situate Darwin and his theory in the Ottoman intellectual milieu. Books and journals, the most significant sources, provided fruitful relevant information. In particular, many journals published from the 1850s onwards were scrutinized to examine how secularism, materialism, and scientism were becoming entrenched among the Ottoman intelligentsia. Periodicals were the flagship of intellectual

life at the time. Even though they sought to provide encyclopedic knowledge to their readers, the influence of positivism grew as time went on. It must be emphasized that publishing in the Ottoman Empire was faced with numerous problems such as censorship and financial difficulties. Thus, the publication of some journals was interrupted and others were closed down completely. Nevertheless, these printed materials offered an enormous insight to figure out the Darwinism in the Ottoman Empire.

Many journals of the nineteenth century are very striking, but *Mecmua-i Fünûn* (journal of sciences), *Dağarcık* (pouch), *Servet-i Fünun* (wealth of sciences), *Hazine-i Evrak*, and *İçtihad* were the leading ones that can be regarded as channels for the conveyance of recent scientific developments in Europe to Ottoman audiences. Articles on nature and organisms published on these journals were examined. Journals that appeared after 1908 were even more striking given the relative freedom offered to authors to express their thoughts to the public. The secular interpretation of organic life became more crystalized in these journals. Materialist and evolutionary forces were particularly apparent in the journals *Felsefe Mecmuası* (journal of philosophy) and *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* (journal of economic and social sciences). The authors of *Felsefe Mecmuası* were influential figures of Ottoman materialism. In particular, Baha Tevfik, who was one of translators of Ludwig Büchner's *Kraft und Soft* (*Force and Matter*), made an enormous contribution to the literature on materialism. He also published Ernst Haeckel's studies in the journal part by part. In addition to *Felsefe Mecmuası*, *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* had a distinctive position in the history of evolution in Turkey since many articles on this subject were published in it by Ahmed Şuayip, Bedii Nuri, and Asaf Nef'i. However, some of these articles were on the evolution of the state and society, rather than on biological evolution. Nevertheless, the authors were ardent supporters of positivist tradition, and proof that the idea of evolution was entrenched in the Ottoman intellectual world.

Whilst scrutinizing the aforementioned journals, it is also necessary to have a close look at periodicals published by conservatives in order to learn the opinions of conservative thinkers. *Sırat-ı Müstakim* (straight path), *Beyanü'l-Hakk* (statement of god), *Sada-yı Hakk* (sound of god), *İslam Mecmuası* (journal of Islam), and *İslam Dünyası* (Islamic world) covered anti-materialist

articles. Though it was difficult to find articles on anti-Darwinism or anti-evolution articles, reading between the lines of articles was fruitful. Conservative authors like Aksekili Ahmed Hamdi wrote a few anti-Darwinist articles for *Sırat-ı Müstakim*, which was well-known for its Islamic orientation. While reading these periodicals, it should be kept in mind that they cannot be classified as against Westernization or modernization. Despite their political orientations, they favored a selective appropriation of Western science. They were aware of the need for the urgent modernization of the Ottoman Empire.

Apart from journals, books situated Darwinism in the intellectual landscape of the Ottoman Empire. Despite the low literacy rate, the number of books and readers gradually went up. Translated materials in particular helped Ottomans learn of recent scientific and philosophical developments in Europe. While technical books were translated into Turkish from the beginning, many philosophical books - some of which were on materialism and evolution - were only translated in subsequent years. Although none of Darwin's books was translated, translations by certain intellectuals like Süleyman Memduh, Baha Tevfik, and Ahmed Nebil were striking since they gave Ottoman audiences access to leading materialist philosophers. In addition, the memoirs of some Ottomans such as Rıza Nur and Rıza Tevfik (Bölükbaşı) were beneficial for figuring out the place of Darwinism in the empire.

As this study focuses on an intellectual subject in the Ottoman Empire, it was difficult to find archival documents about Darwinism and anti-Darwinism. Even though the theory of evolution was considered to be harmful to society and individual, the state seems to have taken no precautions to prevent its popularization. However, many books that were related to materialism and contained Darwinian interpretations were banned by the state. But there was no direct proscription against Darwin and his theory. What the state was worried about was the destructive results of materialist thinking. Due to the shortage of archival materials, books and journals became the most significant sources for study.

This dissertation is comprised of seven chapters, including this introduction and the conclusion. In the second chapter, I will focus on the rise of Darwinian theory of evolution and anti-Darwinism in general. Special emphasis will be placed on the scientific conditions that paved the way for the

appearance of modern evolutionary theories. Darwin's theory was widely considered as important as Newton's discovery of gravity and Copernicus' heliocentric view. His great contribution to the secular and materialist interpretation of organisms will be examined and his distinctive place in the field of biological evolution will be emphasized. His well-proven theory reflected onto other fields such as sociology and politics and, it did not remain an ordinary biological theory. After the role of evolution in the emergence of Eugenics is demonstrated, the emergence of anti-Darwinism will be examined in particular because social and religious motivations guided against the popularization of this theory.

In the third chapter, factors leading to the secular way of thinking will be analyzed in detail. Since journals were the flagship of Ottoman intellectual life, their role and legacy will be investigated in detail. Their contribution to the explanation of the forms of natural life from a materialistic point of view cannot be ignored. Many were published only for a short period. Then, this chapter will scrutinize intellectuals influenced by evolutionary views, biological materialism, and positivism. Even though Darwin and his theory was not the focus in their point of view, some of them - such as Asaf Nef'i and Bedii Nuri - used certain Darwinian concepts to interpret society and the individual. At the end of this chapter, Ottoman intellectuals (Subhi Edhem, Memduh Süleyman, and Edhem Necdet) who played a leading role in the biological theory of evolution will be examined in detail. While scrutinizing evolution in the intellectual history of the Ottomans, physical anthropology requires special consideration since this scientific field benefited from evolution. In particular, the role of Mustafa Satı (el-Husrî) will be emphasized

In the fourth chapter, the rise of anti-Darwinism and the arguments of its proponents will be investigated. Social and religious concerns were their motivations, like those of critics all over the world, but they emphasized that the implications of materialism made them afraid. Evolution was regarded as one of the bases of materialist philosophy.

The fifth chapter will scrutinize the reception of biological evolution in the early years of Republican Turkey. The radical modernization policy of the young regime paved the way for cultural revolution. As the Kemalist elite was unafraid of the implications of materialism and Darwinian theory, it did not

hesitate to promote them through its educational institutions. Why Kemalist elites promoted evolution and what steps they took to entrench it in Turkish intellectual life will be explained. This chapter compares the between pre-1938 and post-1938 eras to investigate whether the death of Atatürk was a breaking point in terms of the popularization of the evolutionary theories.

The sixth chapter is the summary of the arguments put forward in the aforementioned chapters.

2

The Concomitant Rise of Darwinism and Anti-Darwinism

Evolution means the "change" of organisms – by which they undergo a process of modification and divergence. The result of the process is numerous descendant species that emerged in time. Many often confuse the concepts of evolution and natural selection. The former is the change that took place in past while the latter is the most important "mechanism" of evolution.[1] The meaning of evolution, like the mutation of species, has changed in the course of history and has been used as synonyms for progress, advancement, and developments in many fields such as politics and culture. Thus, these usages of the word evolution have been conceived as interchangeable. In this dissertation, evolution means the mutability of species in biological terms.

The history of the idea of biological evolution can be traced back to Anaximander (610-546 BC) and Empedocles (490-430 BC) in ancient Greece and Miskawayh (940-1030) in Islamic world, but the nineteenth century represents the zenith for biological evolution. It is possible to call this era the age of biology because of a number of path breaking developments in scientific fields ranging from anthropology to zoology. Since the study of organic life increased tremendously and remarkably, the nature of humankind had to be

1 Jonathan Losos, "What is Evolution ?," in *The Princeton Guide to Evolution*, ed. David A. Baum et al. (Princeton: Princeton University Press, 2014), 3.

reinterpreted in lights of news scientific advancements. However, it must be kept in mind that a God-centered point of view on nature had been undermined by the breakthrough developments in science that created the intellectual climate for the appearance of biological evolutionary theories. At this juncture, it is fruitful to look at the advances that played a considerable role in the making of this climate.

First of all, the scientific revolution that took place roughly from 1500 to 1700 grew out of issues regarding the structure and function of the universe. Nature itself had laws that scientists needed to discover. In other words, "the new sciences" focused on the explanation of everything - including the world and "the structure of living things" – "in mechanical terms."[2] According to scientists such as Johannes Kepler (1571-1630) and Isaac Newton (1642-1727), nature had its own laws bringing about "regular, predictable" results to comprehend the universe.[3] Copernicus' heliocentric theory made an enormous contribution to the emergence of "a new cosmology and physics." As a matter of fact, all played leading roles in creating the centerpieces of the scientific revolution.[4] In particular, Copernicus challenged earth-centered astronomy by claiming that the sun was at the center of solar system and the earth itself was but one "corner" of this system.[5] That is, the earth was no more than an ordinary planet in the solar system and had no special importance. Their work in the new sciences was the reduction of the earth to an extremely big "machine." This approach to the earth put forward a question if the world was a material substance, why should one consider that there was a God who dealt with it?[6] The materialist interpretation of universe had a remarkable capacity to shake belief in a deity.

2 Peter J. Bowler, *Evolution: The History of an Idea* (Berkeley: University of California Press, 2003), 28.

3 Garland E. Allen, "The History of Evolutionary Thought," in *The Princeton Guide to Evolution*, ed. David A. Baum and at al (Princeton; Oxford: Princeton University Press, 2014), 11.

4 Bowler, *Evolution*, 28-29.

5 Bertrand Russell, *Din ve Bilim* (Istanbul: Varlık Yayınevi, 1972), 129.

6 Bowler, *Evolution*, 38.

There had to be religious implications of this tremendous scientific progress since, it powerfully challenged religious teachings in a direct or indirect way. Later, awe-inspiring discoveries and observations in astronomy forced men of religion to accept them, as well.[7] God was not excluded from the scientific interpretation of universe, but his role was readjusted. It was thought that the discovery of the laws of nature meant the discovery of divine works. Actually, God himself was still an inevitable part of worldview and was not abolished. Without God, there was a missing gap in the interpretation of nature.

Second, the developments such as extracting mine from the ground, road building, and industrial breakthroughs helped geology to advance in the eighteenth century. Owing to these developments, knowledge of the earth increased considerably and fossils of old organisms were unearthed. Scientists had an enormous opportunity to understand the evolution of species. In fact, the increasing excavation of the earth meant an increase of knowledge about the surface of the human habitat. Much was known "about the structure of earth and present-day organisms."[8] The unknown was becoming known by human beings who were not only discovering fossils but unearthing the secrets of their habitat. In addition, biogeography came into prominence because it helped scientists attain better knowledge of present-day and ancient organisms living in different places of the world. They had more opportunity to determine the origin of species and, and learn how they spread in time. Tracking their migration routes was easier.[9] When geology failed to proffer the necessary clues about the evolution of organisms, other scientific fields came in to help, providing proofs about them. Advancements in the biological sciences, paleontology, and embryology strengthened the idea of evolution. Hilmi Ziya Ülken says while paleontology provided fossils of species,

7 Keith Thomson, *Before Darwin: Reconciling God and Nature* (New Haven: Yale University Press, 2005), 231.

8 Allen, "History," 11-12.

9 Bowler, *Evolution*, 227.

embryology scrutinized "the life of human beings from the mother's womb to the grave." The studies on the life of organisms grew enormously."[10]

Due to the geological advances, many fossils became available for use in evolutionary studies. Some people who collected fossils of old species considered that their collections were similar to other "minerals," but this idea was criticized by some naturalists in the seventeenth century. These scientists did not overlook an important possibility: these fossils might have been the remaining of "extinct" organisms. They were aware of significant similarities between fossils and present-day organisms. Fossils showed that some organisms become "extinct" or evolved..[11] This point of view challenged the idea of the stability of species, showing the differences of organisms in past. Natural life was not as it was told in the Bible, and the firm stances of such holy books cast doubt on their credibility. What is more, the discoveries of my geologists and anthropologists proved that the world was much older than a literal interpretation of the Genesis story.

European expansion all over the world acquainted the "white man" with other species living in various environments. For example, the main aim of HMS Beagle, which Charles Darwin boarded to make geological investigations and collect species, was a survey of South America. The age of colonialism played a remarkable role in scientific research since it offered much empirical evidence and allowed scientists to observe other species. In addition, they came across various kinds of people with distinct "physical" characteristics. While Europeans got the control of different parts of the world, they used the differences of "races" to legitimate their conquest, rule and extermination. They were "aware of the physical differences" between themselves and other peoples and thought that if indigenous people were less developed than they, this situation could be attributed to their own "physical" and "mental" characteristics. During the colonial age, many believed that indigenous races were inferior in terms of intelligence and morality. On this point, evolutionism offered a new explanation for the formation of different races in the world.

10 Hilmi Ziya Ülken, *Türkiye'de Çağdaş Düşünce Tarihi* (Istanbul: İş Bankası Yayınları, 2013), 342.

11 Bowler, *Evolution*, 35-36.

However, even before the idea of biological evolution, indigenous peoples living in Africa and Australia had been described as apelike. White Man looked down on them due to their physical appearances.[12] Evolutionary thought entrenched racist interpretation in scientific milieus.

The more fossils that scientist found, the more difficulty and confusion they encountered in their profession. As their classification posed serious problems, a systematic approach was required. Thus, in the eighteenth century, the well-known naturalist Karl Linnaeus (1707-1778) formed a taxonomic system in which he grouped species. In addition, many naturalists tried to ascertain the relationship between species. Heretofore, species had been categorized, but it was based on religious point of view, rather than scientific principles. Those who proposed natural theology offered a hierarchically organized schema. Humans were attributed a special place, and animals and plants were even categorized within their group. That is, many exponents of natural theology advocated for a chain of being in which "species" were categorized in a hierarchical way. For example, Charles Bonnet prepared a linear chain where he placed organisms according to their resemblances. The simplified version of his "chain of beings" is below. Bonnet argues that "each species was an eternal element in the divine plan."[13]

12 Ibid., 292-293.

13 Ibid., 62-64.

Table 1 Organic Hierarchy of Charles Bonnet

Man
Monkeys
Quadrupeds (Mammals)
Bats
Ostriches
Birds
Aquatic Birds
Flying Fish
Fish
Eels
Sea Serpents
Reptiles
Slugs
Shellfish
Insects
Worms
Polyps (Hyrdas)
Sensitive Plants
Trees
Shrubs
Herbs
Lichens
Mold
Minerals
Earth
Water
Air
Ethereal Matter

As expected, man is at the top of this schema, but what is striking is the position of the monkey. Bonnet placed it just after man. It can be inferred that he did not regard monkeys as ordinary animals and he must have thought that there were strong similarities between monkey and human. Furthermore, he put not only earth's organism, but also inorganic matters in the bottom of

schema. Therefore, from his point of view, there was a hierarchical structure within all things.

Third, the French Revolution of 1789 had an unprecedented place in human history, leaving a long-lasting impact on the ways of thinking. After this historical event, economic, social, and political changes proved that the powers of secular and religious institutions - monarchy and church - were unable to abstain from change. Old values and views were dislocated, and the revolution weakened the power of the church. Human beings came to understand that the world itself was subject to change and flux and that nothing remained the same. The works of French philosophers like Baron d'Holbach (1723-1789) and Denis Diderot (1713-1784) embraced this approach. Actually, the aforementioned developments provided a better ground for the crystallization of the idea of biological evolution, but these scientists stressed that change and transformation were natural and eternal, forming a fruitful context for thinking about how species might be transformed by natural causes.[14] The cyclical understanding of time was replaced with a progressive one. A new outlook on natural history emerged as a result of this fundamental change in mentality. In fact, the idea of evolution was optimal for the spirit of the age since it offered a relatively progressive explanation about the origin of organisms and their subsequent development. Evolutionary ideas were absorbed into the thought of the nineteenth century in various ways. The images of progress penetrated the worldview of the period, and the idea that "some form of struggle was needed to advance toward higher things became more apparent."[15]

Seeking patterns in science was one of the most important features of scientific endeavors in the nineteenth century. "The late nineteenth century's vision of progress was based on the model of a ladder of developmental stages."[16] The idea of evolution fit with the dominant intellectual climate because it offered such stages. For example, the development of species, including human beings, could be explained through successive stages. That is, a scientific explanation that contain stages or phases met the expectations of scientific milieus.

14 Allen, "History," 11-12.

15 Bowler, *Evolution*, 318.

16 Ibid., 284.

§ 2.1 The Birth of Modern Evolutionary Theories

To comprehend the conflict between science and religion, it is beneficial to briefly look at the history of biological evolution in the modern sense. An influential author on evolution was Georges Louis Leclerc, Comte de Buffon (1707-1788), was a well-known French naturalist. "He developed a theory of degeneration to account for at least the process by which the transformation of species could occur within a broad group."[17] His forty-four volume *Natural History* had a scientific popularity at the time.[18] Charles Darwin's grandfather, Erasmus Darwin (1731-1802), asserted another theory relating to the change of species. The grandson was born into an intellectual family and his father was a physician. Erasmus Darwin wrote a book exploring the laws of organic life, entitled *Zoonomia*. He explained the process of evolution in this book, drawing attention to the great changes in animals. The first was changes that took place during the life of an individual animal, and he cited "changes in the production of a butterfly with painted wings from the crawling caterpillar" as an example.[19] The second was changes that took place over a long period. For example, horses were selected by humans who wanted to benefit from the different features such as strength and swiftness. They played a leading role in the selection of species, a point that Darwin emphasized in the first chapter of *The Origin of Species*.[20] Third, Erasmus Darwin was aware of the fact that warm-blood animals had many obvious examples in anatomical changes and organic structure and argued that they were the production of a similar filament.[21]

After Erasmus Darwin, Jean-Baptiste Lamarck (1744-1829) conducted painstaking research on evolution. He focused on the course of evolution in animals rather than humans. He was not widely criticized relative to Darwin. As a naturalist, he developed "a full-fledged theory of the transformation," explaining how they could adapt to their environment. A well-known example

17 Allen, "History," 14.

18 Desmond King-Hele, *Erasmus Darwin* (London: Macmillan, 1963), 65.

19 King-Hele, *Erasmus*, 67-68.

20 Charles Darwin, *The Origin of Species* (London: Watts, 1945), 21.

21 King-Hele, *Erasmus*, 67-68.

of his theory concerns the necks of giraffes. He claimed "as ancestral giraffes ate leaves from the lower branches of trees, they continually stretched their necks to reach leaves high up." [22] The length of the giraffe's neck was passed on to its offspring, a proof of "acquired characteristics." He thought that structural changes in adult organism led by the activity of organs could be partially transmitted to the offspring. The change of habits and the use of body in other ways played a leading role in the use and disuse of the organ.[23]

Lamarckian theory of evolution offered an explanation about changes in organisms. He proposed a relatively teleological instead of a random course of evolution. He accepted the evolution of organisms but that it took place in a teleological way. Therefore, his point of view was considered less dangerous by comparison with the Darwinian one. "As Lamarckism was seen as the natural alternative to Darwinism, there has been a tendency for later liberals to regard it as a morally preferable."[24] In the late nineteenth century, Lamarckian theory of evolution was revived as some biologists noticed that the inheritance of acquired characteristics softens evolutionism and has a teleological aspect. Although this theory was not completely accepted, Lamarckian principle of inheritance of acquired characters had a chance for rebirth.[25] It was supposed to have offered a more suitable biological toolkit for understanding the development of species.

As some scientists found Lamarckian theory of evolution lacking, it was modified. Neo-Lamarckism emerged in the late nineteenth century. The strongest supporters of this movement were Alpheus Hyatt (1838-1902), Edward Drinker Cope (1840-1897), Henry Fairfield Osborn (1857-1935), and the Austrian zoologist Paul Kammerer (1880-1926). Neo-Lamarckian scientists concentrated on problems of adaptation and advocated that evolution of species took place in a shorter time.[26] Bowler says that

22 Allen, "History," 14.

23 Bowler, *Evolution*, 236-237.

24 Ibid., 315.

25 Ibid., 236.

26 Allen, "History," 19-20.

> neo-Lamarckians of the late nineteenth century was the claim that Darwinism was a mechanistic theory which reduced living things to puppets driven by heredity. The selection theory made life into a game of Russian roulette where life or death was predetermined by genes one inherited.[27]

While Darwinism left no room for organisms to determine their destiny, Lamarckism allowed them to choose new habits when faced with "environmental challenge" and set "the future course of their evolution." In fact, Lamarckian theory of evolution enabled organisms to be agents of their destiny rather than passive elements in nature.[28] Neo-Lamarckism took many factors in the interpretation of organic evolution under consideration. Its proponents emphasized the role of "geographical isolation, the effects of gravity, and the effects of air and water currents."[29] In fact, neo-Lamarckism did not overlook the role of the geography where organisms lived and by which they were deeply influenced.

While Darwinian evolutionary theory attracted serious criticisms, Lamarckism offered purposeful and orderly evolution. Some authors like Edward Pfeifer even thought that natural theology continued in the form neo-Lamarckism. Many Lamarckians argued that acquired characters, which passed to offspring, were the signs of divine will. God help organisms to adapt and progress in natural life. Butler's argument was based on that evolution was directed to a goal and there was a consciousness rather than haphazardness in the occurrence of evolution.[30]

The main figure of biological evolution, Charles Darwin (1809-1882), was born into an exceptionally prosperous, freethinking family in Shrewsbury. He received his education in medicine at Edinburgh University for two years and then studied a variety of subjects such as geometry and theology. But the turning point in his life was the voyages of the HMS Beagle that lasted

27 Bowler, *Evolution*, 367.

28 Ibid.

29 Alpheus Spring Packard, *Lamarck, the Founder of Evolution: His Life and His Work* (New York: Longmans, 1901), 342.

30 Bowler, *Evolution*, 237-239.

approximately five years in total. After returning in 1836, he began to build his evolutionary theory.[31] Furthermore, after returning, he became a well-respected and well-known person by major scientific milieus. In particular, a number of naturalists such as Charles Lyell and Richard Owen paid attention to Darwin.[32] In fact, his fruitful experience and observations in the Galapagos offered him the perfect opportunity to establish contact with the scientific network in London at that time. He had an important insight to understand to biological diversity after this voyage.

What Darwin tried to do was to ascertain the principles of biological evolution. Although Darwin began preparing his work about species when he returned, he would not publish his theory for a long time. In 1858, Alfred Russell Wallace (1823-1913), a young naturalist, sent Darwin "an unpublished sketch of a similar theory," and Darwin decided to prepare an "abstract" of his book on evolution. Eventually, he published his work *The Origin of Species* in 1859. Later, he published *The Variation of Animals and Plants under Domestication* (1868) and *The Descent of Man, and Selection in Relation to Sex* (1871). These two books can be regarded as applications of main arguments in *The Origin*'s.[33] There is a striking point in this study. Darwin avoided touching upon the origin of human beings because even before publishing, he was aware of the serious arguments that the book would engender. Thus, he did not prefer concentrating on the origin of human beings in this study. However, as this kind of prudent attitude annoyed him,[34] Darwin stated that "light will be thrown on the origin of man and its history."[35] He was cognizant that any discussion of this delicate issue would overshadow his theory of natural selection.[36] The history of Darwinian theory of evolution proves his suspicion since the ideas of a common ancestor or descent from other species eclipsed the full picture.

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31 Jonathan Hodge and Gregory Radick, introduction to *Cambridge Companion to Darwin*, ed. Jonathan Hodge and Gregory Radick (Cambridge: Cambridge University Press, 2009), 4.

32 Allen, "History," 16.

33 Hodge and Radick, introduction, 5.

34 Bowler, *Evolution*, 207.

35 Darwin, *Origin*, 407.

36 Mike Hawkins, *Social Darwinism in European and American Thought 1860-1945*, Cambridge; New York: Cambridge University Press, 1997, 28.

The claim of human descent from monkeys became almost equivalent to this theory in many countries. Discussions were in the context of descent from lower species.

Darwin's formulation of the theory of evolution is based on five basic principles. The first is the possibility of "transmutation." He tried to prove that modern species were revised descendants of earlier species and to show how this process of descent with modifications had occurred. The second is the idea of "common descent." At the beginning, species had a "common ancestor" and then diverged in a long time. All species living on earth might form a single tree of life due to their common origin. Darwin concluded that when traced back, all animal and plant species might share a common ancestry. [37] Darwin used "an analogy" between natural selection and "the selective breeding of domesticated animals by humans." He focused on this analogy in a number of chapters in *The Origin of Species*.[38] The third is gradualism. Evolution did not abruptly happen and species on the earth needed a long time to evolve. Nature left little room for extensive biological changes. The fourth is "the multiplication of species." Because species had common ancestry and developed in different biological ways, their multiplication continued. New organisms emerged while others become "extinct." Natural selection is the last principle. In natural selection, fit variations were selected and unfavorable ones were eliminated.[39] Darwin put forward that if "the minute variation" of a species provide "advantage" in terms of its capacity of "reproduction and survival success," nature select it and eliminate others. Offspring would inherit beneficial variations of their ancestors and the aggregate result would be the emergence of new species or varieties. Natural selection is the main mechanism of evolution. Each variety and ultimately each new species is "produced and maintained by having certain advantages" over other organisms. Later, Darwin noticed that his theory of natural selection had serious difficulties explaining some facts, so he developed his theory of sexual selection in *The Descent of Man*. He needed this theory since he was aware that natural selection

37 Allen, "History," 17.

38 Hodge and Radick, Introduction, 5.

39 Allen, "History," 17.

could not explain many physical and behavioral traits of humans and animals. In addition to natural selection, Darwin used sexual selection to explain organic life. This selection led to conflicts and competition in which males tried to find many mates and to create attraction for "reproduction."[40]

While forming the theory of natural selection, Darwin was inspired by Thomas Malthus, a well-known British economist. He considered that all organisms were in conflict to survive due to "the pressure" that "population" brought about. There was a discrepancy between population growth and "available subsistance." While "better-adapted species" survive, others became extinct. New species gradually appear on earth.[41] Organisms are in a fight for survival and reproduction. Struggle is a fundamental aspect of their life. Darwin applied social concepts to natural life because it made his theory more comprehensible.

§ 2.2 The Reflections of Darwinian Theory in Other Fields

The zenith of evolutionary thought - Darwinian theory of evolution - left a remarkable impact on the history of social and political ideas. While Charles Darwin tried to discover the principles of organic evolution by means of argument, experiment, and observation, his legacy had a tremendous impact on the social sciences. That is, the impacts of evolutionary ideas were beyond the limits of natural history, and biology, and the theory of evolution was applied to the social sciences. It was used in many sciences and by many political ideologies ranging from capitalism to sociology. When considering the implications of social Darwinism, one must bear in mind that Darwin did not formulate a systematic "social theory" but did explicitly desire for evolutionary theory be applied to other areas like "language" and "cognition."[42] His theory offered a fruitful viewpoint to understand many issues from biology to human

40 Hawkins, *Social Darwinism*, 25-27.

41 Gregory Radick, "Is the Theory of Natural Selection Independent of its History ?" in *Cambridge Companion to Darwin*, ed. Jonathan Hodge and Gregory Radick (Cambridge: Cambridge University Press, 2009), 151.

42 Hawkins, *Social Darwinism*, 36.

affairs. Its implications offered a complete explanation of universe. Besides, factors such as "the mechanisms of evolutionary change (natural selection, disuse of organs, and sexual selection)" – as well as "the rate and direction of evolutionary change" already provided a basis on which social Darwinism could be deployed.[43]

Among historians, there are disagreements about Darwin's own views on society. While some claim that he promoted aggressive individualism, others allege that he was unsympathetic to this viewpoint. Darwin considered that both individual and tribal struggle among individuals and tribes had importance in the course of evolution and assumed that breeding unfit individuals might cause trouble in a civilized society because this might disturb the course of natural selection. On the other hand, he was surprised when "newspaper article accused him of justifying the actions of Napoleon and of tradesmen who cheat" in their business. Darwin focused on biological evolution, and the social implications of his theory were beyond what he expected.[44] Some social Darwinist thinking was assumed to have been originally formulated by Darwin. Social Darwinism had supporters from parts of the political spectrum since the Darwinian concepts of competition, overproduction, and selection provide a relatively comprehensive view for explaining social world. It is possible to assert that there are different types of social Darwinism and political ideologies use the principles and discourse of biological evolution.[45]

For political ideologies, social Darwinism offered a toolkit for understanding human nature since, "from the ancient world to the advent of modernity, human nature provided a conceptual bedrock for socio-political discourse." Human essence enabled thinkers to have knowledge of how individuals and societies could be conducted and how welfare could be realized through social and ethical norms.[46] Political ideologies had to construct a human nature to make their principles more durable and rational.

Herbert Spencer (1820-1903) made tremendous contributions to evolutionary worldview of social Darwinism. He acquired his fame as a philosopher

43 Ibid., 32-34.

44 Bowler, *Evolution*, 300.

45 Ibid., 298-299.

46 Hawkins, *Social Darwinism*, 22.

since he attempted to resolve the disagreement about the human nature by using the idea of evolution. Many thinkers had examined it for a long time. Furthermore, as he associated his philosophy with the free-enterprise capitalism, he earned a popular fame. In his book, *Social Static* (1851), he criticized the idea that "the state could play a useful role in promoting the well-being of individuals." As he introduced the expression "survival of the fittest," he was stigmatized as a social Darwinist. However, like Darwin, Spencer did not consider their ideas to be the promotion of "ruthlessness or immorality." Spencer accepted that human beings make cooperation for their well-being and their common interests lead to collective action. "His social philosophy was intended to promote the virtues of thrift, self-reliance, and initiative."[47] His political thought - a liberalism that favored "the virtues of individualism" and condemned "the evils of an interventionist state" – were grounded in his theory of evolution. According to Spencer, societies were "the aggregate of individuals" who had undergone a process of evolution.[48] His methodology for analyzing society was based on the idea of organic entirety. The mutability of organisms in the course of history offered a way of thinking about human aggregates.

Spencer believed that evolutionism was a universal process and responsible for everything ranging from the formation of the solar system to the origins of life to the emergence of human societies. In other words, Spencer's philosophy was based on the idea that the same laws of evolution governed both the biological processes by which human beings appeared as well as the emergence and development of society.[49] "For him, the evolution of the mind and the evolution of society went hand in hand."[50] Evolution was a universal principle that nothing could escape.

He proposed a "more ruthless form of individualism." He embraced "natural selection as an important mechanism of biological evolution." He ardently advocated "laissez-faire individualism," and considered "the struggle

47 Bowler, *Evolution*, 220-222.

48 Hawkins, *Social Darwinism*, 89

49 Ibid., 83.

50 Bowler, *Evolution*, 222.

among individuals jockeying for position to be the driving force of social progress." Spencer criticized socialism as he thought that poor relief could lead to individuals "to be idle organisms." To him, "a state-funded welfare system" would bring about more "unfit people" in society while laissez-faire system would promote "individuals to improve themselves."[51]

Socialist ideology used the theory of evolution to bolster their ideologies, too. Even "Alfred Russell Wallace, the co-discoverer of natural selection, actively wrote in support of socialism" and made an effort to find biological foundation of this ideology. He claimed that "the inheritance of wealth distorted people" when they chose their mates. "A biologically fit individual might be tempted to marry someone of inferior character." Such cases wholly harmed race. If a socialist government promoted "equality of wealth, the fittest individuals would naturally tend to partner with one another." Assuming a relation between socialism and Darwinian theory of evolution was an exaggeration even though Karl Marx and Friedrich Engels were cognizant of "an analogy between natural selection and the capitalist system of economic competition." Soviet Union had an antagonistic attitude to evolutionary theories of Darwinian and Lamarckian,[52] while Marx was believed to have extolled Darwin's studies.[53] In fact, various thinkers used nature as a reference point for new and high forms of society. Solidarity or competition in natural life inspired them.

One of the areas for which social Darwinism provided a foundation was competition among races. In the nineteenth century, a different type of social Darwinism explained "the struggle for existence among the races of humankind and among the nations within the dominant white races." Many people claimed that "the domination of one race over others was a natural part of the process by which the human species had advanced." Darwin himself argued that both "species and races" were in competition for "territory." In the nineteenth century, as time went on, "there was an increasing assumption that populations would expand into new territories, competing with indigenous

51 Ibid., 301.

52 Ibid., 306.

53 Paul Thomas, *Marxism and Scientific Socialism from Engels to Althusser* (New York: Routledge, 2008), 50.

races." What is more, Darwin used "racial struggle" as the subtitle of *The Origin of Species*: "*The Preservation of Favoured Races in the Struggle for Life*". One can infer that he accepted racial competition among species through his observation and research. In the nineteenth century, politicians embraced racial interpretations of human affairs. Colonial competition among the great powers of Europe was interpreted as an outcome of racial competition. Even though Europeans believed that they were superior over other races, there were "major rivalries among European nations themselves." Many nations competed each other for "their shares of economic benefits of conquest and colonization." The antagonism among the nations was intensified and this situation paved the way for the rise of militarism. During the colonial era, there was a remarkable "transition from an individual struggle to a national struggle for existence."[54] Darwinists such as Karl Pearson and Sir Arthur Keith had confidence in the white men's ability to expand its territory and they "welcomed their conquest of the world."[55] Colonialism and colonial rivalry among these states had deep racial roots which the aforementioned intellectuals supported.

§ 2.3 The Reception of Darwinism in Europe

It is fruitful to look at the reception of Darwinian theory in certain countries. In Britain, where the leading figures of evolutionary thought (Darwin, Spencer, Wallace) had been born, the theory of evolution by natural selection initiated serious discussions in both secular and religious milieus - as did all over the world - due to its antitheological and materialist implications. Many publications of Darwin's *The Origin of Species* (1859) sold out and he gained an enormous reputation within scientific societies because of his hotly-debated theory. Thomas Henry Huxley (1825-1895), a well-known English biologist, supported his theory so aggressively that he was called "Darwin's bulldog."[56]

54 Bowler, *Evolution*, 303-304.

55 Ibid., 303.

56 Peter Bowler, "Darwinism in Britain," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought,* ed. Michael Ruse (New York: Cambridge University Press, 2013), 218, accessed July 21, 2017, http://ebooks.cambridge.org/

Just one year of the publication of *The Origin of Species*, Huxley, Bishop Samuel Wilberforce, and many scientists met at the 1860 meeting of the British Association to discuss evolutionary theory. This was a public debate that took place in the Oxford Museum of Natural History. "Wilberforce was coached by an anatomist, Richard Owen," who accepted evolution, but not Darwinian evolution by natural selection.[57] In fact, this discussion is proof of a scientific challenge to the teachings of the church and of a conflict between science and religion. This hot debate publicized Darwin's theory, which appeared more in the journals.[58] Despite harsh criticism, the theory was promoted much more.

In Britain, "opponents" to the theory of evolution tried "to preserve a role for God's designing hand in nature." Roger Owen argued that "evolution was the unfolding of a divine plan through law-bound process rather that a sequence of miracles." In 1868, a Catholic anatomist who was one of Owen's disciples, St. George Jackson Mivart, criticized Darwinian evolution and, and wrote a book entitled *Genesis of Species*. Even though Huxley had agreed with Mivart at the beginning, he expelled him from "the Darwinian camp" due to "his antiselectionist arguments." Mivart wanted the place of divine will in the interpretation of natural life. Those who criticized Darwinian theory were worried about implication of materialism. "This paved the way for the emergence of anti-Darwinian ideas."[59] In other words, they were annoyed by the subversive, materialistic implications of the theory and attacked it on religious grounds.

In Germany, Darwinian theory of evolution acquired a tremendous reputation. Its roots took such a deep hold among Germany's intellectuals that it can be called a cradle of Darwinist thought. This is because "the German mind was predisposed to adopt the new theory." Immanuel Kant (1724-1804) and Johann Wolfgang von Goethe (1749-1832) favored "transmutational views" and several major German thinkers used "Lamarck's conceptions" in the first

57 Ibid., 220-221.

58 Ian Hesketh, *Of Apes and Ancestors: Evolution, Christianity, and the Oxford Debate* (Toronto [Ont.]: University of Toronto Press, Scholarly Publishing Division, 2009), 91.

59 Bowler, "Darwinism," 222.

decades of the nineteenth century.[60] German intellectuals' ties to evolutionary ideas had a considerable past, even though it was not long. Darwin's book, *The Origin* of Species (1859), was translated into German by H. G. Bronn just after one year after its English publication. His theory fit well into the German intellectual landscape.

Even though Bronn translated Darwin's book, he challenged his theory, and later Ernst Haeckel (1834-1919) and August Schleicher (1821-1868) accepted his challenge. Bronn claimed that Darwin's theory lacked "actual evidence," but Ernst Haeckel and August Schleicher came to the aid of Darwinian theory and provided the necessary evidence. The former was a professor of biology at the University of Jena and carried out embryological studies to bolster the idea of evolution. The latter was a linguist. "He explored the history of language, where linguistic fossils could be found that indicated descent with modification." He put forward that "language and mind were two sides of the monistic coin" and human mental evolution could be measured by "the complexity of language."[61] His attempt to provide empirical evidence to prove evolution was various from that of biologists like Haeckel.

Ernst Haeckel was a leading figure in not only biological evolution but also social Darwinism. He met naturalists such as Thomas Henry Huxley and Charles Darwin in England before conducting his research on "siphonophores, a complex colonial organism," in Canary Islands in 1866-67.[62] His visits offered him the opportunity to learn about evolution from direct sources and expand its application. Ernst Haeckel enthusiastically favored Darwin's theory and its application of the struggle for existence to human affairs. Richard Weikart says that

> he (Ernst Haeckel) believed that the most important aspect of Darwinism was the animal ancestry of humans, which would bring forth a

60 Robert J. Richards, "The German Reception of Darwin's Theory, 1860-1945," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. Michael Ruse, (New York: Cambridge University Press, 2013), 235, accessed July 21, 2017, http://ebooks.cambridge.org/

61 Ibid., 237-238.

62 Ibid., 238.

> complete revolution in the entire world view of humanity. The idea of human evolution would integrate all branches of knowledge.[63]

Haeckel favored the application of Darwinism to society, but was challenged by German scientists such as Ludwig Rüttimeyer (1825-1895) and Alexander Goette (1840-1922) who attacked Haeckel's biogenetic law. These scientists disproved "recapitulation hypothesis" in particular, thus "protecting the newly emerging field of professional embryology from the ingressions of evolutionary theory."[64] In spite of these critics, Haeckel's legacy was so significant that it deeply influenced Ottoman intellectuals like Baha Tevfik in the late period of the Ottoman Empire. Wilhelm Preyer, a fellow professor of physiology at the University of Jena, applied "Darwinism to society." He stressed "individualistic nature of the human struggle for existence." He offered a justification for "economic inequality and the permanence of poverty."[65] The entrenchment of evolutionary ideas in many fields ranging from biology to anthropology annoyed many scientists in Germany, and it can be inferred that the penetration of evolution into the German consciousness did not take place without opposition.

Social Darwinism remained theoretically and practically in Germany. It provided a historical and biological basis for political thought there like it did throughout Europe. As Darwin stressed, the inevitability of the struggle for existence in human society and its concomitant evils could be easily considered "an apology for economic inequality and brutal competition." There was a "connection between economic liberalism and social Darwinism," which is apparent in the thoughts of the young Max Weber. He was familiar with the words and phrases used in evolutionary theories. Also, he advocated "economic competition and free trade" since they were considered important elements of struggle for existence. The dominant character of German intellectual life was social Darwinism and it is impossible to avoid its influence in this

63 Richard Weikart, *From Darwin to Hitler: Evolutionary Ethics, Eugenics and Racism in Germany* (New York: Palgrave Macmillan, 2004), 13.

64 Richards, "German," 240.

65 Richard Weikart, "The Origins of Social Darwinism in Germany, 1859-1895," *Journal of the History of Ideas* 54, No. 3 (July, 1993): 476.

country. Furthermore, "the collectivist form of social Darwinism justified militarism, nationalism, imperialism, and racial competition." Ernst Haeckel himself supported some nationalist and imperialist thoughts. In his study entitled *Natürliche Schöpfungsgeschicht*, he claimed that there were "ten races of humanity" and "Caucasian race" was superior. He overlooked "the extermination of primitive races" that were defeated in the struggle for existence.[66]

In Germany, social Darwinism was so deeply rooted that it was accused of paving way for the birth of "Nazi ideology" and German imperialism. Many critics accused Darwinian theory of providing a foundation for "Hitler's racism and Nazi biology." In addition, Ernst Haeckel was considered to have "forged the bonds between academic science and racism in Germany." What is more, he was said to have propounded the idea that "Jews were the original source of decadence and morbidity in the modern world."[67] Some prominent Darwinists alleged that human racial competition and war were part of the Darwinian struggle for existence. Some factions of social Darwinism were imbibed into Nazi ideology and blended into virulent anti-Semitism, culminating in the Holocaust. It was claimed that "Hitler hijacked Darwinism" and applied it to politics. Hitler had the idea that humans have differing values dependent on biological characteristics and he tried to apply biological inequalities of human beings to the political realm. "Darwinian terminology and rhetoric were pervaded in his speeches and writings." The fact that Hitler was a social Darwinist is indisputable,[68] but to what extent he was influenced by Darwin remains a matter of debate. There is no direct influence of Darwinian theory of evolution, but as Darwinist thought was a favored trend in German intellectual life, avoiding the spirit of age seems inevitable. Robert J. Richards says, "Hitler's notions of struggle (Kampf) or battle among races seems antithetical to the Darwin's conception that struggle occurs primarily and most strongly within a variety or race and only distantly among distinct varieties or species."[69]

66 Ibid., 475-480.

67 Richards, "The German," 241.

68 Weikart, *From Darwin*, 3-7.

69 Richards, "The German," 242

The appearance of Nazi ideology cannot be attributed only to Darwinism; other factors must be taken into consideration. "Darwinism was a necessary but not sufficient cause for Nazi ideology." Nevertheless, historical "connection" between Darwinism and Nazism are so apparent that they seem undeniable. However, Nazi ideology was not a natural outcome of social Darwinism. There had to be another factor to bring out this kind of ideology. What is more, traces of Darwinist thought can be found in other countries. For example, "the Darwinian devaluing of human life" cannot be considered "proto-Nazi" since such ideas were existent in the "United States, Great Britain, and other democratic countries." In other words, "devaluing human life" was not particular to Germany and led to "human tragedies outside of Germany." But, "the most catastrophic" events took place in Germany.[70] The practical use of social Darwinism and Eugenics is the reason many conclude that Nazi ideology was born within social Darwinism and accused Darwinism and evolutionary ideas of bringing about the destruction of the modern world and human values. However, it must be emphasized that the relationship between Darwinism and Nazism is not clear and is debatable.

In Europe, the attitude of France was quite different. France resisted the penetration of Darwin's evolutionary thought despite its having become a major scientific tradition in the nineteenth century. Darwin's many books were translated into French starting in the 1860s, and *The Origin of Species* was translated by Clémence Royer (1830-1902) in 1862, only two years after its German translation. When Darwin's *Origin* was translated into French, "Darwin was scandalized by Royer's preface." The translator asserted that "Darwin's theory embodied not only a philosophy of nature but also a philosophy of humanity." She thought "Darwin's book was not only destined for botanists, zoologists, and physiologists, but also for philosophers and economists." Also, she concluded that Darwin's thoughts stressed "the fundamental errors of Christianity: exaggeration of the virtues of charity, fraternity, and the sacrifice of the strong for the weak."[71] She seems to have had social Darwinist

70 Weikart, *From Darwin*, 9-10.

71 Jean Gayon, "Darwin and Darwinism in France before 1900," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. Michael Ruse (New York: Cambridge University Press, 2013), 243-247. Access July 25, 2017, http://ebooks.cambridge.org/,

tendencies because she not only considered Darwin's theory in terms of biological evolution but also applied it to social sciences. She was aware of groundbreaking implications of his theory.

The idea that Darwin was completely unknown in France is unfounded. His many works were translated and "diffused", and he was honored by Paris Academy of Science - though later than in Germany. However, many French naturalists and biologists ignored him and "showed high reluctance to adopt or imitate his works."[72] There are two reasons for France's resistance to Darwinian theory of natural selection. First, biology in the country was under the domination of "a positivist view of science." Darwinian evolution was thought to "belong to the realm of speculation," French scientists discredited it. Claude Bernard and Louise Pasteur, well-known French biologists, thought that questions such as the fixity or transformation of species and "multiplicity of human races could not be resolved experimentally. Thus, instead of such questions, biologists were to have an attention to problems that could be solved experimentally. In fact, many French biologists thought that Darwinian theory of evolution went beyond the facts, "generated idle controversy, and was non-scientific."[73] When Darwin published *The Origin of Species* in 1859 and *The Descent of Man* in 1871, the main arguments became hotly debated issues in scientific societies, and his theory was often assumed to be hypothetical. In the natural sciences, French had "applied and non-theoretical orientation."[74] Therefore, this kind of attitude discredited Darwin and left little room for him.

Second, Darwinian and Lamarckian theories of evolution fundamentally disagreed over the mechanism of evolution, and there was a clear competition between these two theories. As a Frenchman, Lamarck had an advantage in his own country, even though nationality should not matter in the pursuit of universal truths. Some Lamarckian scientists admitted the existence of natural and sexual selection but denied that they are the main mechanism of

72 Ibid., 243-246.

73 Gayon, "Darwin," 247-248.

74 Patrick Tort, "The Interminable Decline of Lamarckism in France," trans. Matthew Cobb, in *The Reception of Charles Darwin in Europe 2*, ed. Eve-Marie Engels and Thomas F. Glick (New York: Continuum, 2008), 330.

evolution. They believed that "the action of the external milieu (essentially the physical milieu)" led to the direct "modification" of organisms and that new characteristics were passed to "their progeny." "Lamarckism fitted well with the primacy of experimental biology."[75] Thus, scientific attitudes inspired by Lamarckian thought were preferred in France.

In spite of the resistance to Darwin's theory in the nineteenth century, it began to be "incorporated into" research programs in France at the beginning of the twentieth century. To French scientists in particular, Philippe L'Héritier (1907–94) and Georges Teissier (1900–72) were "standard Darwinians who took Darwin's theory of natural selection not as an object of rhetorical discussion but as a working paradigm."[76] Eventually, Darwin's theory caught on, defeating Lamarckian theory of evolution.

Some scholars claim that the Catholic Church played a primary role in preventing the introduction or penetration of Darwin's theory into France. Because its implications for the nature of human beings, morality, and their role on earth brought about shock, religious authorities were alarmed around the world. However, such opposition cannot be evaluated as a distinctive factor that explains why French scientists were unwilling to incorporate Darwinian theory into their active research program in the nineteenth century. In other words, the opposition of the Catholic Church did not play a decisive role; religious challenges were present in other countries like England, where Bishop Samuel Wilberforce spilled out hatred for Darwin's theory. Towards the end of the nineteenth century, Eugenics and improving began to make inroads in science.

Many Russian naturalists and social thinkers embraced Darwinism enthusiastically. The Russian translation of *The Origin of Species* appeared in 1864, just a couple of years after its German and French translations. "Darwinism became a part of the creed only of those thinkers who considered themselves progressive." In particular, "Russian radicals" considered Darwin's theory as similar to Newton's physics. His theory of natural selection explained the

75 Gayon, "Darwin," 248.

76 Jean Gayon, "Darwin and Darwinism in France after 1900," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. Michael Ruse (New York: Cambridge University Press, 2013), 311. Access July 25, 2017, http://ebooks.cambridge.org/,

development of the organic world without recourse to a creator or a purpose. However, "the enthusiasm for Darwinism and the natural sciences in the 1860s was not confined to radical thinkers." Some moderate thinkers were aware of the development of natural sciences in their country. Due to the political structure of Russia, no conservative school of political thought in Russia used Darwinism "to rationalize a social structure." The scientist who did the most to introduce Darwinism there was Kliment Arkadeevich Timiriazev, a hard-liner who defended the Darwinian ideas. He was the major publicist of the theory of natural selection and played a leading role in its promotion. In addition, he managed to stand up against anti-evolutionary arguments.[77]

In Russia, one of the heaviest attacks on Darwinism appeared in 1885 with the publication of N. A. Danilevsky's massive *Darwinism: Critical Research*. However, Timiriazev, as Darwin's most active propagator in Russia, "quickly came to the defense of Darwinism in a series of public lectures and articles."[78] The criticism of Darwin's revolutionary theory did not amount to its total rejection. In other words, many scientists in Russia had a shared enthusiasm for Darwinism but did not receive it uncritically. Particularly, the response of the great majority to the "Darwin-Malthus connection" and the metaphor "struggle for existence" was negative. Many Russian scientists like Ilya Ilyich Mechnikov were outstanding Russian scientists in the field of biology who remained distant from the idea of struggle for existence.[79] Korzhinskii emphasized the theory of heterogenesis, rather than evolutionary theory. He proposed that

> the struggle for existence remained a key factor in geographical distribution of variations, but it was also an obstacle to evolution. When struggle among organisms was intense, new, unstable variations generally perished. When the geographical conditions were suitable,

77 James Allen Rogers, "The Reception of Darwin's Origin of Species by Russian Scientists," *ISIS* 64, no.4 (December, 1973): 499-502.

78 Ibid., 501.

79 Daniel P. Todes, *Darwin Without Malthus: The Struggle for Existence in Russian Evolutionary Thought* (New York, Oxford: Oxford University Press, 1989), 44.

> newly arisen variations could consolidate and multiply. Korzhinskii mainly challenged Darwin's theory of evolution.[80]

Due to "the basic condition of Russia's national life," their responses can be claimed to have had nationalist sentiments. "Russian class structure and political traditions, and its land and climate" played a role in the absence of "a dynamic, pro-laissez-faire bourgeoisie," and Russian lands were under the domination of "landowners and peasants." Even though Russian intellectuals welcomed Darwin, they distanced themselves from the idea of struggle for existence.[81] The political and economic infrastructures were not suitable for advocating such concepts, and it offered no meaningful tool for understanding Russian society. In other words, defining the relations of social groups in the context of a struggle for existence was not fruitful for interpreting of Russian society.

§ 2.4 Evolution and Improvement of Genetic Quality

In the second half of the nineteenth century, it was believed that modern societies were decaying due to artificial and unnatural intervention which were leaving detrimental impact on the course of human progress. In other words, "modern civilization removed the salutary effects of natural selection" because it enabled physically and mentally impaired individuals to survive and to reproduce. "The only way to save humanity was to control these individuals."[82] The increasing number of those with no capacity to contribute to the development of their societies was akin to an alarm bell. Francis Galton, the cousin of Charles Darwin, coined the term Eugenics, which can be regarded as a form of Social Darwinism. "The logic of Eugenics rested on the ideology of hereditary or genetic determinism." Therefore, eugenic scientists claimed that

80 Ibid., 76-77.

81 Todes, *Darwin*, 168.

82 Tatjana Buklijas and Peter Gluckman, "From Evolution and Medicine to Evolutionary Medicine," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. Michael Ruse (New York: Cambridge University Press, 2013), 508, accessed July 19, 2017 http://ebooks.cambridge.org/

neither "education" nor "improved conditions" could change the biologically-ordained quality of an individual.[83]

Some individuals are hereditarily noble and factors like education have no impact on their personal development. "Galton argued that human intellectual, moral, and personality traits were transmitted from parents to offspring." The achievements in various fields resulted from inheritance, and biological factors played the leading role during the entire life of an individual. "Talented individuals" would be successful irrespective of their disadvantages. Their number needed to be increased, and those whose heredity was not noble should not be permitted to overwhelm society. To Galton, the course of human evolution had to be manipulated for a better society. "The obvious solution was for humans to take charge of their own evolution, doing for themselves what breeders had done for horses and cattle."[84] In fact, intervention in the course of evolution of organisms was no a novelty; human beings had been carrying out it for centuries.[85]

Eugenics became popular in many countries. At the beginning of the twentieth century, many eugenic associations and societies were founded around the world. In the United States, for example, the American Breeders Association – later the American Genetic Association - set up a Eugenics Committee in 1906, and after four years, the Eugenics Record Office was established. Moreover, the first Eugenic Congress was held in 1912. "A well-established eugenic program existed in Germany long before the Nazis came to power in 1933." They were a remarkable example because of "more extreme methods to sterilize and ultimately to liquidate the unfit."[86] They sterilized thousands of people and killed millions, including gypsies and homosexuals, in order that Germany have racial purity. Eugenic practices were even common in some Scandinavian countries like Sweden.

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83 Bowler, *Evolution*, 308-309.

84 Diane Paul, "Darwin, Social Darwinism and Eugenics," in *The Cambridge Companion to Darwin*, ed. Jonathan Hodge and Gregory Radick (Cambridge: Cambridge University Press, 2009), 221-222.

85 Darwin, *Origin*, 21.

86 Bowler, *Evolution*, 310-311.

One debated issue concerning Darwin's theory is its relationship to Eugenics. Even though Darwin was not a social thinker, he is important in the history of social thought due to his contribution to the making of modern Eugenics. After the publication of *The Origin of Species*, "Darwin as well as his readers assumed that natural selection resulted in the constant improvement of organic beings."[87] Nonetheless, Darwin did not favor any intervention into "human breeding," and "imposing a twentieth-century eugenic outlook upon him is anachronistic." Those who read both "Darwin's ambiguous writing" and similar studies written by others were confused and believed that Darwin himself promoted Eugenics.[88]

Darwin accepted the negative results of "the less capable outbreeding" but "he sanctioned neither a withdrawal from charity activities nor the active breeding of humans." As a result, it is not possible to describe him as a eugenicist. However, Darwin's theory alerted people to "the need for a program of selective breeding."[89] Darwinian theory of evolution provided a biological basis on which eugenicists bolstered their agendas, contributing to a favorable environment for them to argue their views. Its discourse of selection was used to justify eugenicist policies. As Darwin's theory allowed the interpretation of human societies from a biological point of view, intervention into their biological evolution and the creation of societies composed of "better" individuals became possible. In fact, the implications of his theory fit well with the agenda of Eugenics.

§ 2.5 The Growing Tension between Science and Religion

The publication of *The Origin of Species* in 1859 aroused curiosity and fear due to its main arguments and implications. All copies sold out quickly and many subsequent editions were published. This book seems to have had more influence than the works of Newton and Copernicus in scientific communities. Darwin's theory was conceived "as an answer to questions in biology," but it

87 Paul, "Darwin," 240.

88 Buklijas and Gluckman, "From Evolution," 509.

89 Paul, "Darwin," 241.

contributed to many fields ranging from cosmology to psychology.[90] Its influence was beyond biology, and left profound impacts in many fields from politics to embryology. Nevertheless, Darwinian theory made many people upset and angry due to its materialist implications even though he tried not to draw materialist conclusions. "Most readers understood him as a materialist."[91] The most common basis for criticism against Darwin and his theory concerns its promotion of materialism that was said to conflict with religious teachings. To many, especially conservatives, the theory was shocking since it replaced God with nature. The idea of divine involvement in the world was undermined, and it explained the forms of natural life in materialistic terms. After 1859, a long - lasting tension between science and religion would gain momentum. Indeed, one of the biggest challenges that religion - including Judaism and Islam – had faced resulted from Darwin's theory of evolution. Religious communities tried to protect themselves from the corrosive and degenerate influences of evolution.

Darwin's theory was criticized in two realms, namely, religion and science. However, the majority originated from religious rather than scientific motivations. Before scrutinizing these criticisms, a crucial point must be clarified. The relationship between religion and science cannot be reduced merely to conflict. Some sects in both Christianity and Islam and many religious men had a moderate attitude and accepted evolution either partly or completely. Therefore, claiming that religion is *ipso facto* against evolution is untrue, even if conflict between them is the most remarkable dimension of their relationship. As Darwinian theory of evolution became accepted in scientific communities and societies, anti-Darwinism also emerged. In other words, the making of Darwinism and anti-Darwinism are a concomitant process.

To begin with, not only religious men but also some scientists did not welcome Darwin's theory, as it was claimed to not be based on scientific truths. The scientifically motivated challenge to Darwin's theory was Lamarckism, the details of which are explained earlier in this chapter. His theory began to be discussed in some scientific milieus, and public reactions to it was negative.

90 Dennett, *Darwin's,* 63.

91 Richard G. Olson, *Science and Religion 1450-1900: From Copernicus to Darwin* (Westport, Conn.: Greenwood Press, 2004), 196.

In particular, theologians were shocked and labeled Darwin "the most dangerous man in England." Although some young scientists like Huxley supported him, "the majority of established scientists" did not regard his study founded.[92] Their criticisms were based on five points. To begin with, husbandry had not shown that new species could emerge by selection. "Selection had been practiced with dogs for hundreds, but no new species had been produced." Therefore, many scientists thought that the main mechanism of evolution - natural selection – was invalid. Second, "the blending inheritance meant that new variations would hardly ever have a chance to become established except under extremely high levels of selection." Third, there were "large gaps and discontinuities" between fossils. There should be a fossil record with "many intermediate forms," the lack of which is even today a common point of criticism by anti-Darwinists. Fourth, Darwin was accused of claiming that human beings had descended from monkeys. This accusation led to "considerable controversy," and was the most hotly debated dimension of his theory, in both secular and theological milieus. Finally, "the estimates of the age of the earth" seemed to refute "Darwin's slow, gradual process." Diverse species on earth would have required a longer time to evolve. There was a serious conflict between the geological age of earth and the duration of evolution.[93]

The age of earth was claimed to have been one of its weakest links. That is, Darwin thought that there had to be enough time for the evolution of species.[94] Darwin came up with his theory "without knowing the time scale of orbitally forced climatic change, the relationship between that time scale and the longevity of species, and how organisms and species respond to rapid climate change."[95] What is more, there was conflict with respect to the age of the earth, and scientific estimates differed remarkably. In the nineteenth century,

92 Allen, "History," 17

93 Ibid., 17-18.

94 Keith Bennett, "Darwin and Time," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. Michael Ruse (New York: Cambridge University Press, 2013), 124, accessed July 19, 2017, http://ebooks.cambridge.org/

95 Ibid., 130.

the age of earth was one a debated issue in the scientific world. Charles Lyell, a well-known British geologist, argued that its age could be calculated by using "the cooling of the planet from a molten state," and he argued that "the total age might be only a hundred million years." Subsequently, the theory was rejected by subsequent physical theories.[96]

Actually, Darwin himself was apprehensive about the age of earth and tried to find out its age by looking at the findings of geology. He estimated the age of earth as "hundreds of millions of years,"[97] and believed that this was enough for the evolution of species. But, in late 1868, the physicist William Thomson (Lord Kelvin) used "the new science of thermodynamics" and estimated "a shorter age of the earth to an extent which made the selection theory untenable." He estimated the total age of earth could not be more than 100 million years. "Thermodynamics was based on the physical principle that energy always becomes less available and hence hot bodies always cool down." Even though Darwin was sure Kelvin made a critical mistake in the calculation of the age of earth, he could not explain "why."[98] Shorter time scales were a serious problem for his theory. Darwin could not stand up against his estimate since he was a powerful, influential physicist.[99] However, William Thompson's estimate would later be falsified and Darwin's theory was more compatible with the newer geological findings about the age of earth.

The most significant challenge that Darwinian theory of evolution originated from religious motivations, even though *The Origin of Species*, suggested that Darwin theory was in partial harmony with "some interpretations of Christianity (He later expressed regret about this language in his book.)"[100] He was worried about the potential reactions to his work and tried to prevent it with biblical language. Even before the publication of *The Origin of Species*, Darwin was aware of the controversy that his book would engender and thus avoided mentioning the origin of human. However, this diplomatic attitude

96 Bowler, *Evolution*, 202.

97 Bennett, "Darwin," 125.

98 Bowler, *Evolution*, 234-235.

99 Bennett, "Darwin,"129.

100 Olson, *Science*, 200.

annoyed him, so "he inserted a single sentence at the end"[101] that "light will be thrown on the origin of man and its history".[102] Actually, Darwin had much to say about the evolution of humankind, but because scientific realm was not ready to hear it, he decided to remain mute on this topic for a long time. He was cognizant that a scientific discussion of the origin of humankind might overshadow his theory of selection.[103] His prediction was true to an extent: discussion of the evolution of organisms did revolve around the descent of humans from monkeys - one of the well-known implications of his theory. In 1871, he elaborated his view on the evolution of humankind in *The Descent of Man and Selection in Relation to Sex*, providing a more scientific basis for the discussion of the origin of humankind.

Nowadays, "virtually all scientists agree that the evidence for organic evolution by natural selection is so overwhelming that its essential truth is beyond question." Darwin's theory has been subjected to fierce skepticism for a long time, but because of "the discovery of DNA and explosive development of genetics," the idea of organic evolution was strongly confirmed.[104] However, religious arguments against his theory survived despite these scientific developments.

The religious opposition to Darwinian theory is based on a number of basis about God and human. Christianity, Islam, and Judaism do not have the same attitude to this theory, and there are many differences among their sects. Even various religious men in the same religion or sect bold various positions on this theory. Collapsing the beliefs of these religions and sects into just one stands would be mistaken.

In early nineteenth century Britain, scientific studies and religious teachings were thought to be consistent with each other. Science was believed to reveal "the wonders and perfection of natural world" and to provide "evidence for divine design." William Paley's book, *Natural Theology*, is an outstanding

101 Bowler, *Evolution*, 207.

102 Darwin, *Origin*, 407.

103 Hawkins, *Social Darwinism*, 28.

104 Janet Radcliffe Richards, *Human Nature after Darwin: A Philosophical Introduction* (London and New York: Routledge, 2010), 26.

work reflecting this view.[105] Darwin's theory was conceived as a blow to divinity as it shook its main foundation. "The first chapters of the biblical book of Genesis describe God's creation of the world, plants, animals, and human beings. A literal interpretation of Genesis is incompatible with the gradual evolution of humans and organisms by natural processes.[106]" The idea that these organisms have remained the same since their creation eroded since evolution showed how they changed in the course of history."[107] Many scientists thought that a serious conflict between science and religion took place.

Darwin's evolutionary theory "fitted perfectly with an emerging positivistic conception of science that was loath to invoke intelligent design and sought as far as possible to assimilate scientific explanations into natural law."[108] Science was substituted for God and explained forms of natural life in materialistic terms, undermining the idea of miraculous creation. Many religious men thought that God's involvement on earth have been minimized or wiped out. This is the most striking antitheological implication of the theory, and "conservative opponents to it labeled the theory as an extreme manifestation of the atheistical tendency. The natural world that produced humans was reduced to a purposeless sequence of accidental changes."[109] The theory of a purely natural and unplanned course of the history of organisms put religions on the line; counter arguments were vital for their survival.

Actually, Darwin's relation to religion seems ambivalent since he never called himself an atheist. Even though "he gradually lost any belief in Christianity as a divine revelation, he described himself variously as a theist or an agnostic, but never as an atheist." Darwin's belief was not so clear in the course

105 Mark Pallen and Alison Pearn, "Darwin and Religion," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. Michael Ruse (New York: Cambridge University Press, 2013), 215, accessed July 20, 2017, doi:10.1017/CBO9781139026895.

106 Francisco J. Ayala, "Evolution and Religion," in *the Princeton Guide to Evolution* (Princeton; Oxford: Princeton University Press, 2014), 820.

107 Russell, *Din*, 50.

108 William A. Dembski, "The Design Argument," in *Science and Religion: A Historical Introduction*, ed. Gary B. Ferngren (Baltimore: The John Hopkins University Press, 2002), 339.

109 Peter Bowler, "Evolution," *Science and Religion: A Historical Introduction*, ed. Gary B Ferngren (Baltimore, Md.: Johns Hopkins University Press, 2002), 223.

his life, and his "eventual unequivocal rejection of Christianity" was obvious at the end of his life. He expressed that he believed neither in the "Bible as divine revelation" nor in "Jesus as the son of God."[110] He received a religious education in Cambridge before going to Galapagos Islands, but he was dissatisfied with being there as he did not choose the school himself. His family played a considerable role in his educational background, leading him to attend this religious school.

Darwinian theory of evolution left a detrimental impact on the teleological view of nature since it implied that neither nature nor humans had a particular goal. The divine interpretation of nature and humankind assumed that both were products of divine will and fulfilled the goals of God. Their perfect structure was proof of the existence of God, and denying or overlooking divine intervention was unacceptable to many religious men. Darwin suggested that "initial variations in hereditary material are probably random rather than directed to any particular end."[111] Therefore, life lacks meaning from evolutionary point of view because the theory undermined the teleological approach to nature. "Traditional theology" assumes that the emergence of humans is the product of a divine will and that human life has an existential "goal."[112] As an elevated organism on earth, it cannot be the product of natural haphazardness. Traditional theology carried out an anti-materialist counterattack.

Darwinism brought about a transformation in the thinking about the value of human life. First of all, Darwinism altered some people's conception of humans in the universe and the organic world. For example, after the publication of *The Origin of Species*, T. H. Huxley questioned the position of human beings in "*Man's Place in Nature.*"[113] Darwin profoundly undermined "the sanctity of human life." The ideology of classical liberal human rights and "Judeo-Christianity" both attributed enormous value to human life, but it was now subject to discussion. Many Darwinists claimed that they were creating a

110 Pallen and Alison Pearn, "Darwin," 211-215.

111 Olson, *Science*, 197.

112 Eugenie C. Scott, *Evrim mi Yaratılışçılık mı* (Istanbul: Evrensel Basım Yayınevi, 2012), 140.

113 Richard Weikart, "Darwinism and Death: Devaluing Human Life in Germany, 1859-1920," *Journal of the History of Ideas* 63, No. 2 (April, 2002): 329.

whole new world view with new ideas[114] and that there was no room for the divine interpretation of human beings. "The Darwinian revolution displaced human beings from their exalted position as the center of life on earth," and notion that "all other species were created for the service of humankind."[115] In particular, Abrahamic religions attribute a tremendous importance to human beings. In both the Bible and the Torah, humans had a special position, and God created earth for these beings. To question whether human beings are special and distinctive meant to question their existential goal.[116] From an evolutionary point of view, humans are ordinary creatures on earth and are no different from other organisms.

Second, the mechanism of Darwinian evolutionary theory - the principle of natural selection - suggested "the mass destruction of organisms, including humans," was not crucial. In fact, the destruction of human life amounted to know than the demise of an organism.[117] That is, human beings are not various from other species on earth and do not have any special mission.

Third, the principle of a common ancestor was terrifying for religions since it conflicted with chapters in Genesis about the creation of the earth and humans according to which God first created earth and then humans. However, Darwin proposed that humans appeared later than other animals and had common ancestor with many of them. Naturalist thinkers such as John Ray, the author of *the Wisdom of God*, and William Paley, the author of *Natural Theology*, believed that "each species were perfectly adapted to their environments because it had been created by a wise and benevolent God." [118] Humans are divine and exalted organisms. Their dethronement from this sacred position was unacceptable to those who endorsed the teachings of the Bible. Darwin challenged the story of human origin recounted in sacred texts and undermined the traditional belief that nature itself is a divine construct.

A well-known implication of Darwinian theory of evolution is human descent from inferior animals like monkeys. Religious thinkers were worried

114 Ibid., 327.

115 Ayala, "Evolution," 819.

116 Russell, *Din*, 21.

117 Weikart, "Darwinism," 329-330.

118 Bowler, "Evolution," 220.

about the decay of moral values since if humans were descended from monkeys, it meant that they would display uncivilized and brutal behavior. Humans had a soul and morality, and this peculiarity was imperiled by Darwin's dangerous ideas. "For the fundamentalists, the spread of Darwinism was both a cause and a symptom of the degeneration of human civilization." They had witnessed "the barbaric violence of the First World War" and argued that animal ancestry might "brutalize and degrade them."[119] This was the most common criticism levied against Darwin's theory, but within Christianity, there was no single, homogenous point of view.

Darwinian theory was rejected by two main claims of Catholicism. The first was the teleological approach to natural knowledge. The second was that "the rational human soul was different from the merely vegetable and animal souls of all living organisms. Each rational soul was directly implanted by God."[120] With the scientific triumph of evolutionary theory, the Catholic Church had to adopt a new position and endorse an ambivalent attitude. It gradually accepted the physical evolution of human species, but maintained that God created their soul. In fact, for them the human was comprised of two parts, namely, body and soul. While the former was a product of evolutionary processes, the latter was that of a divine act. Materialistic evolution can be applied only to the body, not to the soul. The Roman Catholic Church was not willing to completely accept the evolutionary theory since it worried about the theory's capacity "to deprive the world of meaning and purpose."[121] The limited or moderate acceptance of evolution is nonetheless the first steps to complete acceptance as it is extremely difficult for religious men to accept biological facts that have the capacity to undermine the main pillars of the religion.

The smooth acceptance of evolutionary theory is not limited to Catholics, but is evident in other sects, as well. When conservatives faced this great threat to their belief, they took up an argument that "evolution represented the unfolding of a divine plan." They did not completely reject evolution and claimed

119 Thomas Dixon, *Science and Religion: A Very Short Introduction* (New York: Oxford University Press, 2008), 86.

120 Olson, *Science*, 213.

121 Dixon, *Science*, 79-80.

that this process could not be realized by "a purely haphazard mechanism" – in which case God had to be involved.[122] Evolution itself became such a strong and, clear reality that they could not overlook it. "In Britain, the Anglican Church endorsed the idea of teleological evolutionism." At the beginning of the twentieth century, a new natural theology based on evolutionism emerged. The Anglican Church had a progressive view and promoted efforts to forge a reconciliation with science.[123] Furthermore, some Protestants, who posed the most fundamental challenges to Darwin also tried to find ways to accept scientific truth without undermining their belief. In other words, with the professional triumph of evolutionary theory, most Protestants began to accept it as truth. Yet, "they sought to harmonize scientific and religious views by adopting carefully - crafted interpretations of both evolution and Christianity so as to make them work together."[124]

Anti-Darwinism not only produced criticism but offered alternative interpretations of nature, namely creationism and Intelligent Design, which are based on religious rather than scientific concerns. In fact, they are the continuation of natural theology. In both the nineteenth and twentieth centuries, it was often asserted by conservative or those with religious motivations that "evolutionary theory was in the throes of death."[125]

One of the most systematic challenges to Darwinian theory of evolution belongs to creationists who argue that God created organisms on earth and that nature is incapable of it. In other words, the proponents of creationism argue that there must be a supernatural power to make organisms with complicated anatomy and behaviors since natural selection is unable to lead to such complicated structures and acts.[126] Nature and human beings are divine products, not the outcomes of natural processes that lasted millions of years. The proponents of creationism say that "only supernatural design can explain the complex and orderly structure" of organisms. "The perfection of each

122 Bowler, "Evolution," 224.

123 Ibid., 322-323.

124 Olson, *Science*, 209-210.

125 Scott, *Evrim*, 29.

126 Ibid., 18.

design and the adaptation of each species to a particular way of life" is apparent proof of the existence of God.[127]

The creationists' relationship to science is ambivalent: though they accept that the earth orbits the sun, they deny evolution. They are selective in their acceptance of scientific truth. They are not anti-science, and readily endorse what does not undermine their religious beliefs. There are simple, basic differences among the views of various creationists, but "what all share is the belief that the universe and life on earth were created instantaneously and supernaturally by God and that human beings and all other organisms were created separately and in their current form." They deny the common ancestry of all plants and animals.[128]

The modern creationist movement was born in the United States and anti-Darwinism was exported to other countries. "The growth of secondary education, the appearance of Protestant fundamentalism, and the association of evolution with social and political ideas of social Darwinism" paved the way for the rise of the movement there.[129] In the first half of the twentieth century, creationists managed to exclude evolution from "school curriculums for decades."[130] The main victory for anti-Darwinists was the Scopes Trial that was publicized worldwide in 1925. A teacher was put on trial for teaching evolution in his classroom and he was levied a fine. There was great attraction to this trial, and it was broadcast live on the radio. Many countries paid attention to it. After the Scopes Trial, interest in the subject of evolution declined and it was banned from the curricula of schools in many states until 1960s. But the Cold War affected many fields, including science and education, and these curricula were revised so that the United States could compete with the Soviet Union. In fact, the United States had to take scientific and rational precautions and reform its education.[131] Therefore, attempts to prevent the teaching of evolution were discredited, playing a remarkable role in the popularization and public acceptance of the theory. Anti-Darwinism seemed to have been

127 Bowler, *Evolution*, 5.

128 Dixon, Science, 88-92.

129 Scott, *Evrim*, 149.

130 Bowler, *Evolution*, 376.

131 Scott, *Evrim,* 158.

thwarted in the favorable climate that allowed the theory to rise, but the rise of anti-Darwinism was accompanied by that of its opponent, anti-Darwinism. The theory's new success motivated those trying to refute it. In particular, after 1980s, anti-Darwinism grew stronger.

There are various forms of creationism, the most outstanding of which is Intelligent Design. The unfavorable climate did not wipe out anti-Darwinism, rather transformed it in a scientific way. The teaching of creationism was banned in many schools in the United States since the curriculum had to be "neutral" with respect to religious belief. Thereafter, the propaganda of Christianity had to be revised, and Intelligent Design was a strategy to get God back into the classroom in scientific clothing. Its proponents "adopted a new strategy, campaigning for legislation mandating balanced treatment or equal time in the classroom." As the teaching of creationism began to be perceived as an unacceptable, it tried to emerge in a scientific form. The distinction between Intelligent Design and creationism is that it neither directly nor indirectly references religious sources and divine intervention. The proponents of Intelligent Design neither mention Bible nor explain geological and fossil evidence in terms of a biblical flood. They pursue an intelligent actor in the development of life and make no reference to religious sources.[132]

The proponents of Intelligent Design explain nature and the origin of human beings with reference to the acts of a supernatural power. They always assert that their perfect, impressive structure precludes the accidental appearance of human beings. There are "events, objects, and structures in the world that exhaust the explanatory resources of indirect natural causes and that can be adequately explained only by recourse to intelligent causes."[133] Without supernatural power, the secrets of the miracle about human beings and nature cannot be ascertained. While trying to prove that humans are the product of a supernatural power, they exploit "gaps" in evolutionary theory. In other words, Intelligent Design proponents use supernatural power to fill "gaps" that evolutionary biologists have failed to fill. When evolutionary biology has not answered a question or has only unsatisfying answers on a scientific issue,

132 Dixon, *Science*, 93-94.

133 Bowler, "Evolution," 343.

Intelligent Design inserts supernatural explanations.[134] This is one of the most common ways that anti-Darwinist refute the theory and try to prove its groundlessness. "The disagreement within the scientific community provide ammunition for those who would dismantle the whole edifice of a scientific approach to understanding the origin and development of life." Any sign of theoretical disagreement within the scientific community is held up as proof of that "evolutionism is not science at all."[135]

All in all, Darwinian theory of evolution arose along with its opponents in a concomitant way. Actually, there is no discussion of creationism in respected scientific milieus, and evolutionary discussions were concerning mechanisms by which evolution took place. Science itself accepts the theory's truth and endeavors to discover its secrets. The core motivation of anti-Darwinists is political, ideological, and religious. Indeed, the conflict between evolution and creationism is an artificial debate.[136] As emphasized above, the most serious challenges come from religious rather than scientific motivations.

"In recent decades, the most prominent opponents of evolution have come from within two particular traditions - Protestantism and Islam."[137] They fear the corrosive and degenerative outcomes to which Darwin's theory can lead. "Evolution of all stripes" harm their religious claims "regarding the unique relationship of God to humankind."[138] Therefore, in order to get rid of this theory, the opponents of evolution adopt many strategies.

The power of anti-Darwinism varies from country to country in accordance with the prevailing scientific ethos and the distribution of political power between ecclesiastical and secular forces, but it is from the United States that anti-Darwinism is being exported to other countries. "Protestant fundamentalism" there is such a significant agent against evolution that it is possible to say they are the "flagship" of anti-Darwinism.[139] The clearest example of this was the Scopes Trial. What is more, it strengthened anti-Darwinism in the

134 Dixon, *Science*, 98.

135 Bowler, *Evolution*, 375.

136 Scott, *Evrim,* 14.

137 Dixon, *Science*, 80.

138 Olson, *Science*, 212.

139 Bowler, *Evolution*, 324.

Muslim world. Protestants bolster not only creationism and Intelligent Design in their realm, but also among anti-evolutionists in the Muslim world. On this point, Turkey is remarkable country on account of the power of the anti-evolutionist camp. This situation resulted from the policies of modern Turkey aimed at constructing a secular view of life and the origin of man. The rise of Darwinism in Turkey accelerated anti-Darwinism, which flourished at the end of the Ottoman Empire. This issue is elaborated in the following chapters of this dissertation.

3

The Rise of Secular Thought and the Introduction of Evolution in the Ottoman Empire

In the history of thought in the Ottoman Empire, it must be emphasized that modern thought developed when both the state and society were subject to a wide range of traumas in politics, the economy, and society. Instead of accessing to the roots of Western thoughts and comprehending them fully, the majority of Ottoman intellectuals concentrated on solving "day-to-day issues." They benefited from ideas they imported from Europe insofar as these ideas offered political, social, and economic answers to their problems. Therefore, it can be asserted that intellectual life remained shallow in the late period of the Ottoman Empire. However, it would be inappropriate to accuse Ottoman intellectuals of superficiality of thoughts just because "practical concerns" were more important to them in comparison with "abstract" issues. In other words, as their main goal was to alleviate political, social, and economic problems and save the empire, focus on abstract issues was neither fruitful for the sake of the empire nor themselves. Their intellectual pursuit was not disconnected from the "practical concerns "of daily life, and they did not live in an ivory tower. Instead of intellectual isolation, they played a leading role in the adoption of new ideas as far as they had the opportunity to do so.[1] For the

1 Ülken, *Çağdaş Düşünce* , XXII-XXIII.

Ottoman Empire, leaving aside the political conjuncture of the nineteenth century is impossible since it is difficult to distinguish intellectual efforts from the political conjuncture. This situation was not peculiar to the Ottomans, however, and can be seen in other countries like Egypt and India - the places where intellectual efforts were closely linked to political situations. "The course of Western thoughts in the Ottoman Empire began with political philosophy and the social sciences. Philosophy remained in the background in an era" when the Ottomans witnessed a range of political and military depressions. But towards the end of the nineteenth century, abstract ideas burgeoned.[2]

As the Ottoman Empire recognized its military problems and implemented a wide range reforms to challenge Western powers, foreign ideas began over time to deeply to penetrate the empire. Although Westernization started in the military realm, it spread to areas ranging from administration to law. The state and society began to undergo deep, tremendous changes during its longest period, the nineteenth century. These were so overarching and revolutionary that the state machine became remarkably various from that of the classical age. Many institutions were intensely influenced by Westernization. In particular, the reforms of Selim III and Mahmud II are noteworthy. The former focused on the construction of a new military order, but the latter's reforms covered many issues in areas like education. Thus, the real secularization and modernization of the Ottoman Empire started during the reign of Mahmud II. His innovations played a leading role in "the emergence of the idea of an Ottoman state, composed of peoples of diverse nationalities and religions based on secular principles of sovereignty as contrasted the medieval concept of an Islamic empire." This idea was the harbinger of "the gradual separation of state and religion."[3]

In the reign of Mahmud II, the idea of making purposeful changes for social progress came about. By initiating this, "he opened a window to the West and had no hesitation to challenge tradition." The abolishment of the Janissary corps in 1826, called the "Auspicious Incident" in the history of the Ottoman

2 Ibid., 320.

3 Niyazi Berkes, *The Development of Secularism in Turkey* (London: Hurst & Co., 1998), 90.

Empire, left no significant opposition against fundamental reforms. Furthermore, religious offices had no capacity to resist the Westernization and the influence of religion gradually decreased. "Mahmud II made a distinction between worldly and religiously affairs and eventually excluded the latter from the area of reform." Furthermore, he did not found an advisory council for religious affairs.[4] His legacy contributed to the secularization of both the state and society. Just after his sudden death in 1838, the Tanzimat period began with a historical document that reorganized the relationship of sultan and his subject. That is, westernization gained momentum because fundamental reforms were carried out in many fields from administration to taxation. In fact, the Tanzimat era was a radical period bringing Turkey into "close contact" with the West and providing many possibilities for "Europe to exert its influence directly."[5] The spread of this influence over many fields ranging from administration to education appears was inevitable.

It can be easily asserted that the Westernization movement, led by state itself, paved the way for the introduction of a secular way of thinking. Nature itself was being scrutinized in the light of science. It was increasingly accepted that religion itself had no capacity to explain natural phenomena, but this did not mean that Islam was regarded as a hindrance to be overthrown for the sake of modernization. Reforms in politics, the military, and education smoothed the way for a secular interpretation of nature and humankind. Thus, the nineteenth century represents a sharp transition from a religious to secular view of life. At this point, it is important to look at the factors that played a role independent from religion as well as at the intellectuals who introduced the theory of evolution.

§ 3.1 Modern Educational Institutions and New Textbooks

The classical Ottoman educational system was based on "the teaching of religious knowledge with limited worldly and practical educational content." Its basic aim was to inculcate basic religious knowledge to pupils, while madrasas

4 Ibid., 93-97.

5 Ibid., 138.

concentrated on the deeper learning of religious knowledge. Before the eighteenth century, the educational system had been composed of "mainly religious schools and a few schools with more secular characteristics." Enderun Mektebi (the Court School at Topkapı Palace) and Acemi Oğlanlar Ocağı (Janissary Novices) can be regarded as secular schools, but these were exceptional in the educational system of the Ottoman Empire. Fundamentally, religious foundations were responsible for providing educational services to the "common people."[6] Generally, they had to receive their education from Sıbyan School and madrasas under the control of religious foundations. However, these schools were directed towards otherworldly issues and discredited the positive sciences. In fact, there were various problems about the training of teaching staff and the curriculum.[7] Ali Suavi, one of the Young Ottomans in the nineteenth century, criticized madrasas for their insufficient curriculum. The classical methods in Ottoman education failed to meet the needs of both society and state. He noticed that there was an intellectual inertia and Muslims had to learn positive "sciences like physics."[8]

There was a serious problem with these classical educational institutions: they had no capacity to challenge Western military superiority. Various defeats proved the inefficiency and incompetence of the Ottoman army. Europe's material superiority forced the Ottoman Empire to revise its educational system since it had become necessary to reform the army and navy, which in turn necessitated the acquisition of "Western scientific knowledge."[9] In the nineteenth century, especially Young Ottomans were ardently keen to learn the outside world (power, administration, and fiscal methods of the West). Despite their political references to Islam, they contributed to the increasing conveyance of knowledge from Europe to the Ottoman Empire.[10] Towards the end

6 Selçuk Akşin Somel, *The Modernization of Public Education in the Ottoman Empire* (Leiden; Boston: Brill, 2001), 15-19.

7 Hasan Ali Koçer, *Türkiye'de Modern Eğitimin Doğuşu ve Gelişimi, 1773-1923* (Ankara: Milli Eğitim Bakanlığı, 1992), 27.

8 Şerif Mardin, *Yeni Osmanlılar Düşüncesinin Doğuşu* (İstanbul: İletişim Yayınları, 1996), 409-412.

9 Somel, *Modernization*, 15.

10 Mardin, *Yeni Osmanlılar*, 450.

of the empire, the Young Turks regarded knowledge obtained from Western sources as "guidance," since they thought it might be beneficial for saving the state.[11] The introduction of the idea of evolution in the Ottoman Empire was embedded in the process of Westernization.

Many military schools were founded so that the Ottoman army could keep up with the latest developments. These can be considered an extension of military modernization. The first modern educational institutions were the Mühendishane-i Bahr-i Humayun (the Naval Engineering School, established in 1773), Mühendishane-i Berri-i Humayun (the Engineering School for Armed Forces, established in 1795), Tıphane-i Amire (the Military Medical School [1826]), and Mekteb-i Ulum-ı Harbiye (the War Academy [1834]). Furthermore, many medical schools, including the Mekteb-i Tıbbiye-i Şahane (the Imperial School of Medicine), were oriented towards meeting the needs of the Ottoman army rather than those of civilians. In military engineering schools, teachers lectured on topics from geometry to architecture, and courses in physics and mechanics were especially remarkable. Owing to these modern military schools, the development of modern sciences took place in the Ottoman Empire.[12] Students in these early modern schools benefited from foreign teachers and books, and France had considerable influence over students. In classical Ottoman education, courses had been taught by ulema in the madrasas, but the mainstream courses were religious ones. Military schools played a leading role in the making of a secular thought in the Ottoman Empire.

Of the new military schools, Mekteb-i Tıbbiye-i Şahane was relatively the most interesting educational institution due to its curriculum and alumni, many of whom would become major political agents in the late period of the empire. Dr. Bernard, the founder of the Imperial School of Medicine, took Josephinum (a medical school in Vienna) as a model of a modern medical

11 Tarık Zafer Tunaya, *Türkiye'nin Siyasî Hayatında Batılılaşma Hareketleri* (İstanbul: Arba Yayınları, 1996), 70-71.

12 Sevtap Kadıoğlu, "Osmanlı'da Modernleşme Döneminde Fen Bilimlerinin Gelişimi," in *Bilim Sosyolojisi: Bilim Tarihi ve Yöntem Sosyoloji Yıllığı 16*, ed. Ertan Eğribel and Ufuk Özcan (Istanbul: Kitabevi, 2007), 722-723.

school. This school was composed of two sections, a four-year high school and a four-year main medical school. In fact, the former was a preparatory school for further education in medicine. The curriculum of the high school included certain courses such as mathematics and zoology. Pupils received courses on pathology, botany, and general chemistry in the second section of this medical school.[13] This school was merged with the Mekteb-i Tıbbiye-i Mülkiye (founded in 1867) in 1909. It offered many courses ranging from anatomy to geology and zoology.[14] Despite changes to the structure, curriculum, and the period of study, the influence of this school was long lasting in the intellectual landscape of the late period of the Ottoman Empire and the early Republican era.

Positivism first appeared in the Ottoman Empire in schools. Instead of the religious interpretation of nature and human origins, a biological, materialist approach became prominent. Religious interpretations concerning these issues were replaced with scientific explanations. Even though students who had just started Mekteb-i Tıbbiye-i Şahane, were conflicted with respect to religion and science, many came to favor the latter. Beşir Fuad and Abdullah Cevdet, well-known intellectuals mentioned later, had had conservative point of view, but they espoused materialist thought after a short period of education there. In fact, the views of its alumni conflicted with the values of a society enormously influenced by Islam. In particular, the French books and lecturers led the dissemination of this materialist thought among the students.[15] The books of Félix Isnard and Ludwig Büchner - who used Darwinian ideas in their philosophies - were widely read in the Imperial School. When Charles Macfarlane visited the school, he noticed that the books of atheist philosophers such as

13 Arslan Terzioğlu, "Galatasaray'da Mekteb-i Tıbbiye-i Şahane'nin Tesisi ve Bizde Modern Tıp Eğitiminin Gelişmesinde Önemi," in *Mekteb-i Tıbbiye-i Adliye-i Şahane ve Bizde Modern Tıp Eğitiminin Gelişmesine Katkıları: Kuruluşunun 150. Yıl Dönümü Anısına 18 Eylül 1989'da Yapılan Sempozyuma Sunulan Bildiriler*, ed. Arslan Terzioğlu and Erwin Lucius (Istanbul: Arkeoloji ve Sanat Yayınları, 1993), 11.

14 Kadıoğlu, "Osmanlı'da," 727.

15 Şükrü Hanioğlu, *Bir Siyasal Düşünür Olarak Doktor Abdullah Cevdet ve Dönemi* (Istanbul: Üçdal Neşriyat, 1981), 8-9.

Baron d'Holbach were widely read.[16] The students of this medical school attended to apply "the positive sciences to social affairs" since society itself was suffering from a severe disease and the state was backward. They did not isolate political affairs, participated and attempted to apply what they had learned and read.[17]

Apart from the aforementioned military schools, many civilian schools, which were independent from the religious foundations and also had a secular curriculum, were established by the state. Even though the Imperial Rescript of Gülhane was an epoch-defining document in Ottoman history, it included no articles concerning the education of the subjects of the sultan. However, during the Tanzimat era, education that had been in the hands of religious communities and foundations began to undergo a process of centralization and secularization. The organization of education by the state itself remarkably contributed to the increasing rates of schooling and literacy. From forward, education was a public service and the state used it as a means to permeate into society. As well as education, the growing functions of the state in education and communication meant the severe need for qualified officers. The need for military and civilian officers skyrocketed in the nineteenth century.[18] Thus, the state had to pay attention to build civilian schools. "The first non-military institutions" were Mekteb-i Maarif-i Adliye (School for Learning) and Mekteb-i Ulum-ı Edebiyye (School for Literary Sciences), both established in 1839. "These institutions were designed particularly for the training of unschooled young officials" and offered courses in different subjects such as French and history. "For the first time in the Ottoman Empire, a Muslim non-military school was offering these courses."[19]

16 Berkes, *Secularism*, 117; Charles Macfarlane, *Turkey and Its Destiny: The Result of Journeys Made in 1847 and 1848 to Examine into the State of that Country* (Philadelphia: Lea and Blanchard, 1850), 184.

17 Hanioğlu, *Abdullah Cevdet*, 22.

18 Mehmet Ö. Alkan, "Osmanlı İmparatorluğu'nda Eğitim ve Eğitim İstatistikleri, 1839-1924," In *Osmanlı Devleti'nde Bilgi ve İstatistik* (Ankara: Devlet İstatistik Enstitüsü, 2000), 127.

19 Somel, *Modernization*, 34-35.

Apart from these two schools, three other new educational institutions were significant during the late Tanzimat period. The first was the School of Civil Service (Mekteb-i Mülkiye-i Şahane, established in 1859), which was founded for the training of young clerks of the Sublime Port in subjects such as history and statistics. This school was originally a two-year course, but in 1869 the duration of its educational program was expanded to three years, and after one year later, it became four years.[20] This school included the course of the history natural sciences (*Tevarih-i Tabiiye*) in its curriculum.[21] During the Hamidian regime, it was elevated to a professional college. It trained high ranking-officers who would work in the provinces. This school had many well-known alumni such as Mizancı Murad and Sakızlı Ohannes Pasha. The second school was Mekteb-i Sultani (present-day Galatasaray High School), which was established to provide education for both Muslims and non-Muslims. Its instructional language was French. In fact, this school is a symbol of Tanzimat period reflecting "the cosmopolitan aspect" of the empire in terms of religion.[22] The curriculum of the school included many courses in the natural sciences and philosophy. What is more, when a museum was founded at Mekteb-i Sultani, fossil collections were exhibited.[23] The students must have realized the instability of organisms and the extinction of some species. The third school was Darüşşafaka (House of Compassion), a private orphanage founded in 1873. "Many of its instructors were military officers who prepared some of the textbooks and translated others from French into Ottoman Turkish."[24]

Of the educational institutions, the history of the establishment of Darülfünun (House of Multiple Sciences) was different due to the debates about it. The main motivation was to promote science in the Ottoman Empire rather than to train qualified staff for a bureaucracy. Although the idea of its

20 Necdet Sakaoğlu, *Osmanlı'dan Günümüze Eğitim Tarihi* (Istanbul: Istanbul Bilgi Üniversitesi Yayınları, 2003), 85-86.

21 Ali Çankaya, *Yeni Mülkiye Tarihi ve Mülkiyeliler*, (Ankara: S.B. F., 1968), 53.

22 Sakaoğlu, *Osmanlı'dan*, 85-86.

23 İbrahim Hakkı Akyol, "Tanzimat Devrinde Bizde Coğrafya ve Jeoloji," in *Tanzimat I* (Istanbul: Maarif Matbaası, 1940), 547.

24 Somel, *Modernization*, 52-53.

establishment emerged in 1846, the state managed to do it only in 1863. Many lectures on the natural sciences were offered, and they were open to the public.[25] It was supposed that various people in Ottoman society - the students of the madrasas, officers, and statesmen - would have been interested in these lectures. Derviş Pasha, who had received an education in Europe, delivered the lectures. Furthermore, lectures on astronomy were planned and certain physical experiment with electricity were carried out there.[26]

Darülfünun was short-lived. When it was re-opened in 1870, a speech by Jamal al-Din al-Afghani drew a strong reaction from Sheikhulislam who accused Afghani of being a "heretic."[27] In 1900, Darülfünun was again re-opened and this time endured. It was composed of various branches of education like "mathematics and the natural sciences (Ulum-ı riyaziye ve tabiiye). In the latter branch, "courses on geology, physics, and botany were offered."[28] Furthermore, Darülfünun had a "religious science branch (ulum-ı aliye-i diniye)," which was a blow to madrasa education since the letter had been known as "the cradle of religious education."[29] The state consolidated the nationalization of public education. However, it did not completely remove religious education from the religious environment.

Apart from new schools, the Ottoman Empire placed particular importance on the institutionalization of educational affairs. In 1845, the Meclis-i Maarif (Council of Education) was established to prepare textbooks and translate foreign books into Turkish. This council paved the way for the foundation of the Ministry of Public Education (Maarif-i Umumiye Nezareti). Even though Encümen-i Daniş (Council of Knowledge) was founded to promote science in 1851, it was gradually sidelined.[30] However, the Maarif Nezareti

25 Ülken, *Çağdaş Düşünce*, 78.

26 Ibid.

27 In this speech, Jamal al-Din al-Afghani compared philosophers and prophets, emphasizing their equality. This led religious leaders in Istanbul to attack him violently and he was ordered to leave the country. For further information, see Nikki R. Keddie, *Sayyid Jamal ad-Din al-Afghani* (Berkeley: University of California Press, 1972), 68-70.

28 Kadıoğlu, "Osmanlı'da," 732.

29 Alkan, "Osmanlı," 133.

30 Sakaoğlu, *Osmanlı'dan*, 71.

(Ministry of Public Education, established in 1859) by the Maarif-i Umumiye Nizamnamesi (Regulation of Public Education) made enormous contributions to the institutionalization and nationalization of public education. This ministry was established because of "the need of coordinating the increasing number of government schools and better supervision of non-Muslim and foreign educational institutions." The establishment of this ministry can be considered "a major institutional step" because it played a leading role in "the secularization of public education" in the empire. This ministry dealt with cultural activities in the empire as well as educational matters.[31] The regulation endeavored to solve educational problems in a well-coordinated way. Although religious education was still offered by foundations and religious communities, the state was a noticeable agent in education from the Tanzimat onwards. This regulation was prepared under the influence of the French Minister of Education, Jean Victor Duruy.[32] A more secular understanding emerged and the state intervened more in education. In particular, education was a noticeable example of the sharp transition from otherworldliness to worldliness.

The Tanzimat was not an end point in terms of the secularization and nationalization of public education. Many noticeable advancements took place during the reign of Abdülhamid II despite his authoritarian, Islamic orientation. The main orientation of his reign reflected on the educational policy, but there was a strong continuity between the Tanzimat era and the Hamidian regime in terms of educational policies. During his authoritarian regime, higher education was developed in accordance with the needs for competent civil and military staff.[33] As the state expanded into fields such as communication and health, the need for these staff was imperative. The secularization of education was inescapable.

During the Hamidian regime, "a renewed stress on Islam" was obvious and the state maintained the promotion of educational modernization. The Hamidian regime made an effort to synthesize "Islam and modernity." Both

31 Somel, *Modernization*, 8.

32 Berkes, *Secularism*, 179.

33 Niyazi Berkes, *Felsefe ve Toplumbilim Yazıları* (Istanbul: Adam, 1985), 119.

the promotion of education and "the preservation of piety" was considered indispensable. Students were supposed to learn Islamic rules at school.[34] The most important developments in education were the dissemination of public education across the empire and growing bureaucracy of the Ministry of Education. The number of Rüşdiye, İdadi, and Darülmuallim (Teacher Training Schools) rose from 250, five, and four to 600, 104, and thirty-two, respectively. The provincial organization of the ministry expanded enormously after educational directorates were established across the empire.[35]

While new schools were being established, a relatively modern curriculum was introduced, though many of these schools offered religious courses to their students. Some courses taught in madrasas were given in Turkish in these new schools (Rüşdiye and İdadi), contributing to the dissemination of religious education across the empire. While these schools delivered Western sciences, they did not overlook religious education. In fact, the latter was more dominant than the former. Modern schools had an important role in the transformation of traditional schools like madrasas.[36] With the foundations of modern schools independent of traditional schools, the educational landscape of the empire began to change completely. Yet, this does not mean that modern and traditional schools were wholly various from each other. There were some commonalities in their curricula.

While the state was becoming increasingly involved in educational affairs and was establishing modern schools, there were many schools, with no official affiliation with the Ministry of Education. That is, despite the state's growing involvement in education, there was still no unity or centralization. Except for the modern schools established by the state, many missions had schools in various degrees across the empire. The presence of these schools was one of the leading factors that forced the Ottoman Empire to modernize education. "The higher quality of instruction and the teaching of foreign language" were attractive to local people, irrespective of their religious and ethnic identity. This trend was powerful in regions where public schools were few or non-

34 Somel, *Modernization*, 4.

35 Bayram Kodaman, *Abdülhamid Devri Eğitim Sistemi* (Ankara: Türk Tarih Kurumu, 1991), 164.

36 Ülken, *Çağdaş Düşünce*, 81.

existent. To decrease the influence of these foreign schools, the dissemination of modern schools was needed.[37] Therefore, there was competition between the public and missionary schools. In particular, the interest of Muslim pupils in foreign schools was an alarming situation since these schools might leave a detrimental impact on the fabric of Muslim society. Missionary schools attracted many Muslim pupils due to their "well-constructed buildings, competent teaching staff, and curriculum." Thus, the number of Muslim students went up gradually.[38]

Although missionary schools had religious purposes, they did not ignore modern sciences since what made them attractive to the locals was their educational quality. These sciences had a unique point in their curriculum. In the nineteenth century, developments in the modern sciences were so stunning that even missionary schools could not discredit them, and their curricula had to contain these developments. Indeed, the education offered by missionaries became increasingly secular.[39] Furthermore, these schools were a door for introducing many scientific developments of the Western world. Even though the question of whether these educational institutions were secular or not is debatable, they transmitted recent scientific knowledge to the subjects of the Ottoman Empire. Modern sciences thus had a channel into the Ottoman Empire. In particular, the Robert College in Istanbul and the Syrian Protestant College (SPC) in Beirut, founded by American Protestants in the 1860s, transmitted the latest scientific developments to their pupils. The former offered many various courses on geology and natural history,[40] and some teachers at the latter delivered a "speech" about Darwinian theory of evolution.[41]

New educational materials were vital in the aforementioned schools. Many courses taught in these schools played a leading role in preparing many pupils

37 Somel, *Modernization*, 202.

38 Sakaoğlu, *Osmanlı'dan*, 88.

39 Uygur Kocabaşoğlu, *Anadolu'daki Amerika: Kendi Belgeleriyle 19. Yüzyılda Osmanlı İmparatorluğu'ndaki Misyoner Okulları* (Istanbul: Arba Yayınları, 1989), 168.

40 "Programme of Annual Examinations," CU-RBML, Robert College Records, Box: 32, Folder: 22, 1877.

41 Uriya Shavit, "The Evolution of Darwin to a Unique Christian Species," *Modernist-Apologetic Arab-Islamic Thought, Islam and Christian–Muslim Relations* 26, No.1 (2015): 19.

to embrace a secular interpretation of nature and humankind. The textbooks used in the traditional schools were insufficient. Focusing on the courses and textbooks of modern schools is beyond scope of this chapter, but scrutinizing some textbooks seems fruitful to grasp how modern science was introduced through educational institutions.

The courses of geology, zoology and botanic in modern schools contributed greatly to the appearance of secular thoughts about the earth and organisms. From the last quarter of the nineteenth century onwards, the number of books on geology increased remarkably thanks to the aforementioned new schools and geology courses in their educational program.[42] Mustafa Behcet translated part of French naturalist Comte de Buffon's *Histoire Naturelle* (natural history), which contained considerable knowledge on geology, and it was published on *Tasvir-i Efkar* (description of ideas). In addition, Başhoca İshak Efendi provided a valuable knowledge of geological eras and mining in his *Mecmua-yı Ulum-ı Riyaziye* (journal of mathematical sciences). In 1853, the first complete geology book, titled *İlm-i Tabakat al-Arz* (science of earth), was a translation of *Géologie Populaire* by Nérée Boubée (1806-1862). The translation was undertaken by Mehmet Ali Fethi, a madrasa scholar.[43] Although not prepared for educational purposes, it was used as a textbook in schools for approximately twenty-five years due to the lack of eligible books on geology. This book included information on how earth was formed and how plants and animals appeared. Furthermore, the author focused on Adam and the biblical flood.[44] Thus, not all religious arguments were excluded from this scientific book, and it was not based on a completely materialist interpretation of the earth and the origin of organisms. If it had promoted a complete materialist understanding, Mehmet Ali Fethi might not have translated since, as a

42 Ekmeleddin İhsanoğlu and others, "Osmanlı Tabii ve Tatbiki Bilimler Literatürü Tarihine Giriş," in *Osmanlı Tabii ve Tatbiki Bilimler Literatürü Tarihi*, ed. Ekmeleddin İhsanoğlu and others (Istanbul : IRCICA, 2006).

43 Celal Şengör, "Osmanlı'nın İlk Jeoloji Kitabı," in *Osmanlı Bilimi Araştırmaları* XI/1-2 (2009-10), 130-131.

44 Ekmeleddin İhsanoğlu and others, "Osmanlı Tabii ve Tatbiki Bilimler Literatürü Tarihine Giriş," in *Osmanlı Tabii ve Tatbiki Bilimler Literatürü Tarihi*, ed. Ekmeleddin İhsanoğlu and others (Istanbul : IRCICA, 2006), 169.

madrasa teacher, he would avoid an interpretation that excluded divine will. In the Ottoman Empire, the first book to be written on geology was *İlm al-Arz va'l Maadin* (science of the earth and mining), by Macarlı Abdullah Bey in 1875, and it was used for a long time.[45] In this book, even though Abdullah Bey mentions Darwin's name and his theory, did not favor the idea of human descent from apes.[46]

Halil Edhem (Eldem) (1861-1938) was one of the most important contributors to the development of geology in the Ottoman Empire. He received his education in Europe and followed contemporaneous scientific developments there. He taught courses at the Mekteb-i Mülkiye (School of Civil Administration) and Darüşşafaka (House of Compassion) and wrote a book on geology, entitled *İlm-i Maadin ve Tabakatü'l-Arz* (the science of mining and the earth) in 1890. Even though he started it off with the *Bismillah (in the name of God)* and used a religious discourse, he did have a completely religious interpretation of geological issues. For example, while he mentioned Noah's ark, he interpreted the earth and some organisms in a materialist way. What is more, he wrote about Charles Darwin, if only briefly.[47] He rejected the idea that species had remained the same since their appearance on the earth, but he did not state clearly that organism evolved. When their appearance was questioned, he emphasized the idea of creation, but not that of evolution. Even though he mentioned the biological relationship among some species at the time, he did not attribute this to evolution. He accepted that humankind was created in the fourth geological era.[48] From his book, it can be inferred that he embraced a dynamic point of view while explaining geological issues and the appearance of organisms. That is, instead of accepting that the world and species are fixed, he favored the idea that there is constant change in the course of history.

After the declaration of the Second Constitution (1908), the number of the books and journals shots up, reflecting a respective freedom. Therefore, many

45 Ibid., LXXXIX.

46 Miralay Doktor Abdullah Bey, *İlm al-Arz va'l Maadin,* (Istanbul: Mekteb-i Tıbbiye-I Şahane Matbaası, 1292 AH [1875]), 511.

47 Halil Edhem (Eldem), *İlm-i Maâdin ve Tabakatü'l-Arz* (Istanbul: Mihran Matbaası, 1307 [1890]), 239.

48 Ibid., 294-295.

authors stated their ideas openly. M. Sadi, a physician, wrote a book, *İlm-i Arz* (the science of the earth), and paid attention to not only to geological issues but also to the cultural progress of humankind. He divided geological time into five eras, and humans appeared in the fourth. But he pointed out that it was possible to observe some animals were harbingers of humankind, and many fossils of these organisms, especially of monkeys, corroborated his idea. He added that a skull, discovered in Java, Indonesia, was proof of the similarity between human and monkey.[49] However, he did not apply the idea of evolution to the appearance of humankind even though he compared humankind and monkeys at certain points.

Another remarkable point in Sadi's book was his focus on the cultural evolution of humankind. As he did not accept the fixity of humans, he divided their history into eras. In addition, the words used to define the course of their history were oriented towards their perfection (*tekemmül*). He explained the perfection of humankind from the perspective of cultural, but not physical anthropology. While ancient humans used to live in caves and obtain food by hunting, they later domesticated dogs and discovered fire, which they would sacralize.[50] Instead of concentrating solely on geological issues, his book contains valuable information on the history of civilization.

Ebu'l Muhsin Kemal, a teacher in Istanbul, wrote a geology book, entitled *Yeni İlm-i Arz* (new science of the earth) for students at İdadi schools. He asserted that discovered fossils revealed differences between some animal and plant species, and these fossils were not existent species. Thus, they were probably "extinct." Furthermore, Kemal accepted change within some species in the course of history. He argued that due to changes in environment, some animals began "to resemble existent species."[51] Even though he appears to have favored the application of evolution to animals, he remained silent about the appearance of humankind.

Even though the authors sometimes used a religious discourse in the explanation of geological issues, scientific findings were their guiding light. Their

49 M. Sadi, *İlm-i Arz* (Istanbul: Mekteb-i Tıbbiye-i Askeriye Matbaası, 1328 Rumi [1912]), 168.

50 Ibid., 170.

51 Ebu'l Muhsin Kemal, *Yeni İlm-i Arz* (Istanbul: Artin Asadoryan ve Mahdumları Matbaası, 1330 [1914]), 118-119.

motivation was to transmit recent developments in science, rather than to bolster religious arguments in light of science. Nevertheless, while authors did not clearly and specifically mention Darwinian theory of evolution in their explanations of organisms, many of them embraced the idea that species did not remain the same and changed in the course of history. Furthermore, they pointed out concepts such as the extinction of some species and their adaptation to environment. As mentioned in the previous chapter, geological studies – along with the constructions of dams and railways - provided huge fossil record to which the aforementioned books paid attention. As a result, geological books had important textbooks in order to indicate how a secular approach to both earth and organisms was located.

The trend in geology textbooks can also be observed in zoology and botany books. The increase in modern schools paved the way for the expansion of the literature in these scientific fields. Botany courses at the Mekteb-i Tıbbiye-i Şahane and Mekteb-i Ulum-ı Harbiye particularly enhanced interest in the aforementioned fields and some alumni of Mekteb-i Mülkiye translated many studies into Turkish.[52] Even though the aim of these translations was to disseminate recent scientific knowledge, they contributed to the materialist

52 According Ekmeleddin İhsanoğlu, some books on botany and zoology are: Muallim Bernard, *Element de Botanique* (prepared as a textbook, a part of which is in Turkish); Agop Gırcikyan and Cevdet Efendi, *İpek Terbiyesinin Talimnamesi* (Istanbul: Tabhane-i Amire Litografya Destgahı, 1269); Hayrullah B. Abdulhak Molla, *Fenn-i Ziraatten Beyt-i Dihkani* (Istanbul: Dar al-Tıba'at al-Amire, 1264); Kirkor Ağaton, *Türkiye'nin Zirai İktisadı* (lost in Paris); Abdullah Ramiz Paşa, *Fenn-i Ziraat-i Muhtasara* (Istanbul: Tophane-i Amire Matbaası, 1869); Mustafa Hilmi Paşa, *İlm-i Nebatat*; Mustafa Rasim Paşa, *Çiftçilik* (Istanbul: Mihran Matbaası, 1302); Mehmed Safvet, *Ziraatte Teceddüd* (Istanbul: Matbaa-i Ebuzziya, 1309); Mehmed Fuad, *Takvim-i Ziraat* (Istanbul: Artin Asaduryan Şirket-i Mürettibiye Matbaası, 1309); Hüseyin Remzi, *İlm-i Nebatat* (Istanbul: Mekteb-i Mülkiye Litoğrafya Destgahı, 1311); Kuşadalı Hacı Mehmed Ali Paşa, *İlm-i Nebatat-ı Tıbbiye*, *İlm-i Nebatat, İlm-i Nebatat-ı Umumiye* (Istanbul: Mekteb-i Tıbbiye-i Şahane Matbaası, 1874,1886,1892). Rasih Efendi, *Menakıb-ı Hayvanat* (Istanbul, 1272); Rıfat İsmail Paşa, *İlm-i Hayvanat* (Istanbul, Matbaa-i Amire, 1285); Civani, *Zootekni Fenn-ı Teksir ve Islah-ı Hayvanat* (Istanbul: Matbaa-i Hukukiye, 1329). Ekmeleddin İhsanoğlu et al., "Osmanlı Tabii ve Tatbiki Bilimler Literatürü Tarihine Giriş," in *Osmanlı Tabii ve Tatbiki Bilimler Literatürü Tarihi*, ed. Ekmeleddin İhsanoğlu and others (Istanbul: IRCICA, 2006), XCV- XCVI.

interpretation – at least of organisms other than humans. However, many of the botanical books were on agriculture and medical cares, while the zoological books were about animal breeding.

These books introduced encyclopedic information on many animals (their habitats, nutrition, hunting) ranging from hedgehogs to monkeys.[53] However, there was one attention-grabbing topic in these books: even though their subject matter was animals, certain pages focused on humankind, giving remarkable knowledge on their physiology and morphology. However, the authors emphasize the uniqueness and elevated position of humankind on the earth. The scientific level of the authors was adequate to know ofDarwinian theory of evolution, but remained silent on the origins of animals and their biological relationship to humans. For example, Tevfik Şükrü, a teacher of zoology in the İdadi section of the Imperial School of Medicine, touched on humankind in his book *İlm-i Hayvanat* (The science of animals), but he stressed that they were "the most honorable of creatures" (*eşref-i mahlukat*) and "excellent" (*mümtaz*). In doing so, he prevented possible criticisms about the origin of man and refrained from an evolutionary discussion. In addition, Tevfik Şükrü expanded on the issue of humankind by touching upon races. From his point of view, man appeared in Asia and spread from there to the corners of the world. There were four main races in the world, namely, "white" (ırk-ı ebyad), "Mongolian" (ırk-ı Mongoli), "black" (ırk-ı zenci), and "malay" (ırk-ı Malay).[54]

There is one important point in the books on zoology. While explaining animal species, racial issues and the position of humankind as organisms are examined. For example, Mehmed Emin[55] focused on the elevated position of

53 Tevfik Şükrü, *İlm-i Hayvanat* (Istanbul: Mekteb-i Tıbbiye-i Şahane Matbaası, 1319 Rumi [1902]); Hüseyin Remzi, *İlm-i Hayvanat* (Istanbul: Arşak Garoyan Matbaası, 1331 Rumi [1915]); Mustafa Satı, *Tarih-i Tabiiden İlm-i Hayvanat* (Istanbul: Artin Asodoryan ve Mahdumları Matbaası, 1327 [1911])

54 Tevfik Şükrü, *İlm-i Hayvanat* (Istanbul: Mekteb-i Tıbbiye-i Şahane Matbaası, 1319 AH [1902]), 323-325.

55 Many people put this author down as Mehmet Emin Yurdakul (1869-1944) who was poet and politician. The author died in 1924 and there is just name resemblance and their year of birth is the same. Perhaps, their name and the year of birth led this confusion. For a short biography

humans in the first chapters of his book, claiming that they are the product of divine will. Their "verbal" skills and "mental" capacity are distinctive peculiarities.[56] After mentioning humankind and races, touches upon the primates such as the chimpanzee and the gibbon, accepting the similarities between apes and humankind.[57] He was aware of discussions of the descent of humankind from animal, but rejected the animal ancestry and accepts divine creation - perhaps to escape direct confrontations with religious teachings.

A well-known Ottoman educationalist, Mustafa Satı (to be mentioned on subsequent paragraphs), wrote a book of zoology (*Tarih-i Tabiiden İlm-i Hayvanat*) for the students at Yanya Idadi School. Throughout his book, he pointed out that the lives of organisms do not go unchanged and that "the renewals and transformations of organisms" are ordinary processes.[58] Although his book was on animals, he devoted a chapter to humankind and provided knowledge on human physiology and morphology. He included humans in the category of primates, but emphasized their "distinction" among organisms. Furthermore, like Tevfik Şükrü, he touched on the issue of race.[59] In fact, his book was so well-rounded that it would pass as a book on the history of civilization rather than a book on zoology.

Apart from aforementioned schools textbooks, a textbook of general history, *Tarih-i Alem,* written by Süleyman Paşa is significant because it covered a long history of the world and examined certain geological and zoological issues. He used scientific findings to explain the making of the earth. He said that "the earth, which was covered with gas, was a single spark of fire. As it cooled down, the present layer formed…"[60] As for the appearance of

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of Mehmed Emin Bey: Ali Çankaya, *Yeni Mülkiye Tarihi ve Mülkiyeliler*, (Ankara: S.B. F., 1968), 374.

56 M. Emin, *Musavver Tarif-i Hayvanat* (Dersaadet: Matbaa-i Osmaniye, 1310 AH [1893]), 2-3.

57 Ibid., 5-6.

58 Mustafa Satı, *Tarih-i Tabiiden İlm-i Hayvanat* (Istanbul: Artin Asodoryan ve Mahdumları Matbaası, 1327[1911]), 2.

59 Ibid., 155-157.

60 Küre-i arz ki etrafı gaz ile muhat şerare-i müfrez-i nariye idi. Teberrud ettikçe tabaka-i haliyesi teşekkül etmiş. Süleyman Paşa, *Tarih-i Alem* (Istanbul: Mekteb-i Harbiye Matbaası, 1293 AH [1876]), 9.

organisms on the earth, he accepted the biological evolution emerging from simple to complex organisms. The first organic animals were "coral" and "sponge."[61]Even though he accepted the evolution for animals, he disfavored the evolution of human beings and took the story of Adam and Eve as the starting point for their history. He found religious narratives reliable to write a general history and put forward that "there was no available proof related to early times except for the account of holy books…"[62] Human beings originated from Adam and Eve and scientific findings are not capable of providing reliable fact to explain this issue. Ahmed Midhat Efendi shared a similar opinion with Süleyman Paşa, emphasizing the reliability of religious stories. The former thought that

> the matter of early creation of world and Adam is a matter between naturalists and heavenly books…But, as we are dealing with history of science rather than natural science, we will completely stay quiet on the ideas and views of naturalists. [63]

Neither the work of Süleyman Paşa nor that of Ahmed Midhat Efendi had a positivist point of view as they embraced religious stories for the explanation of human beings, considering them to be an absolute truth. Besides, although both of them seem to be aware of the recent developments in natural sciences like biology, they prioritized religious stories. Ahmed Midhat Efendi and Süleyman Paşa had a remarkable place in the explanation of how human beings appeared on the earth in other school textbooks.[64]

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61 Ibid., 22.

62 Ezmene-i evveliyeye dair kütüb-ı mukaddesenin rivayetinden başka elde bir sened olmayıp… Ibid., 32.

63 Dünya ve Hz. Adem'in ibtida-yı hilkati meselesi tabiyyun-ı hükema ile kütüb-ı semaviye arasında bir mesele…Ancak biz burada ulum-ı tabiiye ile değil, ilm-i tarih ile iştigal eylediğimizden tabiiyyunun efkarı ve rü'yeti tamamen sükut ile geçeceğiz. Ahmed Midhat Efendi, *Tarih-i Umumî: Kısm-ı Evvel Ezmene-i Mukaddime Tarihi* (Istanbul: Kırk Anbar Matbaası, 1295 AH [1878]), 58-59.

64 Hasan Sırrı, *Tarih-i Umumî* (Dersaadet [Istanbul]: Karabet Matbaası, 1309 AH [1892]), 14-15.

§ 3.2 Ottoman Print Culture

With the increasing number of modern schools and growing contact with Europe, the intellectual and cultural life of the Ottomans entered into a dynamic period. Even though Ottoman culture had long been based on oral narratives, literacy overall had increased sharply on account of both private and public initiatives during the nineteenth century. As a matter of fact, more schools meant increasing literacy. Estimates suggest that literacy at the beginning of the nineteenth century was about two to three percent, but by the end of the century, it had risen to fifteen percent. Furthermore, an average of only eleven books were published annually in Istanbul before 1840, but this had increased to 285 by 1908.[65] Codification, the main trend of Tanzimat era, was evident in the publishing field. The number of private and public printing houses increased so sharply that a *Matbaa Nizamnamesi* (regulation for printing houses) was issued to control them. There were 151 printing houses across the empire, and the number of private ones was much higher than that of public ones.[66] In the second half of the nineteenth century, private initiatives in print culture became more common and played a remarkable role in the printing of new books. For example, Ahmed Mithad Efendi and Ebüzziya Tevfik, two well-known authors and publishers, made enormous contributions to the intellectual climate by publishing many books and periodicals. The popularization of knowledge went up considerably.

As the Ottoman Empire became exposed to Europe, the number of translated books went up. The influence of Westernization was evident in the field of translation. The establishment of modern schools required a new curriculum and textbooks, and the lack of learning materials was a serious problem for lecturers. The optimum solution was translations. Ottoman authors were already translating technical books for engineering schools, and this trend spread to other fields such as philosophy and science. The conveyance of European thought to the Ottoman Empire thus gained momentum. For example, while Hüseyin Rıfkı, Emin Paşa, and İshak Hoca, who taught various courses

65 Donald Quataert, *The Ottoman Empire 1700-1922* (New York: Cambridge, 2005), 168-170.

66 Alim Gür, *Ebüzziya Tevfik: Hayatı, Dil Edebiyat, Basın, Yayın ve Matbaacılığa Katkıları* (Ankara: Kültür Bakanlığı, 1998), 11.

at modern schools, were the outstanding Ottoman translators, other authors such as Şinasi, Ziya Paşa, and Namık Kemal - Young Ottomans - came to the fore. Şinasi translated many French works like the poetry of Lamartine and fables of La Fontaine. Ziya Pasha translated Molière's *Tartuffe* and Namık Kemal translated Volney's *Les Ruines*.[67] These are examples of Ottoman intellectuals' growing interest in Western literature, showing that their interests were not limited to scientific treatises.

In the Ottoman Empire, Western influence through translations were not particular to books. Many journals and newspapers published respectively short translated passages. For example, while Abdullah Cevdet translated books on topics ranging from science to philosophy, many passages of translated works in his own journal, *İçtihad* (opinion). The number of translated philosophical works went up increasingly.[68]

"Increasing diplomatic relations with the West" gave rise to the translations. The need to foster relationship and better communication with European countries played an important role in the establishment of the Tercüme Odası (Translation Chamber), but it was more than a translation office for the state. It taught many courses to its officers. This function of the institution was the product of a growing need for more and better interpreters and public officials.[69] This chamber had a remarkable position in intellectual life since those who served and received their education there left a long-lasting legacy. Halil Esrar Efendi and Mehmet Tecelli Efendi, who trained many translators in Terüme Odası, contributed to a degree to the appearance of an open-minded generation. Twelve out of thirty-three permanent members of the Cemiyet-i İlmiye-i Osmaniye (Ottoman society of sciences), established in 1861, had connections to this chamber. "The members of Tercüme Odası translated not only diplomatic correspondences, but also many European works ranging from theater to the natural sciences." For example, Ahmet Vefik Paşa (1823-1891)

67 Hilmi Ziya Ülken, *Uyanış Devirlerinde Tercümenin Rolü* (Istanbul: Ülken Yayınları, 1997), 325-329.

68 Ibid., 333-334.

69 Özlem Berk, "Translation and Westernization in Turkey from the 1840s to the 1980s" (PhD Diss., University of Warwick, 1999), 29.

who was a well-known author and politician, translated many works of Moliere.[70] In addition, officers received courses on law and history and read "the books of Voltaire and Machiavelli."[71] Thus, this chamber was essentially a modern school. Even though it had diplomatic functions in foreign affairs, its impact on the intellectual life of the empire was impressive.

As well as Tercüme Odası, another bureaucratic unit triggered translation. The Telif ve Tercüme Heyeti (Committee of Compilation and Translation) was established within the Ministry of Education in 1865. Of its members, Kadri Mehmet Paşa, Sakızlı Ohannes, and Keçecizade Mehmet were significant figures. "The goal of this committee was to write and translate books that ordinary people could read" rather than to produce textbooks for the students at the modern schools.[72]

§ 3.3 The Flagships of the Intellectual Realm: Periodicals

Periodicals provided remarkable amount of knowledge about the intellectual life of Ottomans. Secular interpretations of nature and humankind crystalized. The history of secularism in the Ottoman can be traced through the articles published in these periodicals. During the Tanzimat, Hamidian and Young Turk eras, periodicals were a step ahead of books. Particularly, after 1908, the impact of new journals was critical in intellectual life. Thus, periodicals require special attention. Journals had long aimed to provide encyclopedic knowledge to their reader rather than to discuss scientific or political issues. It is beneficial to look at the journals that contributed to the making of the intellectual climate.

The first newspaper in the Ottoman Empire, *Takvim-i Vekayi* (calendar of events), was published in 1831, but since it was an official periodical, only state affairs were allowed to be subject matters of the writings on it. Its main motivation was to inform its readers about state affairs and to proclaim the sultan's decisions. The second newspaper was *Ceride-i Havadis* (chronicle of events,

70 Sezai Balcı, *Bab-ı Ali Tercüme Odası* (Istanbul: Libra, 2013), 323-325.

71 Ibid., 365.

72 Ülken, *Çağdaş Düşünce*, 57.

1840). Even though this periodical was similar to *Takvim-i Vekayi*, it published a certain number of articles on history and geography. It is controversial to call it a private newspaper since "the state sponsored it when its publishers had financial difficulty and lacked technical staff." Therefore, there was a strong organic relation between the state and its publishers, and one cannot assume this newspaper was a completely private initiative. Despite its semi-official character, *Ceride-i Havadis* left a long-lasting impact on print culture, paving the way for the simplification and development of the language of written works. During the Tanzimat era, print culture in the Ottoman Empire proliferated gradually. Agâh Efendi, who earned his experience in the printing house of *Ceride-i Havadis*, and Şinasi (1826-1871), who was a famous journalist and author, started to publish the first private newspaper, *Tercüman-ı Ahval*. This periodical was of higher quality than previous ones in terms of content. It can be called a "newspaper of ideas" and contained many "encyclopedic articles."[73] After leaving *Tercüman-ı Ahval*, Şinasi began to print his own newspaper, *Tasvir-i Efkar* (description of ideas), which contributed to burgeoning discussions of "democratization, language, and literature." His legacy for the progress of print culture in the Ottoman Empire was as much important as the legacies of Ahmed Midhat Efendi and Ebuzziya Tevfik.[74] When Şinasi was in Paris, he met with Emil Littré and Ernest Renan, the well-known representatives of positivism in France.[75]

Journals left an enormous impact on print culture because their qualitative and quantitative level significantly shaped intellectual life. They were the main transmitters of secular ideas. Without Western-oriented journals, the intellectual life of the Ottomans in the modern age would have been primitive. The first journal, *Vakayi-i Tıbbiye* (*medical events*), was published by Mekteb-i Tıbbiye-i Şahane in 1849, but was short-lived and consisted of only twenty-eight issues. It had a French version.[76] This journal provided valuable

73 Alpay Kabacalı, *Başlangıçtan Günümüze Türkiye'de Basın ve Yayın* (Istanbul: Literatür Yayınları, 2000), 61-64.

74 Ibid., 67-68.

75 Murtaza Korlaelçi, *Pozitivizmin Türkiye'ye Girişi* (Ankara: Hece Yayınları, 2002), 157-158.

76 Zafer Toprak, *Türkiye'de Popülizm* (Istanbul: Doğan Kitap, 2013), 79.

knowledge on remedies for certain diseases, public health, and epidemic diseases like cholera. Even though the journal was published by Mekteb-i Tıbbiye-i Şahane, which was established for military purposes, the authors emphasized general health.[77] It thus contributed to the dissemination of general public knowledge about medicine though its main audience was not ordinary people. In addition, it followed medical developments in Europe.[78] As the publisher of this journal was a Western-oriented school, its close watch on Europe is expected.

Mecmua-i Fünûn (journal of sciences) explicitly represents the encyclopedist tradition of Ottoman journalism. Cemiyet-i İlmiye-i Osmaniye published it, and Münif Paşa played a leading role in its printing. Münif Paşa and other authors took on the task to inform people in the Ottoman Empire of European scientific developments. This periodical was like "present-day small booklet" and was highly informative.[79] "Its thirty-three issues were printed regularly. Despite disruptions due to financial problems and an epidemic of cholera, it was republished in 1866."[80] This journal was not limited to one branch of science, and what made it striking was that its content ranged from the ancient history of Egypt to geology to the economy. Apart from an introduction to geology, there was an article on the dissemination of humankind over the earth written by Hayrullah Efendi. He focused on how humankind was distributed, their racial divison, and the physical differences among them. While providing recent scientific knowledge, he briefly mentioned Carl Linnaeus (1707-1778), a Swedish botanist, and Georges Cuvier (1769-1832), a French naturalist.[81] Both were well known for their systematic research on species. While Linnaeus carried out enormous studies on taxonomy, Cuvier proposed a theory on the extinction of species. He probably had knowledge of Darwinian theory of evolution since it would be difficult for him to know *The Origin of Species* from its English version (1859) or French translation (1862). Ottoman

77 *Vakayi-i Tıbbiye*, No. 1 (1 Cemaziyelevvel 1265 [25 March 1849])

78 *Vakayi-i Tıbbiye*, No. 4 (1 Şaban 1265 [22 June 1849])

79 Tevfik Çavdar, "Mecmua-i Fünûn Üzerine," *Amme İdaresi Dergisi*, No. 15-2 (1982): 83

80 Kabacalı, *Başlangıçtan*, 69.

81 Hayrullah Efendi, "İntişar-ı Nev'-i Beşer," *Mecmua-i Fünûn*, No. 7 (Recep 1279 AH [1862]): 239-243.

intellectuals would have to wait a couple of decades to learn of Darwin. Mecmua-i Fünûn attempted to introduce Western science and techniques to Ottoman audiences and its function was similar to that of eighteenth-century French encyclopedias. Many Western-oriented authors put various scientific topics to paper for its audience. Both this journal and the Tercüme Odası paved the way for the appearance of a typology of the Ottoman intellectual in the Tanzimat era.[82] In spite of its intermittent printing, its impact on print culture was enormous.

Ottoman journalism gained momentum in the 1860s, and it continued to progress in the following decades. Ali Suavi's journal, *Ulûm* (*Sciences*), was a striking periodical at the time and maintained the tradition of *Vakâyi-i Tıbbiyye* and *Mecmua-i Fünûn*. This journal covered many scientific fields and had no specific specialty. While some issues focused on geography, others did various animals like kangaroos.[83] Many journals flourished in the 1870s despite short print lives mainly due to financial problems or censorship. The major ones of this period were *Sıhhatnüma* (1871), *Ceride-i Tıbbiye-i Askeriyye* (1871), *Mevâdir'ül-Âsar* (1873), *Revnak* (1873-1875), *Öteberi* (1873), *Mecmua* (1873), *Musavver Medeniyet* (1874-1878), and *Afitâb-ı Maârif* (1874-1875).

In the print culture of the Ottoman Empire, Ahmed Midhat Efendi left an enormous impact since he strove to popularize the encyclopedic tradition of the Tanzimat and published miscellaneous studies. He endeavored painstakingly to popularize Western scientific knowledge using an unsophisticated language. He wished a material and cultural progress rather than political goals like constitution.[84] Indeed, he was a vigorous advocate for the "simplification" of the Turkish language. According to Hilmi Ziya Ülken, it is possible to divide his life into two eras. During the first, he favored materialist interpretations, a tendency noticeable in the articles published in *Dağarcık* (Pouch). On the other hand, during the second era of his life, he changed his

82 Toprak, *Popülizm*, 80.

83 *Ulûm*, the date and number of this issue is unknown, 1320-1340, http://katalog.ibb.gov.tr/kutuphane2/sureli/02304_00000_TY_36193.pdf

84 Orhan Okay, *Batı Medeniyeti Karşısında Ahmed Midhat Efendi* (Istanbul: Dergâh Yayınları, 2008), 29.

mind and espoused Islamic doctrines and teachings. A noticeable transition from materialism to spiritualism took place in his philosophy.[85] What is more, his stance against materialism was so apparent that he wrote a book defending spiritualism from the threat of materialism.[86] Ahmed Midhat has a distinctive place in the intellectual history of the Ottoman Empire because he was the first to consider "the philosophical issues of West." Before him, Ottoman intellectuals generally dealt with political ideas. Their attention philosophy was limited to the degree to which philosophical issues were related to their political agendas. In other words, philosophy through interest in as much as it offered a fruitful point of view for interpret political matters in the Ottoman Empire. Even though Pascal and Descartes were mentioned in the articles of Namık Kemal and Ali Suavi, they were looking to them for a guiding principle that they could exploit for their political views.[87]

Ahmed Midhat's journal, *Dağarcık* (Pouch), was published between 1871 and 1872. He wrote articles on various issues from animals[88] to the earth,[89] and he did it in a way that ordinary people could understand. He wrote two significant articles about humankind, namely *İnsan* (Man) and *İnsan* (Dünyada İnsanın Zuhur) (The appearance of man on the earth). In the first article, he explained the power of man, placing emphasis on mankind's respective successes such as the construction of great tunnels and armored ships. While doing so, he did not disregard the role of divine will in the universe, stressing that divine power had no limit. Competition was the basis of human nature from his point of view, but he did not mean a Darwinian type of competition.[90] In addition, he advocated for vengeance in human affairs as well as competition.[91] He examined the nature of humankind philosophically, rather than in light of scientific findings.

85 Ülken, *Çağdaş Düşünce*, 146-148.

86 Ahmed Midhat, *Ben Neyim: Hikmet-i Maddiyeye Müdafaa* (Istanbul: Çağrı Yayınları, 2014), 11.

87 Ülken, *Çağdaş Düşünce*, 147-153.

88 Ahmed Midhat, "Hayvanat," *Dağarcık*, No. 2 (1288): 63-64.

89 Ahmed Midhat, "Arzın Kaderi," *Dağarcık*, No. 1 (1288): 25-26.

90 Ahmed Midhat, "İnsan," *Dağarcık*, No.2 (1288): 49.

91 Ahmed Midhat, "İntikam," *Dağarcık* No.2 (1288):37-38.

In the second article, Ahmed Midhat Efendi concentrated on the appearance on humankind on the earth. Even though he did not touch on the creation of man by divine will, he made a comparison between animal and man, calling the latter "civilized animals." However, he was referring to cultural evolution rather than the biological theories of evolution of either Lamarck or Darwin. In addition, he claimed that "animals which had lived in caves and forests before humankind lived in societies" could be considered to be civilized humans.[92]

The line between animal and man was flexible in his point of view. To indicate anatomical similarities between these species, he emphasized orangutans, whose anatomical shape and "numbers of bones," he argued, are almost the same as man's. He added that some organs of this animal had evolved in accordance with Lamarckian principle of evolution, and its hands and feet to their present shape through their use in the course of time. He implied that the more evolution orangutans underwent, the more similarities they had with man. Even though he believed in a hierarchy among the species and did not fundamentally displace man from its exalted position, he assumed the superiority of some animals whose lives were more civilized than certain people of the deserts of Africa and Asia.[93] While explaining the dissemination of humankind, its relationship with animals, and the influence of climate on organisms he avoided direct confrontation with Islamic teachings.

Although Ahmed Midhat Efendi explicitly mentioned Lamarckian theory of evolution, he made no reference to Darwin and his theory. This omission suggests two possibilities. The first is that he might have worried about probable criticisms about vis-à-vis the atheism, widely inferred from Darwin's theory. That is, he might have been afraid that planning the forms of natural life in materialistic terms could lead to anti-theological implications. In contrast, if he wished to avoid from atheist implications and direct confrontation with religious institutions, he would not have made the correlation between apes and monkeys in some of his articles. The second possibility is that his knowledge of Darwin's theory was insufficient when he wrote his articles in

92 Ahmed Midhat, "İnsan (Dünya'da İnsanın Zuhuru)," *Dağarcık*, No.4 (1288): 109-117.

93 Ibid.

Dağarcık. Even though he admitted having read Darwin's studies,[94] he either said anything favorable nor adverse about Darwin and his theory. As the intellectual landscape of the Ottoman Empire was deeply influenced by France, where Lamarckian theory of evolution had long predominated, it is likely that he was more familiar with Lamarckian theory rather than the Darwinian one.[95] Therefore, the second possibility seems more plausible.

There was an argument claiming that Ahmed Midhat Efendi was a social Darwinist.[96] When his articles published in *Dağarcık* are scrutinized, it is doubtful that Ahmed Midhat was a social Darwinist thinker. He touched upon neither the name of Darwin nor Darwinian concepts such as the survival of the fittest and the struggle for life. Therefore, whether the thinking of Ahmed Midhat Efendi had a clear connection to a particular social doctrine or to a particular understanding of human evolution is open to question. He did not defend social Darwinism in his defense of free-market economics and opposition to the interventionist state. Ahmed Midhat Efendi's conception of the state and the individual did not refer to evolutionary biology and natural selection. Even though his view related on the individual and society was in accordance with social Darwinist ideas, he did not argue for a social doctrine with correct or indirect reference to Darwinian theory. His advocacy for vengeance and competition in human affairs does not make him a social Darwinist because recognition of brutality in humans is not a sufficient criterion. Thus, the notion that Ahmed Midhat Efendi was a pioneer of social Darwinism in the Ottoman Empire is groundless. It is not reasonable to contextualize his writings as social Darwinism. He was in pursuit of a harmony between the findings of Lamarckism and Islamic principles[97] and he did not hesitate to touch on Jean Baptiste Lamarck. For example, he paid attention to the appearance of humankind on the earth with reference to Lamarckian theory of

94 Ahmed Midhat, *Ben Neyim?,* 24.

95 Atila Doğan, *Osmanlı Aydınları ve Sosyal Darwinizm* (Istanbul: Bilgi Üniversitesi Yayınları, 2006), 154.

96 Ibid., 147.

97 Toprak, *Popülizm*, 82.

evolution.[98] In spite of his later transition from materialism to spiritualism, his legacy was significant for the secular interpretation of the earth, humankind, animals, and plants.

Ebuzziya Tevfik (1849-1913), who was an outstanding proponent of Westernization in print and one of the most important publishers during the Tanzimat era,[99] printed *Mecmua-yı Ebuzziya* (journal of Ebuzziya), a periodical that concentrated on literary and political issues but did not overlook recent scientific developments in various fields like geology and physics. Furthermore, it focused on natural history by emphasizing the contribution of Carl Linnaeus.[100] Like the aforementioned zoological textbooks, this journal touched on the classification of human races, dividing them into four categories: Caucasian, yellow, red, and black.[101] A growing interest in organisms and their habitats is evident in the content of this journal. Ebuzziya Tevfik kept his journal out of political issues since periodicals that annoyed the sultan in the Hamidian era could be banned.

Another striking journal was *Hazine-i Evrak* which concentrated on scientific issues. Many well-known Ottoman authors (Recaizade Mahmud Ekrem, Münif Paşa, Namık Kemal, Samipaşazade Sezai, and Abdülhak Hamid) wrote articles for it. Its goal was to show that education could be performed with the help of the press as well as through educational institutions. The young, great authors of the late period of the Ottoman Empire came together in *Hazine-i Evrak*.[102] It provided encyclopedic knowledge on the morphology of many animals like birds and apes, and certain authors entitled their articles as *Tarih-i Tabii* (natural history).[103] Moreover, some articles explained

98 Ahmed Midhat, "İnsan (Dünyada İnsanın Zuhuru)," 113.

99 Âlim Gür, *Ebüzziya Tevfik*, 315.

100 "Tarih-i Tabii," *Mecmua-i Ebuzziya, No. 13* (15 Rebiü'l-Evvel 1298 AH [15 February 1881]): 400.

101 "Uruk-ı Beşerin Taksimatı," *Mecmua-i Ebüzziya*, No. 6 (Zilhicce 1297 AH [November/December 1880]): 169-172.

102 Toprak, *Popülizm*, 83-84.

103 Baki, "Madeniyat, Nebatat, Hayvanat," *Hazine-i Evrak*, No. 3 (no date): 48; Ahmed Hamdi Efendi, "Tarih-i Tabii: Kuşlar," *Hazine-i Evrak*, No. 9 (no date): 133-136; Ahmed Hamdi, "Tarih-i Tabii: Sinin Kuşu," *Hazine-i Evrak*, No. 19 (no date): 328-330; "Tarih-i Tabii: Karıncalar," *Hazine-i Evrak*, No. 26 (no date): 405.

the differences among races and how they spread over the earth, but they remained silent on the evolution of humankind or their descent from a common ancestor with ape. However, it paid attention to apes which have remarkable similarities with humans.[104]

In 1891, Ahmed İhsan (1868-1942), a translator and author, started to publish a weekly journal entitled *Servet-i Fünûn* (wealth of sciences). Even though this journal was intended to introduce Western science to the empire, it evolved into a literary periodical after 1896 when Tevfik Fikret became its editor. In addition, *Servet-i Fünûn* was known as the main voice of a literary movement called *Edebiyat-ı Cedide* (new Literature).[105] Hüseyin Cahit, Ahmet Şuayip, and Mehmet Rauf, wrote many articles for this journal. The journal had published short stories even prior to 1896, and it is not possible to classify it as a strictly scientific journal. Its articles did not have a specific, targeted audience and seem to be for general consumption. It used simple words that ordinary, literate people could understand and did not include complicated scientific issues. There were many articles on plants, animals, and the earth.[106] The editorship of Tevfik Fikret in 1896 did not amount to a complete conversion into literary journal. It was possible to find articles on politics and science. Edhem Necdet wrote a number of articles on Charles Darwin which introduced his theory and life.[107]

As well as aforementioned authors of *Servet-i Fünun*, Cenap Şehabettin (1870-1934) was an influential writer for whom this journal played a leading role in his literary personality.[108] He was known for his literary studies. Even

104 Mehmed Ziya Bey, "İnsanın Çoğalışı," *Hazine-i Evrak*, No. 23 (no date): 375-384.

105 Kabacalı, *Basın ve Yayın*, 96.

106 "Nebatat Meraklısı," *Servet-i Fünûn* 3, No. 57 (2 Nisan 1308 Rumi [14 April 1892]): 75; "Kertenkeleler," *Servet-i Fünûn* 5, No. 119 (10 Haziran 1309 Rumi [23 June 1893]): 229-230; "Musahebe-i Fenniye Deve Kuşları," *Servet-i Fünûn* 5, No. 112 (22 Nisan 1309 Rumi [5 May 1893]): 118-120; "Arz," *Servet-i Fünûn* 4, No. 88 (5 Teşrin-i Sani 1308 Rumi[18 November 1892]):153-154.

107 Edhem Necdet, "Tenkikat-ı Felsefiyye-Şarl Darvin," *Servet-i Fünûn* 39, No. 989, (6 Mayıs 1326 Rumi [19 May 1910]):12-14;" Tenkit-i Felsefiyye - Darvin'in Meslek Felsefesi," *Servet-i Fünûn* 39, No. 1000, (22 Temmuz 1326 Rumi [4 August 1910]): 215-216;" Tetkikat-ı Felsefiyye – Darvinizm," *Servet-i Fünûn* 39, No. 1001, (29 Temmuz 1326 Rumi [11 August 1910]):228-230.

108 Ülken, *Çağdaş Düşünce*, 185.

though he was one of its outstanding members, he also wrote for other journals such as *Mektep* (school) and *Aşiyan* (nest). He published an article, entitled *Mücadele-i Hayat* (struggle for life) in *Musavver Muhit* stressing the overarching influence of struggle on the social life of humankind. He attempted to explain actions like murder as the outcomes of the instinct to survive and reproduce and he assumed that many crimes, including murder, were signs of this struggle. He argued that strong organisms defeated weak ones in nature. Just as individuals conflicted with each other, societies did it with each other. Every organism pursued its interests, which brought about the rise of battles among them. This was a natural rule and there was no way to escape.[109] From his point of view, it can be inferred that nature and social life are similar and that the struggle for survival was a foundation of life. However, while interpreting humankind, he did not touch on biological evolution. It can be evaluated in the context of social Darwinism.

It is possible to assert that *Servet-i Fünûn* was more than a periodical of literature or science; its legacy played a considerable role in the making of positivist thought in the Ottoman Empire. In particular, articles of Ahmet Şuayip, who examined the views of Hippolyte Taine, indicate how a positivist way of thinking gradually was entrenched in the Ottoman intellectual life. With this journal, "a positivist era" began to sideline "the encyclopedic tradition" of Ottoman printing culture. Owing to this journal, the Ottoman intelligentsia and literate people were more exposed to positivist thinking.[110] Furthermore, there was strict censorship of print culture, so the authors delivered their opinions through "the guise of the philosophy of art."[111]

The beginning of the Young Turk period (1908) was a turning point for the transition from otherworldliness to worldliness. The number of periodicals skyrocketed and both their qualitative and quantitative aspects developed enormously. Approximately 607 newspapers and journals were printed between 1908 and 1911. "The freedom of the press encouraged the rise of journals

109 Cenap Şehabettin, "Mücadele-i Hayat," *Musavver Muhit* 1, No. 21 (19 Mart 1325 Rumi [1 April 1909]): 330-331.

110 Toprak, *Popülizm*, 79.

111 Ülken, *Çağdaş Düşünce*, 210.

that concentrated on ideas," and contributed the transfer of the Western scientific knowledge to the empire.[112] "Because of "political chaos at the beginning of the second constitutional era," the intellectual landscape of the empire was similar to "anarchy" While some periodicals severely criticized the reign of Abdülhamid II, others attempted to influence the people by publishing popular articles.[113]

Because of the freedom of press, journals and newspapers began to discuss ideas rather than provide encyclopedic knowledge from various scientific fields. After a short period of political pandemonium, various ideas began to crystalize in these periodicals. To begin with, debates related to Westernization gained momentum when many Young Turks came together under the umbrella of *İçtihad*, published by Abdullah Cevdet. The authors of this journal wrote on many various issues from "modernization of the family" to woman's rights." They even challenged the position of classical educational institutions like madrasas, proposing a secular system. Due to their militant secular approach to social and political matters, they represented the radical wing of secularism in the Ottoman Empire. Second, Islamic political views also became more apparent in print culture after 1908. The number of Islamic journals went up considerably. *Sırat-ı Müstakim* (Straight path), *Beyanü'l-Hakk* (Statement of God), and *Sada-yı Hakk* (Sound of God), *İslam Mecmuası* (Journal of Islam), and *İslam Dünyası* (Islamic world) were principal periodicals at that time.[114]

Of these journals, *Sırat-ı Müstakim* was the most famous. It was published by Ebu'l-ala Zeynel Abidin (Mardin) and Eşref Edip in 1908, and its editorial writer was Mehmed Akif (Ersoy) who would pen the national anthem of the Republic of Turkey in 1921. It changed its name as to Sebilürreşad in 1912. While this journal published articles that advocated Islamic principles, it advocated importing Western technology to save the empire but opposed total Westernization. *Beyanü'l-Hakk* was a periodical published by the Cemiyet-i İlmiye-yi İslamiye (Islamic Society of Science) and its 182 issues essentially focused on the political and social problems of the empire from an Islamic point

112 Toprak, *Popülizm,* 85.

113 Ülken, *Çağdaş Düşünce*, 183.

114 Toprak, *Popülizm*, 87-88.

of view. *İslam Mecmuası*, was another leading journal. Munis Tekinalp and Ziya Gökalp, two of the leading figures of Turkish nationalism and the Committee of Union and Progress, published their articles in this journal. It touched on economic issues of the Ottoman Empire and proposed solutions for its economic problems.[115] Abdûrreşid İbrahim, who visited many countries and attempted to promulgate Islam among non-Muslims like the Japanese,[116] published *İslam Dünyası*. It favored a range of reform in social and educational institutions of Muslims.[117] Articles that it published the periodical is relatively more open-minded compared with other Islam-oriented journals.

In the print culture of the empire, socialist ideas became one of the main topics of conversations after 1908. This political movement first appeared in Salonica, which was one of the most cosmopolitan cities of the empire in terms of social and economic development. A socialist journal entitled *Amele* (laborer) was published in four various languages in this Balkan city, Hüseyin (İştirakçi) Hilmi published *İştirak* (participation) in Istanbul in 1909.[118] A small, but a significant point must be underscored: the journal did not challenge the teachings and practices of Islam. What is more, it even argued that there is an explicit similarity between "the social equality in Islamic philosophy" and "egalitarianism" and "solidarism" of socialist ideology.[119] When Alâeddin Cemil wrote an article on Ottoman socialists in *Şura-yı Ümmet* insulting them and their political views, İştirakçi Hilmi responded harshly, attempting to prove that socialism was accommodated within both Christianity and Islam.[120] In fact, what he endeavored to do was to demonstrate that Ottoman society had been familiar with socialist ideas for hundreds of years. He

115 Tekin Alp," Milli İktisat," *İslam Mecmuası* 2, No. 22 (12 Şubat 1330 Rumi [25 February 1915]): 650-652; Ahmet Muhittin, "Milli İktisat - Milli Sermaye - Milli Sermaye Teşkilatı," *İslam Mecmuası* 3, No. 33 (29 Temmuz 1331 Rumi [11 August 1915]): 729-734.

116 Nadir Özbek, "Abdürreşid İbrahim: İslamcı Bir Eylem Adamı," *Toplumsal Tarih* 4, No. 19 (July 1995): 10.

117 Toprak, *Popülizm*, 87.

118 Ibid., 88.

119 Hamit Erdem, *Osmanlı Sosyalist Fırkası ve İştirakçi Hilmi* (Istanbul: Sel Yayınclık, 2012), 42.

120 Hüseyin Hilmi, "Şura-yı Ümmet'e Cevap," *İştirak*, No. 4 (6 Mart 1326 Rumi [19 March 1910]): 47.

used religion to propagate socialist ideas in the Ottoman society. The legacy of socialist journals contributed to the development of materialist ways of thinking despite their prudent, prudent approach to religion.

Like other political and philosophical movements, materialist ideas were spreading after 1908. Owing to modern educational institutions and new journals, many students and intellectuals were exposed to materialist ideas. It was easy to learn the thinking of materialist intellectuals.[121] Edhem Necdet, Memduh Süleyman, Baha Tevfik, Fazıl Ahmed, Ahmed Nebil, and Subhi Edhem were the leading figures of Ottoman materialism. The flagship of Ottoman materialism was *Felsefe Mecmuası* (*journal of philosophy*) published by Baha Tevfik and Ali Fuad. The contributors to this periodical interpreted human affairs from a materialist point of view, and they were respectively more courageous, touching on precarious issues like the origin of humankind. They wrote articles on many various issues such as Lamarckism, branches of biology and geology,[122] and the history of organisms and earth, all of which were explained without reference to divine will. The scope of this journal was not limited to merely philosophy. In addition, it included a concise dictionary of philosophy that covered the definitions of many concepts such as *cause* and *relativism*. According to this dictionary, evolution (*tekâmül* in Ottoman Turkish) was a development starting from a simple form, generally with reference to organisms.[123] Overall, this journal provided a significant platform for materialist authors to state their views. It must be stressed that there was "a dispute between spiritualist and materialist philosophies"[124] and *Felsefe Mecmuası* was the flagship of materialist thought. Indeed, Baha Tevfik published Ernst Haeckel's *Die Welträtsel* (The Riddle of the Universe) in *Felsefe Mecmuası* as a serial. Haeckel considerably occupied Ottoman intellect. This

121 Toprak, *Popülizm*, 88.

122 Subhi Edhem, "Lamark ve Lamarkizm," *Felsefe Mecmuası* 1, No. 6-7-8-9 (1329 Rumi [1913]).

123 "Felsefe Kamusu," *Felsefe Mecmuası* 1, No. 9-10 (1329 Rumi [1913]).

124 Süleyman Hayri Bolay, *Türkiye'de Ruhçu ve Maddeci Görüşün Mücadelesi* (Istanbul: Yağmur Yayınları, 1967): 6.

might be because he visited the Ottoman Empire in 1873. Ahmed Nebil translated his one of books into Turkish.[125]

There is a significant point to draw attention: prior to *Felsefe Mecmuası*, a periodical entitled *Yeni Felsefe Mecmuası* (new journal of philosophy) had been published by Benizade Ahmed Hamdi and Mehmet Zekeriya (Sertel) in Salonica in 1911. It explicitly promoted Turkish nationalism and endeavored to form its "social ideology *Yeni Hayat* (new life)."[126] This journal published an article that emphasized the role of biological evolution in psychology. It was emphasized that "the development of natural sciences resulted in the fact that psychology gradually acquired a 'realist' character and that all religious inspirations were kicked out from psychology."[127] The author mentioned the Lamarckian principle of adaptation and Darwinian natural selection, but even though he mentioned the name of Lamarck but he did not refer to Darwin. Even so, he favored their biological evolutionary views in the development of psychology.[128]

Owing to the works of Baha Tevfik and friends like Ahmed Nebil, materialist thought became much clearer. Of the journals, he published, which included *Piyano* (piano) and *Yirminci Asırda Zeka* (intelligence in the twentieth century), *Felsefe Mecmuası* (Journal of philosophy) was the most striking due to its contribution to the intellectual life of the empire. It must be emphasized that this journal inherited the intellectual tradition of nineteenth-century

125 Mehmet Ö. Alkan, "Osmanlı Darwinizmi." *Cogito* 60-61 (Fall-Winter 2009): 349; Ernst Haeckel, *İnsanın Menşei Nesl-i Beşer*, trans. Ahmed Nebil (Dersaadet [Istanbul]: Nefaset Matbaası, 1327 AH [1909]).

126 Mehmet Ö. Alkan, "Laik Bir İdeolojinin Doğuşu ya da II. Meşrutiyet'te Türkçülüğün Toplumsal İdeolojisi: Yeni Hayat ve Yeni Felsefe Mecmuası," In *Tarık Zafer Tunaya'ya Armağan* (Istanbul: Istanbul Barosu, 1992), 378.

127 Bugün tabii ilimlerin terakkisi psikolojinin gittikçe "realist" bir şekil almasını ve bütün dini temayüllerin ruhiyattan uzaklaşmasını intaç etti. Ibid., 392; D. A. M., "Psikoloji Tetkikatının Takip Ettiği Yol," *Yeni Felsefe Mecmuası*, no.2 (30 Ağustos 1327 Rumi [12 September 1911]): 13.

128 D. A. M., "Psikoloji Tetkikatının Takip Ettiği Yol," *Yeni Felsefe Mecmuası*, no.2 (30 Ağustos 1327 Rumi [12 September 1911]): 13-17.

Europe and reflected its peculiarities.[129] In particular, *Piyano* included articles about many animals such as frogs and bats. In fact, these writings were not more than encyclopedic information.[130] Baha Tevfik's friend Ali Fuad was co-publisher of this journal but remained in the background. Despite having only ten issues, it left a distinctive mark on the transition from traditional to secular thinking.

In addition to materialism, positivism gained momentum with the publication of a well-known journal, *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* (journal of economic and social sciences). The founders of this journal - Ahmed Şuayib, Mehmed Cavid, and Rıza Tevfik (Bölükbaşı) - had written articles for *Servet-i Fünûn* which had paved the way for positivist publishing in the Ottoman Empire, and they were deeply influenced by its intellectual legacy. Apart from these founders, Ali Suad, Faik Nüzhet, Ahmed Muhtar, Salih Zeki, Bedii Nuri, and Asaf Nef'i wrote articles for this journal. It benefited from the libertarian conjuncture that appeared right after the declaration of the Second Constitution. While it advocated liberal economic policy inspired by Adam Smith and David Ricardo, it favored positivism in philosophy.[131] Positivist ideas were dispersed throughout many articles and the founder of this philosophy, Auguste Comte, and his legacy were examined.[132] According to the program of this journal, their main motivation was to solve the economic and social problems of the empire.[133] They had practical concerns and introduced sociology to the empire, but their sociological point of view was influenced by no more than Herbert Spencer's works; Émile Durkheim had not yet been discovered at the time. One of the most distinctive aspects of *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* was its attempt to explain society and

129 Toprak, *Popülizm*, 88; Mehmet Ö. Alkan, "Türkiye'de İlk Felsefe Dergisi: Felsefe Mecmuası," *Tarih ve Toplum* 66, 1989, 55.

130 "Tarih-i Tabii Dersleri," *Piyano*, No.16: 192.

131 Aynur Erdoğan, "Meşrutiyet'in Evrimci Dergisi: Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası," *Sosyoloji Dergisi* 3, No. 28 (2014): 76-78.

132 Halide Salih (Halide Edip Adıvar), "Ogust Kont," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 1, No. 1 (15 Kanun-ı Sani 1324 Rumi [28 January 1909]): 163-180.

133 Ahmed Şuayip, Mehmed Cavid and Rıza Tevfik, "Mukaddime-i Proğram," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 1, No.2 (15 Kanun-ı Evvel 1324 Rumi [28 January 1909]): 1.

economy through the findings of biology. According to Ahmed Şuayip, one of the founders, there was "a close affinity between biology and sociology," and they frequently and mutually supported each other.[134]

Ahmed Şuayip endeavored to explain society and the state in a positivist sense. In doing so, he was deeply inspired by sociology and sociobiology. Even though he died at the young age of thirty-four, his preliminary approach can be inferred from his article, *Devlet ve Cemiyet* (state and society) in the journal. He argued that European civilization was "the product of a long evolution" by which it acquired its present level of development.[135] After explaining how the law of evolution governed all things in the world, he touched on the nature of humankind in order to clarify the formation of state. From his point of view, humans had a "wild" character that never changed in the course of history and had to be in "cooperation against enemies." This collaboration of various peoples was a compulsory for survival and led to the making of social contract - which Ahmed Şuayip called *Mukavele-i İçtimaiyye* - and the birth of government. In other words, because "people were inclined to do evil to each other and a small gain was enough to make them hostile to each other," "the most clever and strongest" became leaders of communities through a social contract. Experience proved the inefficiency of a disorder and the need for a stable society for the sake of humankind. After explaining origin of government, he concentrated on factors such as geography and men of religion that played a remarkable role as the foundation of society. The evolution of society took place gradually rather than abruptly.[136] As can be inferred from his article, Ahmed Şuayip sought the laws that governed human societies from a positivist standpoint.

Evolutionary theories and the organic theory of society were the backbone of articles published in *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*. Evolution was an inevitable process from which neither organisms, nor society could stand aloof. In the nineteenth century, many significant developments took place in biology, contributing to explanations of social life in the light of

134 Ahmed Şuayip, "Devlet ve Cemiyet," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 1, No.1 (15 Kanun-ı Evvel 1324 Rumi [28 January 1909]): 54.

135 Ibid., 56.

136 Ibid., 58-59.

biological findings. As an organism, society resembled biological organisms and was no more than a continuation of nature. Biological and social organisms were often compared with each other. Both had growth and differentiation in their structure and function, and there was a mutual correlation between their parts. Societies had organs just like individuals. For example, the brain and the circulatory system had equivalents in society. "The most popular of the bio-organicist intellectuals, Herbert Spencer," was the leading figure of early sociology in the Ottoman Empire.[137] There were many articles on the struggle for life, natural selection, evolution, and Spencerian philosophy in *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*.[138] It focused not only on economic and social issues but also on debates about race. While examining biological, environmental, and nutritional factors that lead to the progress of humankind, he benefited from Lamarckian and Darwinian theories of evolution. Ahmed Şuayip attempted to refute the idea that race was the sole factor bringing about progress.[139] Unlike articles in other journals like *Mecmua-i Ebuzziya*, he had an argumentative approach to the racial issues. Overall, this journal adopted a critical position in its introduction of sociology and promotion of positivism despite the fact that it was short-lived.

137 Toprak, *Popülizm*, 95-98.

138 Asaf Nef'i, "Mücadele-i Hayatiyye ve Tekâmül-i Cemiyyat," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No. 8 (1 Ağustos 1325 [14 August 1909]): 455-480; Rıza Tevfik, "Hükümet ve Hürriyet Hakkında Spenser'in Felsefesi 1," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No. 7 (1 Temmuz 1325 [14 July 1909]): 354-368; Rıza Tevfik, "Hükümet ve Hürriyet Hakkında Spenser'in Felsefesi 2," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No.10 (1 Teşrin-i Evvel 1325 [14 October 1909]): 224-226; Rıza Tevfik, "Hükümet ve Hürriyet Hakkında Spenser'in Felsefesi 3," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No.13 (1 Kanun-i Sani 1325 [14 January 1910]): 107-118; Rıza Tevfik, "Hükümet ve Hürriyet Hakkında Spenser'in Felsefesi 4," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No. 14 (1 Şubat 1325 [14 February 1910]): 238-245; Rıza Tevfik, "Hükümet ve Hürriyet Hakkında Spenser'in Felsefesi 5," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No. 17-20, (1 Mayıs 1326-1 Ağustos 1326 [14 May 1910- 14 August 1910]): 672-690; Rıza Tevfik, "Hükümet ve Hürriyet Hakkında Spenser'in Felsefesi 6," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, No. 17-20 (1 Mayıs 1326-1 Ağustos 1326 [14 May- 14 August 1910]: 742-757.

139 Ahmed Şuayip, "Avamil-i İçtimaiyye: Irk Nazariyesi," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 2, No. 5 (1 Mayıs 1325 Rumi [14 May 1909]): 42.

During the Young Turk era, studies on biological evolution gradually increased. For example, on the occasion of the 100th birthday of Darwin in 1909, Dr. Nami published two detailed articles on his biography on the journal *Bahçe* (garden). The author offered valuable knowledge on many evolutionary issues from its history to the foundations of the Darwinian theory. Three years later, Yahya Halid wrote an article on Charles Darwin comparing his theory with that of Lamarck. In fact, this author emphasized that they differed on the main mechanism of evolution and that Darwin's was more widely accepted in Europe.[140]

§ 3.4 Remarkable Intellectuals in terms of Secular Interpretation of Nature and Organisms

3.4.1 *Asaf Nef'i: The Coexistence of Social Darwinism and Social Justice*

Asaf Nef'i, one of the prominent authors of *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, benefited from both Darwinian and Lamarckian evolutionary theories since he considered them to be complimentary scientific approaches for figuring out social life. He thought that evolution is the basis of all of organisms in the world; no species can escape it. He favored the idea of struggle for existence and the thoughts of Buffon, Darwin and Malthus. While Buffon was a precursor to the idea of struggle, Malthus used it in his theory for proposing a theory of population. Eventually, Charles Darwin broadened the application of struggle to nature, asserting that "all organisms were in struggle with each other and that only the fittest ones survive." After testing natural selection as the basis of the relation of species to nature, Asaf Nef'i did not superficially touch on Darwin's sexual selection. "One sex renders itself attractive to mates of the opposite sex," and this was why females need to be "coquettish and beautiful" while males had a tendency to be "brave and courteous" to the opposite sex.[141] In fact, Asaf Nef'i clarified his position about the relationship of

140 Doğan, *Osmanlı Aydınları*, 206.

141 Asaf Nef'î, "Mücadele-i Hayatiyye ve Tekâmül-i Cemiyyat," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 2, No. 8 (Mayıs 1325 Rumi [1909]): 455-459.

species to nature. He had no belief in the stability of species and completely embraced acceptance of the evolutionary theory.

According to Asaf Nef'i, there are three factors that shaped the societies of humankind, namely the survival and biological continuity of generations, personal competition for better social standing, and class conflict. In ancient times, humankind had no motivation except the satisfaction of their needs and acted "egoistically." Thus, they primarily looked for food and mate. On this point, Asaf Nef'i interpreted the nature of man from a materialistic point of view, regarding him as an organism who pursues the satisfaction of its needs.[142] However, while he favored Darwinian principles such as the survival of the fittest and natural selection in the interpretation of history of the humankind, he was cognizant of the importance of Lamarckian theory of evolution. He adopted both the Lamarckian and Darwinian perspectives to determine the nature of organisms and assumed that the influence of the environment on the organisms was irrefutable. In doing so, he considered Lamarckian theory as a compliment to Darwinian theory.[143]

Asaf Nef'i examined social evolution in order to reinforce the idea of struggle for survival, but he put forward that the condition of humankind had been miserable in the past. Societies are always "divided into two, unequal parts." Even worse, the misery of humankind was considered the outcome of the survival of the fittest in society. In other words, the main reason for its misery was the lack of "general justice."[144]From his point of view, the general situation of contemporaneous societies was unacceptable and full of "cruelty." First of all, human beings had to know themselves to save themselves from this "horrible" situation.[145] The working class in Europe was suffering from a range of problems – ranging from malnutrition, long working hours, and for health - due to "competition" in society. The Darwinian struggle for existence took place in French society. He claimed that this principle had not given rise to progress for humankind and had brought about a "debacle," making people

142 Asaf Nef'î, "Mücadele," 465-468.

143 Ülken, *Çağdaş Düşünce*, 242.

144 Asaf Nef'î, "Mücadele," 472-473.

145 Ibid., 479.

sick, poor and disabled. The application of the principle of the survival of fittest to human societies would bring about social disaster. [146]

The ideas of Asaf Nef'i on state, society and the individual are based on an "evolutionist and positivist" worldview.[147] His ideas about society and state promoted the desacralization of the world by explaining the forms of natural life in materialistic terms. He interpreted them as the outcome of neither divine will nor any other supernatural power. Even though he believed in the predominance of natural law, the real-world results of adopting certain principles such as natural selection and the survival of the fittest prevented him from promoting competition within society. While previous authors emphasized divine justice, which was an influence of Islam and ancient Greece, he favored "social justice, which are the product of freedom and rights in new Western thought."[148] Notably, he had an interest in Marxism and wrote an article entitled *Demokrasi and Sosyalizm* (*Democracy and Socialism*).[149]

3.4.2 *Bedii Nuri: Human Nature and the Role of Struggle for Survival*

Bedii Nuri (1872-1913), the brother of Mustafa Satı (el-Husrî), wrote two books and a number of articles in various journals such as *Şehbal* and *Resimli Dergi* (illustrated journal), but he concentrated on social evolution rather than the biological theory of evolution. Like other authors of *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, he accepted that societies gradually evolved in the course of history and that there were the similarities between societies and organisms.[150] He stressed that social evolution is an inevitable process, the debates on the main reasons for this kind of evolution notwithstanding. Individual in society with stronger qualifications and the ideas in the economic context and that used their own mind, can evolve faster and achieve their main

146 Ibid., 476-478.

147 Ülken, *Çağdaş Düşünce*, 244.

148 Ibid.

149 Toprak, *Popülizm*, 85; Asaf Nef'i, "Demokrasi ve Sosyalizm," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 2, No.6 (1 Haziran 1325 Rumi [14 June 1909]): 86-91.

150 Ülken, *Çağdaş Düşünce*, 231.

goals. Individuals had a critical position in evolution.[151] Every person is a product of a social body. A society can adapt to living conditions owing to its ability.[152] At this point, Bedii Nuri emphasized the importance of adaptation, the main pillar of Lamarckian theory of evolution. What is more, he did those not touch on the role of selection in social evolution and the appearance of fit individuals.

Bedii Nuri concluded that social philosophy descended from biology. However, his stance is different from that of Spencer since the former regarded society as a compound while the latter as a composition of individuals.[153] Even so, both agreed on the similarities between organisms and society. Bedii Nuri compared humans with animals, emphasizing that "Humankind" shed its animal traits after "a long period of evolution" and that there are many clear distinctions between the minds of animals and humans.[154] The intelligence of humankind essentially influenced the course of evolution, but there are other non-negligible factors. For example, nature is always a prominent factor in evolution.[155]

One of the most important aspects of Bedii Nuri's evolutionary view was his recognition of the role of struggle for existence, especially in terms of society and the economy. Like other all organisms, humankind exhibits "egoistic" behavior for its "reproduction and survival." Every organism strives to remain alive and primitive individuals are subject to this law, but being selfish is not a hindrance to "collective cooperation." Working or living collectively brings about a "common interest" for survival and reproduction. In fact, this way of life was compulsory rather than preferential.[156] While Bedii Nuri

151 Bedii Nuri, "Beşeriyet ve Mesai-i Maddiye," *Şehbal,* No. 22 (15 Haziran 1326 Rumi [28 June 1910]): 428.

152 Bedii Nuri, "Hayat-ı İçtimaiyye," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 3, No.9 (1 Eylül 1325 Rumi [14 September 1909]): 17.

153 Ülken, *Çağdaş Düşünce*, 230-231.

154 Bedii Nuri, "Kabiliyet-i İçtimaiyye," *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* 2, No.7 (1 Temmuz 1325 Rumi [14 July 1909]): 323-324.

155 Bedii Nuri, "Hayat," 16.

156 Bedii Nuri, "Tefekkür ve Tebebbu: Ahlak ve Cemiyetler," *Şehbal* 33 (15 Kanun-i Evvel 1326 Rumi [28 December 1910]): 164.

emphasizes the importance and the role of egoistic behavior, he does not disregard the benefits of collective cooperation. What is more, he does not seem to have favored such egoistic behavior for the good of society.

From ancient times to the middle ages, it was evident that this kind of struggle took place. Humans are in conflict with each other in order to triumph over their rivals. Many words such as "patriotism and national honor" were invented for "satisfying" this desire.[157] Conflict does not necessarily mean military conflict and it is possible to see conflicts within a society. Some immaterial factors can result in a far greater impact than material conflicts. In fact, he tried to clarify that humans have a desire to be superior to other people and they are always in conflict. During their early periods, they looked for ways to protect themselves from the dangers of nature and wild animals, but when their lives were assured, they began to enter into more relationships with each other to meet their new exigencies.[158] As a result, the more relationships within humankind, the more inevitable the struggles they have in their daily life became.

Bedii Nuri concluded that the struggle among humankind did not go unchanged in the course of history. The early stages of societies can be called *military* since the main source of power was the objects such as weapons and artillery. The offspring of these kinds of societies were inclined to be warriors and were skilled at using weapons. Many leading figures such as Solon and Thucydides actively dealt with military issues. The content and form of the struggle among humans evolved and commercial competition came to predominate over other forms of struggle. Instead of military means, societies used commercial instruments to compete. Bedii Nuri emphasized the peaceful aspect of this new struggle, even though the first form of commerce was banditry rather than the conventional bartering of goods. The Phoenicians, "the earliest traders among ancient civilizations," engaged in "banditry on land and piracy at sea." He said that "while they sold their goods to locals in coastal areas, they captured young girls and boys to sell as slaves…" The Carthaginians inherited the commercial habits and sunk ships that were harmful for their

157 Bedii Nuri, "Malthus Kanunu," *Resimli Dergi* 2, No. 9 (13 June 1909): 856.

158 Bedii Nuri, "Satvet-i İktisadiyye," *Donanma* 2, No.43 (15 Teşrin-i Evvel 1327 Rumi [28 October 1911]): 264-266.

commercial interests. As time went on, this struggle began to acquire a more peaceful character as traders partly abandoned their wild habits. He called all of these processes social progress and promoted struggle as its essential element. However, from his standpoint, the leading factor in this process was ideas, and no one could ignore the role of ideas.[159] He pushed material factors into the background.

As well as the struggle for existence, Bedii Nuri mentioned the economic "inequalities" that he regarded as the echoes of "inequalities" in nature. In spite of his stress on the struggle in his interpretation of the evolution of societies, the contemporaneous social classes that were deprived of property suffer unrest due to their miserable conditions. As their numbers were so high, governments implemented various solutions to minimize their unrest.[160]

3.4.3 *Hakkı Behiç: The Role of the State of Nature for the Interpretation of Society*

Hakkı Behiç, an author of *Musavver Muhit* (illustrated Milieu), wrote two important articles to indicate the factors to which social life was subjected. He claimed that after the formation of society, all people pursue their "survival" and all had a right to live. He called this rule a natural law and made an analogy between humans and society. He seems to have embraced an organic understanding of society, contending that society is like the body of a human. When the organs of a society do not work properly, it loses its "health and wellness."[161]

He looked for the origin of society by examining the state of nature and thought that the needs of human beings brought about the birth of human societies and governments. He explained the appearance of human societies by looking at their biological nature. He accepted that they struggle among

159 Bedii Nuri, "Terakkiyat-ı İçtimaiyye," *Şehbal*, No. 28 (1 Teşrin-i Evvel 1326 Rumi [14 October 1910]): 64-65.

160 Bedii Nuri, "Müsavat-ı İktisadiyye," *Donanma*, No.12 (30 Kanun-ı Sani 1326 Rumi [12 February 1911]): 1089-1090.

161 Hakkı Behiç, "Cemiyyat-ı Beşeriye Nasıl Muhafaza Eder 1," *Musavver Muhit* 1, No. 12 (15 Kanun-ı Sani 1324 Rumi [28 January 1909]): 190.

themselves, but made no direct or indirect reference to the natural selection theory of Darwin. He considered that every individual in society has to struggle to survive and argued that the relationship of society to natural life was "much wilder, and more ambitious." This was because society emerged as a result of humankind's intention to strengthen its "relationship to life." As it had no capacity by themselves, to meet their "needs," humans formed societies.[162]

This situation made enormously contributed to their survival and reproduction. In order to support his assertion about the peculiarities of societies, he quoted from a Betty of Schopenhauer that the state was an excellent product of humankind's self-interest. Furthermore, humans formed governments to meet needs that resulted from their egoism.[163] Even though he did not mention concepts like *social contract* and *consent of governed*, his approach is similar to well-known philosophers like Thomas Hobbes and Jean Jacques Rousseau. Hakkı Behiç seems to have been deeply influenced by the Enlightenment, the heyday of the idea of the social contract.[164] Yet he emphasized the continuation of brutality after the formation of a society and government. The common interest of society was the essential reason for the birth of society and government.

While commenting on the course of human societies, Hakkı Behiç stressed the role of struggle for reproduction and survival in the course of their history. Human societies do everything to stay alive and have no ethical concerns. "They used injustice, "lies, deception, and oppression to rule weak individuals." What is more, they did these things without regret or mercy." This is an inescapable rule of life in "the past, present, and future." Hakkı Behiç cited Europeans' treatment of their colonies as an example. Colonialists were neither "merciful" nor "fair" to indigenous peoples. Human societies have a wild desire to assert dominance over other people and do not hesitate to use

162 Ibid., 188-190.

163 Ibid., 189.

164 Patrick Riley, "Social Contract Theory and Its Critics," in *The Cambridge History of Eighteenth-Century Political Thought*, ed. Mark Goldie and Robert Wokler (Cambridge: Cambridge University Press, 2006), 347.

any immoral and unethical means.[165] There is an important point about his evaluation of the nature of humankind and its societies: he did not mention the long-term results of the struggle to survive and reproduce. That is, he kept silent on the appearance of the fittest organisms as a result of deep-rooted struggle for survival in society. This is an important clue indicating whether he was influenced by Darwinian theory of evolution.

While explaining the formation of society, he touched on the differences between humans and the societies that they formed. Human beings did not put themselves in jeopardy for "an unimportant interest." Despite their egoism and hypocrisy, they tended to "obey" and did not introduce "brutality" as a "fair" order. Moreover, they did not disregard the moral and spiritual elements in their life and material concerns were not always the decisive factor. On the other hand, society was "unconditionally material, rapacious, and egoistic vis-à-vis external agents. When its interest was in danger, it did not hesitate to rampage anything, including "the individuals of which it was composed itself." General interest was a pivotal factor in the shaping of society.[166]

While clarifying the nature of society, Hakkı Behiç pointed out the collapse of great empires in history, citing Roman Empire, which had established absolute sovereignty over Europe, Asian Minor, and Northern Africa as an example. Having enormous power did not ensure the perpetuity of a society. This gigantic empire used "the sword" excessively in order that the world be subject to only its authority, but it failed due to its "fall and partition." This proved that social unity could not be maintained with violence and it appeared in the course of time rather than through violent methods. In order to ensure "social unity," the members of a society have to have a common ground and common traditions, to live together in a strong bond and "understand" themselves well. In fact, he stressed the importance of strong bonds among individuals for the sustainable "unity of society. He assumed that the behaviors of these individuals would be imitated by others and passed on to considering generations. For example, humans could form a common language to communicate. All of these processes take place "as an outcome of evolution, not

165 Hakkı Behiç, "Cemiyyat 1," 189.

166 Ibid., 189.

force." He conflated the term evolution with social progress. The stronger the bonds that the members of a society had, the long lasting and resilient that would be.[167]

3.4.4 *Abdullah Cevdet: Leading Figure of Biological Materialism*

Abdullah Cevdet (Karlıdağ) represents the zenith of biological materialism. He graduated from Mekteb-i Tıbbiye-i Şahane, the cradle of materialist ideas in the Ottoman Empire. At this school, students read the books of Félix Isnard and Ludwig Büchner who embraced evolutionary explanations and considered that evolution offered a toolkit for understanding not only nature but also society.[168] "İbrahim Temo, one of the founders of the İttihad ve Terakki Cemiyeti (Committee of Union and Progress, CUP), suggested Abdullah Cevdet read Isnard's *Spritualism et Matérialisme*." It and Büchner's *Matière et Force* deeply shaped his intellectual world, and he began to be inclined to think in a materialist way. When he started this school, he had an "extremely conservative" life view, but as he read books similar to aforementioned studies, he began to have doubts about some of the values and beliefs that he had.[169]

The fact that Ottoman Empire imported books from France at the time positivism was tremendously influential among French intellectuals paved the way for the introduction of biological materialism. According to Hanioğlu, it was the birth of an "intellectual typology that would conflict with the values of a society based on religious foundations." Mekteb-i Tıbbiye-i Şahane was a main agent in the making of the kinds of intellectuals who "regarded religion as a hindrance to social development" and challenged many social values." The fact that Abdullah Cevdet, Beşir Fuad, and Rıza Tevfik (Bölükbaşı) embraced biological materialism after receiving their education at this school is no "coincidence." They gradually abandoned religious interpretations of life, nature, society, and the state, replacing religious dogma with science based on "observation and experiment."[170]

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167 Hakkı Behiç, "Cemiyyat-ı Beşeriye Nasıl Muhafaza Eder 2," *Musavver Muhit* 1, No. 15 (5 Şubat 1324 Rumi [18 February 1909]): 230.

168 Hanioğlu, *Abdullah Cevdet*, 15.

169 Ülken, *Çağdaş Düşünce*, 350.

170 Hanioğlu, *Abdullah Cevdet*, 8-11.

Darwinian theory of evolution influenced Abdullah Cevdet, but its social implications are more apparent since he favored biological explanations for understanding society. Even so, he was the first to introduce this revolutionary theory, stressing its foundations. When he translated Büchner's book, *Natur und Geist*, he accounted for Darwin's theory in some footnotes. These short passages crystalize his basic understanding of this theory. As the author often emphasized the similarity between humans and gorillas, the translator needed to explain the principles of Darwinian theory. First of all, he explained that the struggle for existence can be applied to all organisms. The second principle is the descent of organisms from other organisms and their capacity to be subject to change. Abdullah Cevdet opposed the stability of species. The last one is natural selection - the backbone of evolution. However, his knowledge was rudimentary since he confused natural selection with sexual selection. This was a critical and intolerable mistake when introducing Darwinian theory. Later, he paid attention to the history of biological evolution and traced it to Lucretius (99 -55 BC), a Roman philosopher and physician. Abdullah Cevdet quoted Lucretius "the available species of animals survived owing to their ability to intrigue, their power, and their speed."[171] In doing so, he stressed that evolution had a long history and Darwin was its original discoverer of evolution.[172]

When a case of anti-Darwinism took place in Kastamonu in 1913, Abdullah Cevdet reacted harshly and called it a case of the *Middle Ages in Kastamonu* (Kastamonu'da Kurun-ı Vusta). The teacher of natural sciences Ragıp Bey, the French teacher Celal Bey, and the *sermubassır*[173] Adem Hilmi Bey at Kastamonu Mekteb-i Sultani (Kastamonu High School) were accused of atheism as they were said to have taught evolutionary theory to their students. This case led to an uproar in the province, and they were suspended from their

171 Enva-i hayvanattan elyevm mevcut olanlar ancak desiseleri, kuvvetleri, süratleri sayesinde bekayat olabilmiştir. Ludwig Büchner, *Goril*, trans. Abdullah Cevdet (Mamûretü'l- Azîz: Matbaa-i Vilayet, 1311 AH [1894]), 41.

172 Mehmet Ö. Alkan, "Osmanlı Darwinizmi." *Cogito* 60-61 (Fall-Winter 2009): 339; Ludwig Büchner, *Goril*, trans. Abdullah Cevdet (Mamûretülaziz: Matbaa-i Vilayet, 1311 AH [1894]), 37-41.

173 The officer responsible for keeping order in the school.

work. The teachers of Turkish, geography, and Arabic in the same school - respectively, Hacı Ziya, Arif, and Zühdü Efendi of Nablus were the chief complainants, and Celal Bey and Adem Hilmi Bey were arrested. The most tragic aspect of this anti-Darwinist case was an angry crowd in the province that stormed a bookstand and targeted these teachers. The person who reported this case for *İçtihad* stigmatized these reactionaries as representatives of darkness. Instead of defending the teaching of evolution in the schools, Abdullah Cevdet evaluated the case in the context of "the freedom of thought and conscience," which he assumed as requirements for a modern state.[174]

Darwinian evolution was a considerable factor that shaped his scientific and philosophical point of view. Fundamentally, his racial anthropology was influenced by it, and he was the precursor of the introduction of anthropology to the Ottoman Empire. As he graduated from a medical school, and was familiar with craniology. His 1894 study, entitled *Fizyolociya ve Hıfzı's-sıhha-yı Dimağ* ve *Melekât-ı Akliyye* (physiology and hygiene of mind and mental ability) can be considered the first anthropological treatise in the Ottoman Empire. He expanded the content of this book in 1894 and republished it, making a slight alteration to its name, in 1914.[175] He mainly examined "the relationship of the size of skull and the volume of brain." Especially, towards the end of the nineteenth century, one of the fundamental assumptions of physical anthropology concerned this relation. Another assumption was that "those who used their brains would have bigger skulls." It was believed that "the use of mental faculties brought about the increasing growth of skulls."[176] The anatomical structure of the skull was regarded as a sign of mental capacity.

Abdullah Cevdet compared the mental capacity of many animals, emphasizing that of all creatures, humans have the most developed brain. While examining the mental capacity of animals, he acknowledged the development

174 Abdullah Cevdet, "Kastamonu'da Kurun-ı Vusta," *İçtihad,* No. 58 (14 Mart 1329 Rumi [27 March 1913]) 1271-1274.

175 Abdullah Cevdet, *Dimağ ve Melekât-ı Akliyyenin Fizyolociya ve Hıfzı's-sıhhası* (Istanbul: Matbaa-i Amire, 1333-1335 Rumi [1917-1919]).

176 Zafer Toprak, *Darwin'den Dersime: Cumhuriyet ve Antropoloji* (Istanbul: Doğan Kitap, 2012), 296.

level of the brains of anthropoids.[177] He noted that male sheep, lions, gorillas, and humans have 150, 300, 530, 1400-1500 cubic centimeters of brain, respectively. He paid special attention to the development of the brain of humans, comparing fossilized corpses available from ancient cemeteries with present humans. From his point of view, ancient man clearly had a smaller skull, and this can be interpreted as the development of the brain in the course of history.[178]

Abdullah Cevdet believed that race was an important factor in the size of a skull. Superior races (Irk-ı Aliye) had more developed skulls than those of inferior races (Irk-ı Safile). Europeans had much bigger skulls than Australian natives or black Africans. The average size of Caucasian skulls was 1450 cubic centimeters while that of African blacks was approximately 1371 cubic centimeters. However, Abdullah Cevdet did not consider race as the only factor determining a person's skull size. The level of civilization and knowledge a race had reflected, the development of the intelligence its members had. He emphasized that many scholars and the elite of Paris had "more developed brains" than those of ordinary people in Paris.[179] Many well-known people had voluminous skulls. For example, Descartes had a goal of 1706 cubic centimeters, and La Fontaine of 1950.[180]

As well as racial anthropology, Abdullah Cevdet dealt with Eugenics. He believed "the application of the natural sciences to social issues" was fruitful and thought that natural selection would bring about an "elitist" group in a society. That is, findings in the natural sciences would help society develop.[181] Importantly, he opposed "sudden revolutions" as they might have a detrimental impact on the natural course of evolution.[182] His eugenic ideas are made clear in his writings on the dynasty of the Ottoman Empire, and he made

177 Any member of primate family.

178 Abdullah Cevdet, *Fizyolociya ve Hıfzıssıhha-i Dimağ ve Melekat-ı Akliye* (Istanbul: Mahmut Bey Matbaası, 1312 AH [1894]), 9-10.

179 Abdullah Cevdet, *Dimağ*, 19-23.

180 Ibid., 28.

181 Hanioğlu, *Bir Siyasal Düşünür*, 16.

182 Ibid., 372.

use of Darwinian ideas to explain its "degeneration." His main idea was the decadence of the members of dynasty.[183]

Abdullah Cevdet argued that the *şehzades* (princes of the Ottoman dynasty) had not received a sufficient education to the country and nation. "All were born to Circassian concubines." They experienced in part a life of slavery in the palace. On this point, Abdullah Cevdet emphasized the brutality of nature, the course of history, and the role of psychology in the upbringing of the *şehzades*. Their slave-like position led them to lose "honor", and sense of "independence." Abdullah Cevdet looked nature for proof and adduced that female animals were used for mundane purposes in daily life. "No matter how powerful the mates of these kinds of animals were, the offspring would not inherit the power and traits of their fathers." A female slave would inevitably bring about the degeneration of the offspring. A Circassian or Georgian slave who was considered "a commercial good" and had a "timid" character would not bring a self-reliant and independent şehzade into the world. The offspring of these slaves had no capacity to have "positive traits, honor, or masculinity." According to Abdullah Cevdet, natural selection - the backbone of Darwinian theory – argued the transmission of traits from mother to offspring rather than from the father. "The parents of the Ottoman sultans should have been free women" and children born to concubines had no capacity to rule the empire. "Instead of incarcerating şehzades in the palace, they should have been benefiting from the leading scholars of Europe."[184] This does not mean that Abdullah Cevdet ignored the importance of education and other cultural factors in their upbringing. Even though biological factors were predominated over social and cultural ones, the latter cannot be disregarded.[185]

Because Abdullah Cevdet was in Europe for a while, he made this harsh evaluation about the members of the dynasty. But he was aware that his words may offend the *şehzades* in Istanbul. Thus, he stressed that he was lack of malicious intent and antagonism in his stance to members of the dynasty.[186] He evaluated the problem of unqualified *şehzades* from a biological point of view

183 Ibid., 223.

184 Abdullah Cevdet, "Teselsül-i Saltanat Meselesi," *İçtihad*, No. 6 (May 1905): 86-88.

185 Hanioğlu, *Bir Siyasal Düşünür*, 169.

186 Abdullah Cevdet, "Silsile," 86-88.

and argued that concubines were the main reason why şehzades were incapable.

While interpreting life, he utilized from secular ideas rather than from Islam. What is more, "*İçtihad* was the first periodical in which Islam was criticized." He argued about the destructive influences of Islam on Ottoman society, but he accepted the fruitful social aspect of Islam. In doing, he attempted to distinguish "the positive sides of Islam," which he recognized as an irrevocable factor in Ottoman society. From his point of view, while religious dimension of Islam was useless its social dimension might be fruitful for solving the problems of the empire[187] He tried to accommodate biological materialism within Islamic culture. To reconcile Islam with scientific truth and materialism, he relies on three major sources. To begin with, the sources of Islam (the Koran and hadith) and Islamic thinkers enabled him to reinterpret Islam. "He sought to reconstruct the golden age of Islam as an enlightened era of liberalism and democracy." In doing so, he wished to demonstrate that Islamic history had "the capacity for progressive evolution." For him, "return to its original sources" was the best option. On this point, he needed to follow in the footsteps of some Muslim scholars. Abdullah Cevdet met Muhammad Abduh. As the latter excluded materialism from his worldview, Cevdet wished to fill this gap with his materialist thinking. Second, he depended on the accumulated works of Muslim mysticism, poetry, and philosophy to reinterpret Islam. For example, he considered the writings of the performer Mawlana Jalal al-Din Rumi who contended to accommodate modern materialism in an Islamic context. What is more, he used the ideas of al-Maarri and Rumi to Islamize specific modern theories such as those of Cesare Lombroso, and he called Umar Khayyam the oriental Voltaire. Third, another source that Abdullah Cevdet used was "a collection of statements on science attributed to Muslim leaders and intellectuals." He reinterpreted their quotations and exaggerated their importance. For example, a statement by the fourth caliph Ali (he who ate no meat for forty days and lost his mind) should be understood as a "scientific observation of the relationship of brain activity and protein

187 Hanioğlu, *Abdullah Cevdet*, 129-135.

consumption."[188] Abdullah Cevdet was interested in the history of Islam and translated Dutch Reinhart Dozy's *Essai sur l'histoire de l'Islamisme* into Ottoman Turkish under the title *Tarih-i Islamiyet*.[189] However, the Şeri Yayınları Teftiş Heyeti (board of inspection of the şeriat writings) prevented its translation and publication.[190]

In *İçtihad*, as well as Abdullah Cevdet, there was a remarkable author named Kılıçzade Hakkı. He criticized *ulama* for keeping people in ignorance and preventing the process of progress in the empire. He said *softa*s who thought that everything consisted of religion did not bring benefit to us. We do not have language, dictionary, rules, literature, wealth, agriculture, art.[191] In fact, while he was accusing some men of religion of ignorance, he was considerably prudent for not touching upon Islam itself. His main opposition was these men rather than Islam itself. He overpraised it and emphasized it holiness as much as possible.[192]

He did not avoid Islamic sources and scholars even though he wholeheartedly embraced biological materialism. As well as his pragmatic approach to Islam, he examined the problems of Islamic states. In one article, he paid attention to the backward situation of Morocco, which was about to experience a political debacle. Abdullah Cevdet said "civilizations were unmerciful to uncivilized people and annihilated those who were weak, ignorant, and incapable. The law of evolution had either mercy nor grace."[193] Even though he did not mention Charles Darwin and his theory, he seems to have benefited from the principle of natural selection.

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188 Şükrü Hanioğlu, "Blueprints for a future society: Late Ottoman materialists on science, religion, and art," in *Late Ottoman Society: The Intellectual Legacy*, ed. Elisabeth Özdalga (London and New York: Routledge Curzon, 2005), 51-53.

189 Reinhardt Dozy, *Tarih-i İslamiyet,* trans. Abdullah Cevdet (Cairo: Matbaa-i İctihad, 1908).

190 Berkes, *Secularism*, 414-415.

191 Her şeyi dinden ibaret zanneden softalık bize bir şey yaptıramamıştır. Ne lisanımız, kâmusumuz, ne kavaidimiz, ne edebiyatımız, ne servetimiz, ne ziraatımız ne sanatımız vardır. Kılıçzade Hakkı, *İtikadat-ı Batılaya İlan-ı Harp* (Istanbul: Sancakyan Matbaası, 1329 Rumi [1913]), 13.

192 Kılıçzade, *İtikadat-ı Batılaya*, 11.

193 Abdullah Cevdet, "Fas Hükümet-i İslamiyyesinin İnkırazı," *İçtihad*, No. 5 (April 1905): 70-71.

3.4.5 *Baha Tevfik: Vulgar Materialism*

Baha Tevfik (1881-1914) was one of the leading figures of materialist thought and made enormous contributions to the materialist literature through his translations and publications. He was born and received primary education in Izmir. Then, he moved to Istanbul to study at Mekteb-i Mülkiye. He knew French and was not interested in Islamic culture.[194] He represented the biological and evolutionary materialism led by Jacob Moleschott, Karl Vogt, and Ernst Haeckel in the nineteenth century. This kind of philosophical thinking occupied a noticeable place in the Ottoman Empire after 1908. Although this philosophy became favorable among intellectuals, its introduction in the Ottoman Empire was late.[195] Baha Tevfik considered the idea of evolution - not the theory of natural selection - was a universal law. He favored the idea of evolution, which demonstrated "a much fascination with Darwinism."[196] Like many other Ottoman intellectuals, he seems to have been impressed by the magic of the world evolution, which was used to emphasize development or progress.

Baha Tevfik played a leading role in the introduction of vulgar materialism to the Ottomans and attempted to propagate it through his writings and translations with colleagues like Ahmed Nebil. As an iconoclastic intellectual, he attacked deep-rooted "customs and beliefs" in order to "spread materialist philosophy, using any means that he could find." His attacked moral and social values were so shocking that he had many "opponents" during the Young Turk era.[197] Thus, his views on society and the individual were arguably extremely marginal in the society. He sought to reach respectively large masses by favoring an unsophisticated and unequivocal discourse in his articles and translations. As many scientific and philosophical books had a pompous discourse,

194 Ülken, *Çağdaş Düşünce, 330.*

195 Ibid., 342-343.

196 Hanioğlu, "Blueprints," 69.

197 Mehmet Akgün, "Baha Tevfik (1884-1914)," in *Tanzimat'tan Günümüze Türk Düşünürleri Tanzimat'tan Cumhuriyet'e Bilimsel ve Felsefi Düşünce Temsilcileri 3,* ed. Süleyman Hayri Bolay (Ankara: Nobel, 2015), 1750.

their audiences were limited.[198] Baha Tevfik's discourse helped him make his voice heard. Many authors in the Ottoman Empire call this course *new language* (yeni lisan) and abstained from using Arabic and Persian phrases in their translations. In addition, they preferred to use "the Istanbul dialect of Turkish" so that a larger audience could understand them.[199]

Even though Turkish historiography has portrayed Baha Tevfik as "the intellectual father of the Ottoman socialist movement and an anarchist sympathizer," he had no belief in socialism. His arguments on anarchism were the reflections of his "intellectual curiosity." He took a stand against the CUP and favored "the liberal individualist movement that favored private initiative and a laissez faire economic system." Like Abdullah Cevdet, he found politics tiring and sought to change the basis of society through scientific ways, rather than political methods.[200] He concentrated on "social and philosophical issues" and paid specific attention to "morality and the individual."[201] Thus, from his point of view, politics was not a fruitful way of transforming society, and he preferred to make himself heard through the press.

To be clear, Baha Tevfik had no "direct" objective to promote Darwinian or Lamarckian theory of evolution. What he endeavored to do was to promote materialism,[202] and theories of evolution provided ammunition for his philosophical view. Baha Tevfik and Ahmed Nebil translated a book of Ernst Haeckel,[203] that contained explicit information on Darwinian theory. This book sold more than the translators guessed, and those who bought it

198 Süleyman Hayri Bolay, *Türkiye'de Ruhçu ve Maddeci Görüşün Mücadelesi* (Istanbul: Yağmur Yayınları, 1967), 50.

199 Ludwig Büchner, *Madde ve Kuvvet*, trans. Baha Tevfik and Ahmed Nebil (Istanbul: Dersaadet Kütüphanesi [Müşterekü'l-Menfaa Osmanlı Şirketi Matbaası]), 7.

200 Hanioğlu, "Blueprints," 79.

201 Mehmet Ö. Alkan, "Düşünce Tarihimizde Önemli Bir İsim: Baha Tevfik," *Toplum ve Tarih* 9, No. 52 (April 1988): 44.

202 Bolay, *Ruhçu ve Maddeci*, 51.

203 Mehmet Ö. Alkan, "Osmanlı Darwinizmi." *Cogito* 60-61 (Fall-Winter 2009):339; Ernst Haeckel, *Vahdet-i Mevcud, Bir Tabiat Aliminin Dini*, trans. Baha Tevfik and Ahmed Nebil (Dersaadet: Kader Matbaası, 1911).

encouraged them to translate Ludwig Büchner's *Kraft und Stoff* (*Force and Matter*).[204] These two German philosophers, Haeckel and Büchner, influenced Baha Tevfik tremendously. In particular, the translation of *Kraft und Stoff* attracted a harsh criticism from religious leaders such as Harputizade Hacı Mustafa Efendi who attempted to refute Büchner's philosophy from a religious point of view.[205] In fact, before Büchner's book was translated, his vulgar materialism had faced serious criticisms in the Ottoman Empire from the 1890s onward.[206]

Baha Tevfik's philosophical approach is based on four pillars. To begin with, "force cannot exist without matter," indeed they are the same things. "If there were not electrified matter, there would be no electricity." Likewise, heat is composed of "vibrations" that cyclic and quick atoms led. Force itself is concrete, but not something abstract. It results from "the motion of atoms," and abstract things have no role in the making of force. Neither does matter create force, nor does force create force. Thus, it is meaningless to claim that there is a force prior to the making of the world. Second, "matter is immortal…even a piece of dust can never disappear under any circumstance."[207] It can be only transformed from one form to another form. Even though matter can undergo a change in shape, it can never "vanish." Third, like matter, forces such as electricity and heat cannot "disappear" even if they are "inactive" for a time. It is a "delusion" to assume that their "inactivity" is a disappearance. Finally, "matter is infinite." It will continue forever and its existence will never be

204 Büchner, *Madde*, 5.

205 Harputizade Hacı Mustafa Efendi, *Red ve İsbat* (Dersaadet: Hikmet Matbaa-i İslamiye, 1330 [1914]).

206 Ali Utku and Abazar Sepehri, "*Sunuş," İbtal-i Mezheb-i Maddiyun* (Konya: Çizgi Kitabevi, 2012), 13; İsmail Ferid, *İbtal-i Mezheb-i Maddiyun* (Izmir: Ahmed Celâdet ve Şürekâsı Matbaası, 1312 AH [1895]); Ahmed Midhat Efendi, *Ben Neyim: Hikmet-i Maddiyeye Müdafaa* (Istanbul: Tercüman-1 Hakikat Matbaası, 1308 AH [1891]);Fatma Aliye,*Tedkik-i Ecsam* (Istanbul: Hanımlara Mahsus Gazete matbaası, 1317 AH [1899]): Şehbenderzade Filibeli Ahmed Hilmi, *Huzur-ı Akl-ı Fende Maddiyun Meslek-i Dalaleti* (Darülhilafe [Istanbul]: Hikmet Matbaa-i İslâmiyesi, 1332 AH [1913-1914]).

207 Madde lâyemut (ölümsüzdür)tur…bir toz parçası ne kadar küçük olursa olsun bu dünyadan kaybolmaz. Bolay, *Ruhçu ve Maddeci*, 54.

interrupted.[208] It is apparent that Baha Tevfik wholeheartedly embraced the philosophy of Ludwig Büchner.

Baha Tevfik was a follower of the tradition of evolutionary materialism that appeared in the second half of the nineteenth century when the theories of biological evolution by Darwin and Lamarck took off due to the well-proven evidence in biological sciences like embryology. One of the outstanding members of this philosophical approach in Europe was Ernst Haeckel, who offered biological findings to support evolutionary materialism.[209] Baha Tevfik benefited from his monist philosophy in order to bolster his own evolutionary materialism. In fact, his main interest was fundamentally the promotion of evolutionary and vulgar materialism rather than the promotion of Darwinism. In other words, he utilized biological evolutionary theory as a compliment to philosophy.

3.4.6 *Beşir Fuad: Ardent Follower of Positivism*

One of the intellectuals who took a keen interest in the science of humankind was Beşir Fuad (1852 ?-1887), who was born in Istanbul and received military education at the Mekteb-i Harbiye (Ottoman Military Academy). This school was a channel for the conveyance of scientific knowledge from Europe to the Ottoman Empire.[210] He served as an officer in the Ottoman army, but "he resigned from military service" in order to concentrate his energies on the study of science. The dissemination of popular science was an important dimension of Beşir Fuad's life. He translated "numerous articles and pamphlets on topics ranging from human anatomy to the solar system" taken from journals such as *Science Pour Tous* and *Die Nature*. He wished that "literate people" vigorously believed in the power of science. Thus, he had a remarkable role in the popularization of scientific knowledge. Before committing suicide, he requested that his body be donated to a medical school for scientific research.[211]

208 Bolay, *Ruhçu ve Maddeci*, 51-60.

209 Ülken, *Çağdaş Düşünce*, 342.

210 Orhan Okay, *İlk Türk Pozitivisti ve Natüralisti: Beşir Fuad* (Istanbul: Dergah Yayınları, 1969), 61.

211 Hanioğlu, "Blueprints," 33-37.

Orhan Okay calls him the first Turkish positivist and naturalist due to their introduction in the Ottoman Empire. He impacted many authors such as Ahmed Midhat Efendi and Muallim Naci.[212]

"Unlike materialists of the preceding decades, whose materialism was based largely upon the works of Voltaire, d'Holbach, and Spinoza," Beşir Fuad admired the philosophy Büchner. In particular, his magnum opus, *Kraft und Stoff*, was a "starting point" for Fuad's reformation philosophy.[213] However, Beşir Fuad's ideas were arguably positivist rather than materialist since the positivist way of thinking about experiment and observation was "the reliable way" to interpret natural and social phenomena. "Unless knowledge was based on these methods, it is impossible for scientists to obtain trustworthy knowledge." According to many positivist intellectuals and scientists, religious and metaphysical knowledge are not sufficiently reliable enough to heed due to their sources. That is, they have to be based on scientific experiment and observation; scientists should pay no attention to supernatural creatures or powers to explain an issue.[214] Scientific findings have utmost importance as they are based on reliable ways. From his point of view, religious knowledge is not capable of explaining organism and nature.

As an ardent supporter of Auguste Comte, Beşir Fuad found metaphysical issues waste of time. Given that Comte rejected both religion and metaphysics, Beşir Fuad presumably stayed away from religion. However, he did not explicitly oppose Islam and mentioned it favorably. His antipathy towards Christianity probably resulted from his education provided in a Jesuit mission in Syria. While at the school, he encountered "the religious fanaticism" of the Jesuits, which left him with a negative attitude toward Christianity. In addition, "his respect for Islam was due to the verses and hadiths that promoted science." Despite his prudent attitude toward Islamic teaching, he had no belief in the post mortem survival of the soul. For him, "the soul passed away

212 Okay, *Beşir Fuad*, 201-208.

213 Ibid., 34.

214 Mehmet Akgün, "Beşir Fuad (1852-1887)" in *Tanzimat'tan Günümüze Türk Düşünürleri Tanzimat'tan Cumhuriyet'e Bilimsel ve Felsefi Düşünce Temsilcileri 3*, ed. Süleyman Hayri Bolay (Ankara: Nobel, 2015), 1715.

with the death of body." On this point, he agreed with Voltaire who proposed the non-existence of the soul after death. In fact, "Beşir Fuad accepted the soul's existence," but considered it as if it were a material entity. In addition, he argued that "life was a form of atoms" of which soul was one part.[215] It is apparent that while explaining humankind in materialist terms, he did not proscribe spiritualist explanations in absolute terms. Indeed, it was extremely difficult to oppose Islam at the time and he has to have positive attitude to Islamic teachings in order to popularize and propagate scientific knowledge. The Ottoman society, for which he attempted to promote science, might not have tolerated antireligious ideas.

Beşir Fuad was under the influences of Claude Bernard and Ludwig Büchner who shaped his views on science and philosophy.[216] As he knew English, French and German, he was able to read many books from medicine to physiology.[217] Claude Bernard was a well-known positivist in France and influenced many Ottomans Mehmed Şakir Paşa[218] as well as Beşir Fuad.[219] Beşir Fuad believed that scientific progress was gradual and was interrupted only once." When Christianity spread across Europe, the religion kept the continent in ignorance by veiling ancient Rome and Greek civilizations. While explaining the dark aspects of medieval times, he compared the impact of both Christianity and Islam on the development of the sciences. He stressed that while Christians "tortured" scientists in the course of spreading their beliefs, Islam raised scientists. "The encounter of these two civilizations" engendered the Renaissance.[220] As mentioned, he defended Islam in an attempt to demonstrate its friendly ties with science.

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215 Akgün, "Beşir," 1714-1720.

216 Doğan, *Osmanlı Aydınları*, 165.

217 Okay, *Beşir Fuad*, 62.

218 Mehmed Şakir Paşa graduated from Imperial School of Medicine in Istanbul and was sent to Paris, where he knew Claude Bernard. He was deeply influenced positivist thinking. For detail information, Ziyaeddin Fahri Fındıkoğlu, *Claude Bernard ve Şakir Paşa* (Istanbul: Türkiye Harsi ve İçtimai Araştırmalar Derneği, 1963), 39.

219 Fındıkoğlu, *Claude Bernard,* 39.

220 Akgün, "Beşir," 1720-1721.

Beşir Fuad used positivism to spread materialist thought. This was not peculiar to him, and many Ottoman materialists were preoccupied with how to "propagate" their thinking in their society. They were aware that something was "missing" from their intellectual efforts. "Beşir Fuad sought a remedy in positivism while Abdullah Cevdet looked first to Islam."[221] It is difficult to categorize Beşir Fuad as a positivist or as materialist since there is no clear-cut distinction in his intellectual orientation, but it is reasonable to assume that he was close to positivism.

Beşir Fuad noticed that many journals in İstanbul focused on literature, there was a need for publications on positive science. Despite he issued a periodical named *Haver and Güneş,* but it was quite short-lived.[222] Beşir Fuad was an outstanding representative of scientism as he attached a great importance to scientific explanations by absolutizing science. He asserted that humankind was an unknown organism for which science offers optimum ways to understand. Even though science has difficulty explaining everything about humankind, it achieved great successes.[223] His legacy in the intellectual history of the Ottoman Empire is obvious because he made a remarkable contribution to the materialist, secular interpretation of life in contrast with the divine one. Despite his short life, he left a lasting mark on philosophy, science, and literature in the late period of the Ottoman Empire. In addition, his close friend Ahmed Midhat Efendi stressed and praised both him and his intellectual efforts.[224]

§ 3.5 The Introduction of Biological Evolutionary Theory

The exact date when Darwinian theory of evolution introduced in the Ottoman Empire seems ambiguous, but it is obvious that Ottoman intellectuals read many works on biological evolution when materialism and positivism were popular among them. Evolutionary views received acceptance from the

221 Hanioğlu, "Blueprints," 83.

222 Okay, *Beşir Fuad*, 62.

223 Beşir Fuad, *Beşer* (Istanbul: Mihran Matbaası, 1303), 7.

224 Ahmed Midhat, *Beşir Fuad* (Istanbul: Tercüman-ı Hakikat Matbaası, 1305 AH [1887]), 28.

end of the 1860s onward, but Ottomans intellectuals followed evolutionary literature rather than conducting new studies. Particularly, Ali Suavi, Ahmet Midhat Efendi, Ahmed Macid-Ahmed Edip, Hoca Tahsin were the striking thinkers in this term.[225] However, when biological evolution is a point in question in the Ottoman Empire, the leading intellectuals were Subhi Edhem, Edhem Necdet, Memduh Süleyman, Mustafa Satı (el-Husrî) and Şemseddin Sami. It must be emphasized that materialist and positivist thinking helped the introduction of Darwinian theory in the Ottoman Empire remarkably.

3.5.1 *Subhi Edhem*

While Baha Tevfik and Ahmed Nebil "directly" advocated a materialist philosophy, Subhi Edhem (?-1919?)[226] endeavored to promote evolutionary thought, specifically the theories of Darwin and Lamarck.[227] His contribution to the spread of biological materialism in the Ottoman Empire is indisputable. As a veterinary physician and teacher, he wrote on the natural sciences and philosophy and even founded a journal, *Beşer ve Tabiat* (man and nature), though it was short-lived. Subhi Edhem, like Baha Tevfik, was influenced by the philosophical tradition of nineteenth-century Europe and he missed new philosophical movements and ideas.[228]

Subhi Edhem witnessed that among Ottoman intellectuals, an interest in nature had risen. "Many young people began to hurry in order to know naturalists like Lamarck, Darwin, Büchner, and Haeckel."[229] Subhi Edhem confessed that he was late to transmit the works of evolutionists to these youth. It can be inferred that he undertook the mission to promote the latest

225 Alkan, "Osmanlı Darwinizmi," 336-338.

226 Mehmet Akgün, "Subhi Edhem," in *Tanzimat'tan Günümüze Türk Düşünürleri Tanzimat'tan Cumhuriyet'e Bilimsel ve Felsefi Düşünce Temsilcileri 3*, ed. Süleyman Hayri Bolay (Ankara: Nobel, 2015), 1801.

227 Bolay, *Ruhçu ve Maddeci*, 51.

228 Akgün, "Subhi Edhem," 1804.

229 Birçok gençler Lamarck, Darwin, Ernst Haeckel, Ludwig Büchner gibi tabiat alimlerini tanımak için acele etmeye başladılar. Subhi Edhem, "İlim (Antropoloji Dersleri)," *Genç Kalemler* 3, No.14 (Kanun-i Sani 1327 [January/February 1912]): 31.

developments of natural sciences and he was aware of the need for an efficient educational program, because it was difficult to understand the ideas of Darwinism without having knowledge of a range of sciences such as anthropology and ethnography.[230]

His two studies were significant for the introduction of biological evolutionary theory. The first one was his articles on Lamarckism, which would be compiled as a book in 1914, and the second was his book on Darwinism. The former study was published in *Felsefe Mecmuası* and introduced Lamarckian principles of evolution. In doing so, the author tried to restore the Lamarckian contribution to the field of biological evolution. He claimed that Lamarck was not favored over Darwin in scientific milieus because Darwin had proposed a more well-proven theory for explaining the origin of species.[231] He added that scientists had not paid painstaking attention to Lamarckian views "prior to the publication of *The Origin of Species*" in 1859.[232]

After touching on the importance of Lamarckian theory of evolution, he set out to explain it. In doing so, he focused on the laws of adaptation, the influence of the environment, and the genesis of organisms. "According to Lamarck, the first organisms are different from what we observe today" and can be called primitive due to their simple organic structure. "They are not more than protoplasm." Natural forces played a leading role in their transformation from primitive to complex structures. "The needs" of these primitive organisms brought about the appearance of new organs, culminating in their evolution. Subhi claimed that Lamarckian theory of evolution had basically four laws. The first is that organisms extended in size. The second concerns the appearance of new organs. Lamarck argued that "new needs" are the main reason for biological change in the bodies of species. Third, "the development of organs" is sustained by "constant use." As new organs were used to meet needs, they continued to develop. Finally, "physiological changes that an

230 Subhi Edhem, "İlim (Antropoloji Dersleri)," *Genç Kalemler* 3, No.14 (Kanun-i Sani 1327 Rumi [January/February 1912]): 31.

231 Subhi Edhem, "Lamark ve Lamarkizm," *Felsefe Mecmuası* 1 (30 Kanun-i Sani 1325 Rumi [12 February 1910]): 82.

232 Subhi Edhem, *Lamarkizm* (Dersaadet: Nefaset Matbaası, 1330 Rumi [1914]), 12.

organism acquired over its life could transmit to offspring." That is, they inherited the acquired traits of previous generations.[233]

Subhi Edhem's other book on evolution, *Darvenizm*, is based on the textbooks of the course of natural history that he taught at Manastır İdadi-i Askeriye (Manastır Military High School). While introducing Darwinian theory of evolution, he emphasized that the Ottoman Empire was an undeveloped country, so its subjects needed "to work with determination and strength to escape the cruel hands of past traditions and to progress as quickly as possible." [234] He wished that the Ottoman Empire have follow recent scientific and technological developments. While he concentrated on the contributions of many scientists such as Georges Cuvier and Carl Linnaeus, he had a noticeably special interest in the contribution of Lamarck to the idea of biological evolution. Interestingly, he briefly summarized Lamarckian theory in his book specifically written for the introduction of Darwinian evolution.[235] His aim was to transmit the latest scientific developments in biology, and he disregarded the differences between these two theories. Instead of comparing them, he offered general knowledge. As mentioned, the content of this book was designed for the students of a military high school. While introducing biological evolution, he took no account of possible, heavy criticisms from religious milieus.[236]

Subhi Edhem paid special attention to the backbone of Darwinian theory, namely, natural selection and the struggle for existence. Natural selection is the main factor and played a leading role in the evolution of species. Nature selects the fittest species. Subhi Edhem used artificial selection to bolster the idea of natural selection, claiming that many animals (chickens, doves, dogs, and cats) had been wild before being selected for domestication. He argued that organisms have two primary objectives – namely survival and reproduction - and all species have to pursue them. No man, animal, or plant could escape from setting these up as objectives. Food and reproduction were necessary for survival and genealogical continuity, respectively. While examining

233 Ibid., 18-19.

234 Subhi Edhem, *Darvenizm* (Manastır: Beyne'l-Milel Ticaret Matbaası, 1327 AH [1909]), 3-4.

235 Ibid., 78.

236 Alkan, "Osmanlı Darwinizmi," 340.

Darwinian evolutionary theory, Subhi Edhem did not disregard the prominent role of competition among organisms. It improved animals and enhanced nations continuously.[237] The role he attributed to competition can be evaluated in terms of social Darwinism. The evolution of both organisms and societies took place because of this competition which eliminated the unfit.

Subhi Edhem was no ardent proponent of Darwinian theory and did not hesitate to state its weakness. There were "vague points" and a need for further explanation in this theory, but none were sufficient to undermine it as a whole.[238] Subhi Edhem believed that because Darwin had constructed it on well-proven scientific facts, minor missing points could not undermine the theory.

3.5.2 *Edhem Necdet*

One of Baha Tevfik's friends was Edhem Necdet who had a mechanical understanding of evolution. Like other intellectuals; he did not follow the recent developments in Europe and also lingered in nineteenth-century philosophy. Despite the fall of Spencerian philosophy, Edhem Necdet and other intellectuals continued to utilize it for social interpretations. He wrote a book entitled *Tekâmül ve Kanunları* (evolution and its laws) using many various sources such as Ives Delage Godsmith's *Les Théories de L'evolution*, Lamarck's *Philosophie Zoologique*, and Gilome Greff's *Transformisme Social*. He divided his book into two sections. After he examined laws of evolution, the influence of the environment, the functioning of organs, and the inheritance of acquired traits, he focused on the evolution of society, organic society, and the mechanical laws that determined changes in society.[239]

From the beginning, Edhem Necdet evaluated discussions on the origins of life in the context of conflict between science and religion. Even though the stability of species had been the predominant view, the idea of evolution became had caught on. This was a revolutionary challenge to "conservatism, the

237 Ibid., 120-127.

238 Ibid., 82.

239 Ülken, *Çağdaş Düşünce*, 438-439.

idea of stability, ignorance, and religious fanaticism." Although *The Origin of Species* became a matter of debate, the idea of evolution - specifically alteration of organisms - was scientifically acceptable in Europe.[240] As an ardent supporter of scientism, he firmly believed in the idea of evolution, arguing that even though Darwin's theory attracted criticism, "the idea of evolution could not be undermined." It was deeply rooted in scientific milieus. Both Darwin and Lamarck proved evolution through natural selection and adaptation, respectively. "Regardless of the main mechanism of evolution," it was scientifically well confirmed that species change in the course of history.[241]

Before explaining evolutionary theories, Edhem Necdet notably traced the idea of evolution to ancient Greece and to Islamic scholars. According to him, the emergence of Christianity commenced a dark era in Europe, but the nineteenth century marked the rise of evolutionary thoughts owing to the contribution of Lamarck and Darwin. He argued that although many conservative people and scientists disproved their theories, the idea of biological evolution received more acceptance. [242] Criticisms from religious milieus were also equally valid for Lamarck and Darwin. In particular, Darwinian theory came in for harsh criticism, but it was accepted by respected scientific milieus.

Edhem Necdet paid particular attention to the influence of environment on the evolution of organisms by emphasizing adaptation, the main principle of Lamarckian theory. "As some organs of s species developed, others underwent a process of atrophy through disuse." The environment itself has a variable character, but the evolution takes place "gradually" rather than suddenly. After the formation of the world, primitive organisms emerged and their forms evolved from primitive to complex. Changes in environment meant the production of miscellaneous changes to the lives of organisms.[243]

The reason the issue of evolution was so "exciting" was that it explained the forms of natural life in materialist rather than theological terms. Thus, the theory of natural selection was of utmost importance for interpreting how

240 Edhem Necdet, *Tekâmül ve Kanunlar* (Istanbul: İçtihad Matbaası, 1329 Rumi [1913]), 3-4.

241 Ibid., 23-24.

242 Ibid., 8-14.

243 Ibid., 16-17.

species evolved over a long time. Owing to Darwin's principle, the idea of evolution dispensed with this "mysterious intervention," and he acquired "an eternal reputation."[244] In fact, Edhem Necdet considered that the scientific community is grateful to Darwin for replacing old worldview with a secular one, leaving no room for God in the scientific interpretation of nature. He unveiled the mystery of life and transferred divine powers to nature.

After focusing on the adaptation of organisms and the influence of the environment on them, he explained natural selection and the struggle for existence. To begin, Edhem Necdet took advantage of man-made selection in order to explain Darwin's natural selection. Both selections are similar because they bring about the emergence of new species, which owe their present forms, talents, and abilities to natural selection. While humans selected the strongest and the most durable animals, nature selected the fittest ones. Second, the struggle for existence took place within a race, among races, and among various species. Eventually, a similar situation occurred between organisms and environment. Bullying, subjugation, and subjection are observable among organisms. "The most important struggle" took place among "the members of the same species" since this struggle resulted by means of natural selection. These members conflicted with each other over food and territory.[245] In other words, Edhem Necdet points to the role of the struggle for existence among members of the same species in their speciation.

One of Edhem Necdet's most remarkable points concerned the implications of Darwinism. The proponents of this evolutionary theory thought differently: they placed natural selection at the center of evolutionary theory and subordinated other factors in the evolution of species. Darwin believed in the supremacy of natural selection but did not ignore the importance of other factors such as the influence of the environment, the activities of organs, and the inheritance of acquired traits. "The evolution of species can be attributed to all these factors, but detecting the efficacy of any of them is difficult." Some post-Darwinian scholars assumed that natural selection was "the sole factor of evolution" and "broadened" its role. In other words, while Darwin accepted that

244 Ibid., 25.

245 Ibid., 26-34.

there were various factors in evolution, his successors distorted his revolutionary theory.[246]

Edhem Necdet emphasized that "the consensus" among the proponents of evolution disappeared after the decline of the ideas favoring the inalterability of species. After defeating the divinely-ordained approach to nature, the theory of natural selection was subject to severe criticism. In order to open up a discourse to criticism of Darwin's natural selection, evolutionary argument first had to prevail over god-centered explanations. As a result, evolutionists had more time and energy to discuss the function and scope of natural selection. There were three main criticisms of natural selection.[247]

To begin with, some scholars began to question whether this selection is "general" and "eternal." They were suspicious of the fact that natural selection is so "overarching" that it completely displace divine explanations of nature and the origin of life. The second criticism concerns the capacity of natural selection to result in a change of species. Edhem Necdet asked whether there may be other factors in evolution. He did not regard the importance of natural selection but looked for other possible evolutionary factors like environment. To bolster his argument, he quoted Peter Kropotkin, a well-known Russian philosopher and activist. Kropotkin argued that when "the harsh climates" eliminate unfit organisms in Siberia, it is inevitable that strong organisms could escape this fate there. In addition to the harsh climate, other factors such as shortage of food and contagious diseases result in the birth of a weak generation rather than the emergence of fit organisms. Third, Edhem Necdet scrutinized whether minor changes in environmental conditions could bring about vital advantages for some of organisms. He was not sure that the superiority of some species actually result from natural selection. He added that "when a lake dries up, all the species perish."[248] Having minor advantages does not ensure survival.[249] All in all, Edhem Necdet clarified that Darwin's natural selection was subject to serious criticism and that his successors had excessively simplified it.

246 Ibid., 41-44.

247 Ibid., 59.

248 Bir göl kuruduğu vakit bütün uzviyetler telef oluyor. Edhem Necdet, *Tekâmül,* 65.

249 Ibid., 61-65.

Edhem Necdet paid specific attention to the evolution of society, based on his organic understanding of society. He accentuated that societies have a body and life that are similar to organisms. Their relation is similar to that of "matter and force or of brain and soul." In fact, "society itself is not the aggregate of individuals." It was both larger and more perfect in terms of volume and functionality. Individuals are no more than the cells of society of which the organs of society are created. It was apparent that individuals are different when separated from society or community. "Societies are real organisms" - an idea shared by Aristotle and Plato in ancient Greece.[250]

As an enthusiastic proponent of evolutionary theory, Edhem Necdet attempted to introduce the laws of biological evolution and social evolution. He regarded evolution as a universal principle and favored the biological findings in the social sciences. He established a strong correlation between the evolution of man and that of society, stressing the superiority of society as an organism. He disregarded the antitheological aspects and implications of Darwin's theory and adopted a completely secular approach while analyzing both human and society.

3.5.3 *Memduh Süleyman*

Of the intellectuals who attempted to introduce Darwinian theory of evolution in the Ottoman Empire, Memduh Süleyman (1887 ?-1920?) who was a close friend of Baha Tevfik.[251] Memduh Süleyman, Ahmed Nebil and Baha Tevfik wrote a book that introduced the life and philosophy of Nietzsche.[252] Memduh Süleyman was distinctive because he translated a book critical of this theory. Even though the reasons he translated it are ambiguous, he clearly intended to inform his Ottoman audience of criticism of Darwinism. At the beginning of the Young Turk era, he noticed that enlightened, thoughtful youth

250 Ibid., 215-216.

251 Mehmet Akgün, "Memduh Süleyman," in *Tanzimat'tan Günümüze Türk Düşünürleri Tanzimat'tan Cumhuriyet'e Bilimsel ve Felsefi Düşünce Temsilcileri 3*, ed. Süleyman Hayri Bolay (Ankara: Nobel, 2015), 1790.

252 Ahmed Nebil, Baha Tevfik and Memduh Süleyman, *Nietzsche Hayatı ve Felsefesi* (Istanbul: Gayret Kütüphanesi, no date)

were enthusiastic to learn about the scientific and philosophical movements of Europe.[253] Many students at Western-oriented schools desired to read Darwin's works, but failed to comprehend them. What is more, it had been difficult to find introductory-level materials to help students comprehend them.[254] In addition, he stressed the impact of Darwinism on science and philosophy, but unlike Subhi Edhem and Edhem Necdet, he wished to promote this theory from a critical standpoint. He delivered Eduard Hartmann's approach to evolution which summarized Darwin's right and wrong points.[255] Hartmann thought that Darwin's theory was so well accepted that it endured the harsh criticisms of its fanatic opponents who became pro-Darwinists. However, as the theory contained serious mistakes and uncertain points, it must be analyzed seriously and meticulously. Hartmann took a critical stance to both anti and pro-Darwinists.[256]

Neither the author nor the translator of the book can be labeled as anti-Darwinists since their intent was to rectify the faults of Darwinian theory of evolution. Their main concerns were scientific rather than religious. The author was aware of the need for a critical approach, and his goal was to fill this gap. Moreover, Memduh Süleyman wanted to avoid writing or translating a book that would repeat the conventional arguments of Darwin. He opposed the unquestioned introduction of Darwin's theory in the Ottoman Empire.

Eduard Hartmann tried to grasp how natural selection took place and to indicate the faults of Darwinism. According to him, the capability of change, inheritance, and the struggle for survival bring about natural selection. In nature, it does not always occur, and its applicability to organisms depends on a number of requirements. First of all, species had to be "better-adapted" organisms after selection. The survival of the less fitted was unacceptable. Second, some members should have "sudden aberration" so that evolution can occur.

253 Mehmet Ö. Alkan, "Osmanlı Darwinizmi." *Cogito* 60-61 (Fall-Winter 2009): 346; Eduard Hartmann, *Darvinizm*, trans. Memduh Süleyman (Istanbul: Necm-i İstikbal Matbaası, 1329 AH [1911]), 4.

254 Rıza Nur, *Hayat ve Hatıratım* (Istanbul: Altındağ, 1967), 94.

255 Hartmann, *Darvinizm*, 4.

256 Ibid., 6-8.

Third, "the new trait" of the species that appeared after the selection place has to be "fruitful" for its survival or reproduction. Finally, "the traits" that helped the organism survive should not have appeared with "other traits."[257]

Another point of criticism Hartmann directed at Darwin concerned his concentration on external factors in the occurrence of evolution. Darwin attributed all changes to natural selection and ignored the impact of the internal factors of organisms on their biological change. "All the animals have to struggle with each other for survival, and it was impossible for an animal to escape this struggle."[258] That is, species in nature have to be compete for the continuity of their life. It could be inferred that this struggle is two-sided - it is waged out against both nature and against other members of the same species. Natural selection was a product of laws that governed nature itself. While applying natural selection to the evolution of species, many factors such as "food, and climate" had to be took into consideration.[259]

3.5.4 *Mustafa Satı: Contemporary Scientific Standards in the Fields of Nature and Organisms*

Mustafa Satı (el-Husrî [1880-1968]), an Arab-origin Ottoman intellectual and the brother of Bedii Nuri, left an enormous impact on fields ranging from pedagogy to ethnography to geology in the late period of the Ottoman Empire. He studied at Mekteb-i Mülkiye and taught the course on nature at the İdadi school in Ioannina (Yanya),[260] today located in northwestern Greece. Owing to his teaching experience, he wrote many books on the natural sciences, botany and zoology. He admitted that the books written on botany and zoology were a fruitful product of his course on nature in Ioannina.[261] Of the

257 Ülken, *Çağdaş Düşünce Tarihi*, 345.

258 Hayvanatın kaffesi yekdiğeriyle muhafaza-i mevcudiyet için mücadelede bulunur…bir hayvanın bu mücadeleden ictinap etmesi gayri mümkündür.

259 Hartmann, *Darvinizm*, 124.

260 Ülken, *Çağdaş Düşünce Tarihi*, 247-248.

261 Satı, Tarih-i Tabiiden *İlm-i Nebatat* (Istanbul: Matbaa-i Kader, 1327 AH [1909]); Satı, *Tarih-i Tabiiden İlm-i Hayvanat* (Istanbul: Artin Asodoryan ve Mahdumları Matbaası, 1327 AH [1909]).

intellectuals who lived in the late period of the Ottoman Empire, Satı was distinctive because he attained contemporary scientific standards, writing more than half a dozen books on various natural and human sciences and textbooks.[262] Thus, he can be called a diligent author of the Ottoman printing culture.

Satı had an extremely secular view of the origin and the spread of humankind over the earth. He divided organisms into two, namely "animals and plants." He added that "the most fundamental and important difference between these organisms is that the former have motion and feelings."[263] His most striking idea is the classification of humankind as animals, and he attempted to indicate the many similarities among these organisms. When "the composition of body, placenta, and the physical appearance of the embryo" are considered, "the similarities" are much more apparent. In particular, similarities are much more evident in some primate species such as chimpanzees and gibbons which seem to be an intermediate form between humankind and apes. However, while humans walk on two feet, the aforementioned animals do it on four ones. This does not mean that their feet are completely different from each other. Some toes on these animals' feet have a more articular structure that allow them to move freely and broadly. Thus, Satı regarded this physiological detail as an exception.[264] He concluded that "there is no reason to classify humankind as a separate category in terms of the composition of

262 Toprak, *Darwin'den*, 297; Satı, *Tarih-i Tabiiden İlm-i Nebatat* (Istanbul: Matbaa-i Kader, 1327 AH [1909]); Satı, *Tarih-i Tabiiden İlm-i Hayvanat* (Istanbul: Artin Asodoryan ve Mahdumları Matbaası, 1327 AH [1909]); Satı, *Mebâdî-i Ulum-ı Tabiiyeden Tarih-i Tabiiye ve Tatbikatı*, (Dersaadet: Kitaphane-i İslam ve Askerî, 1328 Rumi [1912]); Satı, Durus-ı Eşya (İstanbul: Selanik Matbaası, 1328 AH (1911); Satı, *Mebâdî-i Ulum-ı Tabiiyeden Hikmet ve Kimya: Tatbikat-ı Ziraiye, Sınaiye ve Beytiyeleri* (İstanbul: Kitabhane-i İslam ve Askeri-İbrahim Hilmi [Matbaa-i Hayriye ve Şürekâsı], 1327 AH [1911]).

263 Satı, *Mebâdi-i Ulum-ı Tabiiyeden Tarih-i Tabiiye ve Tatbikatı*, (Dersaadet: Kitaphane-i İslam ve Askerî, 1328 Rumi [1912]), 6-7.

264 Satı, *Etnografya: İlm-i Akvam* (Istanbul: Kitabhane-i İslâm ve Askerî - İbrahim Hilmi [Hilal Matbaası], 1327 Rumi [1911]), 19.

body."[265] Both apes and humans are members of the same taxonomical group: primates.[266] He often emphasized the similarities between humans and animals. He said

> human does many acts during lifetime: he or she walks, sits down, stands up, performs action. Feels a lot: he or she sees, smells, suffers and feels joy…Thus, humans are similar to animals. It needs to be considered within the category of animals.[267]

Satı's ideas on the relationship between human and other animals are explicit, exemplifying the explanation of the forms of natural life in materialistic terms. While accounting for some organisms in nature, he does not address any divine activity in nature. In doing so, he desacralized humankind.

Even though Satı classified humankind as primate, he emphasized their mental "superiority." They are not ordinary organisms, and despite similarities, their brains are much more developed.[268] On this point, Satı, like some conservative Ottoman intellectuals such as İsmail Fenni and Aksekili Ahmed Hamdi, recognized the dignified position of humans and did not attempt to absolutely devalue their existence on earth. Despite his attribution of special value to human life, he elicited severe reactions from "conservative circles" due to his ideas on the relationship of humankind and apes.[269] They must find his ideas intolerable and annoying due to its antitheological implications. It is noteworthy that he did not directly write about the common ancestry of organisms in his books despite his knowledge of Charles Darwin and Jean-Baptiste Lamarck.[270] Why he stayed silent on this matter remains uncertain.

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265 İnsanları maymunlardan teşekkülat-ı bedeniyye itibariyle ayrı bir zümre addettirecek hiç bir sebep yoktur. Satı, *İlm-i Akvam*, 19.

266 Satı, *Etnografya,* 15-19.

267 (İnsan) yaşadığı müddetçe birçok hareketler yapar: yürür, oturur, kalkar, iş yapar. Birçok şeyler hisseder: görür koku alır, işitir, ızdırap ve neşe duyar… Bu itibariyle insan hayvanlara benzer. "Hayvanat" zümresinden addolunmak lazım gelir. Satı, *Durus-ı Eşya (Mevalid-i Selase)* (İstanbul: Selanik Matbaası, 1328 AH [1911]), 13.

268 Satı, *Tarih-i Tabiiye*, 95; Satı, *İlm-i Akvam*, 24;

269 Toprak, *Popülizm*, 68.

270 Satı, *Etnografya*," 29.

Probably, he does want not to teach this intensely debated issue to his students to escape the wrath of those who had the divine view of nature.

Satı's legacy for many human sciences, namely ethnography, ethnology and racial anthropology, is considerable. In particular, his journal, *Envar-ı Ulum* (lights of sciences) was "a distinctive periodical of the time." First of all, he attempted to clarify the scope of these sciences by defining them;[271] he believed many scientists were confused about "the scope" of their discipline. Anthropology should deal with the natural history of humankind from "a general standpoint," while both ethnography and ethnology should remain separate from it.[272] Satı said

> anthropology examines humans from the most general framework… Ethnology examines humans in a more detailed way and compares the peoples that history and geography concentrated on… Ethnography does this in one time more detailed way. It contents itself with the separate description and classification of each nation.[273]

Satı taught the course on ethnography at Mekteb-i Mülkiye, and this course was available in the curriculum of the literary branch of Darülfünun.[274] In clarifying the scope of these sciences, he tries to prevent scientific ambiguity. Of the three, anthropology is closest to biology due to its concentration on racial subjects.

Satı's contribution to the introduction of racial anthropology in the Ottoman Empire has a scientific importance. He called anthropology *ilm-i beşer* (science of human) and taught it as a course at Mekteb-i Mülkiye for just one year.[275] Anthropology concentrated on racial issues and he often mentioned

271 Yeliz Okay, *Etnografya'nın Türkiye'ye Girişi ve İlm-i Ahval-i Akvam* (Istanbul: Doğu Kitabevi, 2012), 64.

272 Satı "Etnografya." *Mülkiye*, No. 2, (1 Mart 1325 Rumi [14 March 1909]): 35.

273 Antropolojiya beşeri en umumi bir nokta-i nazarla tetkik eder…Etnolojiya beşer-i daha hususi bir nokta-i nazarla tetkik eder ve coğrafya ve tarihin gösterdiği akvamı mukayese eder… Etnografya ise beşeri bir kat daha hususi bir nazarla tetkik eder. Akvamın her birini ayrı ayrı tasvir ve tasnif ile iktifa eyler. Satı "Etnografya," 35.

274 Okay, *Etnografya*, 101.

275 Toprak, *Popülizm*, 68.

races in his studies. In the nineteenth century, the origin of all human races was an intense debate, and he argued that there were three approaches for explaining races. The first approach is monogenism which contends that "humans races descended from the same origin, all of them are the same species."[276] Their "differences" result from race. The second approach, polygenism, posits the existence of different ancestries for the different human races. Humans "descended from" various ancestors. The third approach is evolution, which asserts the non-stability of species in the course of time. Racial differences took place as organisms evolved.[277] Satı favored the last approach and admitted the change of species on account of evolution. Their fixity is impossible and biological changes follow from the occurrence of evolution.[278] All forms of life are subject to evolution, which is an inevitable process.

Satı divided races into categories, namely the white, black, yellow, and red races.[279] However, he argued that classification of races according to skin colors is not reliable since they are "unfixed" criteria and subject to change depending on climate. Many colors or noticeable within different races, and climate is the chief determinant.[280] While he stressed the importance of the environment, he did not ignore the outcomes of manmade processes and asserted that some species of animals and plants appeared by their intervention. Humans continuously select the most beneficial animals for themselves, culminating in the appearance of new races.[281] This was a similar process to natural selection and Darwin called it "selection by man" in the first chapter of *The Origin of Species* [282] in order to bolster his theory of evolution. Even so, he recognized that nature is the decisive factor in organic life. Humans descended from each other in the course of history due to natural and environmental

276 İnsanlar hep bir asıldan neşet etmiştir, hepsi bir nev'dir. Satı, *Etnografya*, 30.

277 Satı, *Etnografya*, 30-31.

278 M. Satı, *Tarih-i Tabiiden İlm-i Hayvanat* (Istanbul: Artin Asodoryan ve Mahdumları Matbaası, 1327 AH [1909]), 2.

279 Ibid., 155-158.

280 Satı, *Etnografya*, 179-180.

281 Ibid., 32.

282 Darwin, *Origin*, 21-24.

reasons, which must be accepted as an ordinary case. Even though he seems to have read *The Origin of Species*, there is no direct reference to Darwin in his articles or books. Nonetheless, Darwin's ideas preoccupied his interpretation of organic life. He preferred to use it in the explanation of new species and races rather than to introduce the theory of natural selection.

Satı examined the differences between race and species and proposed that there is no sharp distinction between them. In order to corroborate his idea, he claimed that both Darwin and Lamarck agreed on the existence of a minor distinction between species and race. Moreover, species and races descended from a common ancestor and their distinction is "a taxonomical matter."[283] He paid more attention to the origin and evolution of humankind in his examination of geological ages. He divided geological history into five eras: primitive, first, second, third, and fourth eras. "There was no organism on the earth in the primitive era."[284] The first organisms, which were very different from "present-day" organisms, appeared in the first era. Subsequently, the number of land animals increased and changed, becoming distinct species. In fact, Satı implied the evolution of organisms occurred in this era. "Living things similar to present-day ones appeared in the third era."[285]

Satı attributed a huge importance to the third era since he assumed that the first humans appeared in the middle or at the end of this era, but there are significant differences between the first humans and extant ones. Satı examined the Java Man, who lived in this era and found in Indonesia by Eugène Dubois in 1895. His skull is similar to that of apes, but its width was more than that of the skull of an ape, smaller than the skulls of humans. Its size confused scientists, and they called it pithecanthropus, which meant ape human. In spite of this scientific confusion, it was apparent that the ancestors of humankind lived in the third era.[286] Today, humankind lives in the last era and are spread all over the world. They are much more civilized and developed than in previous ages. Satı believed in the stability of neither the earth nor

283 Satı, *Etnografya*, 29-30.

284 Devr-i iptidaiyede müteazzıvat yok idi. Satı, *Mebâdi*, 164.

285 Şimdiki müşabih müteazzıvat ancak devr-i salisede zuhur etti. Satı, *Mebâdi*, 165.

286 Satı, *Etnografya,* 43-46.

organisms and put forward that humans, animals and plants went through various phases and eras. While the continents have been joined together as a single landmass, they gradually broke apart from each other. All things, irrespective of whether they are organic or inorganic, underwent a process of evolution.[287] It can be inferred that Satı followed the latest geological debates in scientific milieus around the world because his arguments about the history of earth are similar to Alfred Wegener's well-known proposal of continental drift in 1912.[288] Geology provided an enormous range of evidence about the occurrence of evolution since scientists had unveiled many fossils from between strata. Influenced by geological findings, Satı favored the idea of evolution in organisms.

Satı underscored the survival and reproduction of organisms.[289] Humankind has to perform these duties. He attempted to understand human nature and concluded that the earth is like a battlefield. Organisms are "equipped" to struggle and always fight with each other and with nature itself. Furthermore, it was scientifically acknowledged and scientists paid much attention to it. This rule can be applied to humankind, which has excessive number of enemies in life. Their survival depends on this war. The reason humans won this war is because "their reason, intelligence, and the tools" that developed for their daily needs gave them an edge. Humans evolved and invaded all the corners of the earth.[290] While outlining the nature of humankind and the relationship between nature and organisms, Satı indicated the impact of warfare on the development of organisms. He touched neither on the superiority of the fittest organisms nor on that of unfit ones.

The challenges that nature and organisms posed to humankind played a pivotal role in the development of human societies. Their reason and efforts to discover the methods to cope with the dangers that nature posed helped

287 Satı, *Mebâdi*, 170-171.

288 In 1912, Alfred Wegener, who received his education in meteorology and astronomy, asserted that continents are an outcome of the splitting of a large landmass that previously contained all the current continents. For further information, see John J. W. Rogers and M. Santosh, *Continents and Supercontinents* (New York: Oxford University Press, 2004), 3-13.

289 Satı, *Mebâdi* 17.

290 Satı, "Ulum-Tabiat," *Envar-ı Ulum*, No. 1 (28 Ağustos 1324 Rumi [10 September 1908]): 9-10.

them advance in history. It is remarkable that as civilization advanced, the insistence of humankind on the discovery of nature increased because the increasing numbers of humans on the earth meant intense relation among them, nature, and more hazardous living and non-living entities. In fact, Satı clarified that knowledge of nature is highly beneficial for the survival of humankind. In order to cope with the challenges of nature, scientific knowledge can be regarded as a vital necessity. Satı always expressed admiration for "the natural sciences" as they helped social sciences and philosophy. He assumed that when they emulated scientific developments in "the natural sciences," latter became real sciences. The research and the method of examination in "the natural sciences" spread the other sciences, including the social sciences, leading radical reforms.[291] The influence of the natural sciences over the social sciences is groundbreaking since its way of understanding nature and organisms indicated how scientific scrutiny should be carried out. From his point of view, observation and experiments in the natural sciences were something that the social sciences should take as an example.

Satı embraced an organic understanding of societies, making an analogy between societies and organisms. He was deeply influenced by Herbert Spencer. The discovery of the existence of cells corroborated this analogy, as it is apparent that there is no absolute independence between cells. In some simple organisms, the organic tie between the parts of a cell is weak, and some organs can survive even if the others disappear. For instance, if the articular organs of "grasshoppers" are pulled off, these organs "move for a while" and then "die." Furthermore, societies are similar to organisms in terms of their genesis and foundation.[292] Like Ahmet Şuayip and other intellectuals, Satı adopts an organic point of view from which to interpret society. He carries the intellectual codes of *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası*, which attributed pivotal importance to Spencerian ideas.

291 Ibid., 11.

292 Ülken, *Çağdaş Düşünce Tarihi*, 236-237.

3.5.5 *Şemseddin Sami: Intellectual in the Pursuit of Human Sciences*

One of the most important Ottoman authors to contribute to the introduction of anthropology towards the end of the nineteenth century was Şemseddin Sami (1850-1904). He is the first author to mention natural history and had an extensive knowledge of culture. His studies of encyclopedias and dictionaries[293] proved his proficiency and indicates that he closely followed the Western scientific literature. At the time he lived, anthropology was in its first stage, and he introduced nascent anthropological information to Ottoman audience with his two remarkable books, *İnsan* (human) and *Yine İnsan* (once again human).[294] He evaluated humankind and its spread across the world from a secular point of view.

First of all, Şemseddin Sami attempted to define what a human being is. In terms of taxonomy, he considered humankind to be an animal but stressed distinctive peculiarities such as the capacity for "speech and comprehension." On the other hand, the recognition of humankind as an animal is unfounded because these peculiarities are so awe-inspiring and unprecedented that no ordinary organism could have them. Those who accentuate the spiritual aspect of humankind put forward that this unique organism "arrived from a spiritual world" and to which it will depart after a period. Their superiority results from their "distinctive and distinguishing features." In spite of the small size of humans, it is "much more important" than all other organisms.[295] While defining humankind, he tried to be meticulous and prudent since it is a sensitive issue in Muslim society. He was cognizant of the fact that completely spiritual or completely materialist interpretations of human nature do not provide the necessary insight to understand it.

Şemseddin Sami combined secular and spiritual arguments to define human nature. Due to this attitude, he can be considered to be in straddling the fence. He highlighted that "humans are both "despicable animals" and

293 Şemseddin Sami, *Kamûsu'l-Alâm* (Istanbul: Mihran Matbaası, 1306 AH [1889]): *Kamûs-ı Türki* (Dersaadet: İkdam Matbaası, 1317 AH [1899]); *Kamûs-ı Fransevi* (Istanbul: Mihran Matbaası, 1299 AH [1882]).

294 Toprak, *Popülizm*, 51-52.

295 Şemseddin Sami, *İnsan* (Istanbul: Mihran Matbaası, 1296 [1878]), 4-5.

"unworldly souls belonging to a holy world." They are composed of both matter and soul."[296] To point out the material and spiritual aspects, he utilized the Koranic argument that "we created man from a clay and then breathed into him." He concluded that humans are ordinary organisms, but their "reason and comprehension" make them "distinctive and distinguishing." He indicated both the defects and the perfection of this organism.[297] If the conflicting approaches of religion and science are thoroughly examined, the fact that both of them are the same is noticeable. The origin of humankind from animals and their creation from "clay" are consistent with each other. Not only humankind but also animals are created of "clay."[298] It is possible to label his approach to the appearance of humankind on the earth as centrist since he neither rejected divine involvement in the world nor the material aspects of human life. In terms of the interpretation of human nature, he took no side in the war between science and religion. His main intent is to shed light on human beings in light of scientific knowledge without declaring a war on Islamic teachings. He avoided this war as much as possible even though there were a few exceptions.

Şemseddin Sami touched on the relationship of humankind and animals, - a controversial issue - but he again remained prudent. From his point of view, claiming that humankind is an animal species requires "courage" because equating human beings with animals such as sheep and fish is insulting. Humans had some "distinctive" features, but there are many strong similarities between animals and human beings. Some animals like dogs have a high "level of discernment" similar to that of human beings.[299] He bordered an ambiguous line between these two organisms.

Şemseddin Sami believed in the non-fixity of organisms. When organisms living in the various geological ages are examined, the existence of changes from age to age is "natural." Some scientists noticed a species similar to humankind prior to the fourth geological age, but it is not possible "to call" them

296 Bir cisim ve bir ruhtan mürekkeptir. Şemseddin Sami, *İnsan* (Istanbul: Mihran Matbaası, 1296), 6.

297 Ibid., 5-7.

298 Ibid., 26.

299 Şemseddin Sami, *Yine İnsan* (Istanbul: Mihran Matbaası, 1303 [1886]), 9-11.

human. There are four types of apes that are "similar" to humans, namely, "orangutan, gorilla, chimpanzee, and gibbon." When they existed, it was easy to distinguish them from other organisms, but distinguishing them with only their bones requires a painstaking effort due to the apparent similarities with human bones. Şemseddin Sami asserted that considering the humans living in the fourth geological to be one of the aforementioned apes is not reasonable. Although he accepts the physiological and anatomical similarities between humans and some apes, he opposed calling first humans as an animal.[300] It can be inferred that he closely followed the debates on the origin of humans because the relationship of humans and animals became an issue of intense debate in evolutionary biology in the nineteenth century. Şemseddin Sami might have read Darwin's *The Origin of Species* or second literature about it.

Şemseddin Sami believed in the evolution of species but objected to the notion that this biological process culminated in the appearance of new species. Due to environmental conditions, organisms underwent some biological changes in the course of history. Human being were no "exception" to this biological process.[301] In this respect, his approach to organic evolution is closer to Lamarckian than Darwinian theory of evolution. Lamarck asserted that acquired physical characteristics passed to offspring, leading to the changes within the same species, but not the emergence of new species.

According to Şemseddin Sami, it can be put forward that humans appeared in the fourth geological era, but if the artifacts discovered in the soil are carefully analyzed, it is noticeable that the appearance of humankind is both new and old. Scientists discovered certain evidence about human life prior to the fourth geological era.[302] At this point, he briefly mentioned the average life of humankind, refuting the claims that early humans lived thousands of years because of a lack of "evidence."[303] It was impossible for humans to live so long at that time. Debates on age are important since he indirectly challenged the religious argument without reference to any holy book. In the

300 Şemseddin Sami, *İnsan*, 36-38.

301 Ibid., 39.

302 Ibid., 11.

303 Ibid., 68-69.

fourteenth verse of the al-'Ankabut surah of the Koran, it is written that "We sent Noah out his people. He lived among them for fifty years short of a thousand but when the Flood overwhelmed them they were still doing evil."[304] Şemseddin Sami did not challenge this verse explicitly, avoiding its groundless argument about the ages of early humans.

After deciding that the appearance of humankind occurred in the fourth geological era, he focused on the first humans, discussing monogenism and polygenism. While the former posits a common ancestry for all humans, the latter advocates descent from various types of ancestors. Monogenism is suitable for the teachings in religious books that tell the story of Adam and Eve. Polygenism, whose proponents were a group of naturalists, abstains from such religious interpretations and favors reasonable scientific explanations. He preferred to accept monogenism without hesitation, believing that all humans are the offspring of the same father and mother.[305] He found the idea of various ancestors unreasonable and cited a verse from the Koran. Religious sources offer important knowledge explaining humankind. While seeking the answer to where first humans appeared, he stressed that science was incapable of providing an accurate answer.[306] He appealed to both religious sources and to anthropologists who speculated on the place of origin. While some anthropologists pointed out to "a mountain located between China and India in," ancient histories and holy books indicated a place close to India.[307] Şemseddin Sami was mindful remaining in the otherworldly sphere and his anthropological approach can be labeled as "agnostic" standpoint.[308]

As mentioned earlier, he believed in the non-fixity of species due to environmental reasons. He accentuated that their "colors and form" depend on these environmental conditions and humans are taxonomically classified. Humans, who had spread around the world, changed over the course of millions of years and arrived at "their present color and form" in the end. This fact is scientifically well proven and indisputable. Different environmental

304 Quran, trans. M. A. S. Abdel Haleem (New York: Oxford University Press, 2005), 253.

305 Şemseddin Sami, *Yine*, 18-20.

306 Şemseddin Sami, *İnsan,* 27-28.

307 Şemseddin Sami, *Yine*, 24

308 Toprak, *Popülizm*, 54.

conditions engendered different human beings, and this is a natural, inescapable fact. Those who try to refute it concentrate on "the slow" nature of this biological process. They take black children born in Europe as an example proving that climate has no influence on humankind. These opponents must have assumed that white babies would be born from black fathers after a couple of generations. The environment had a direct influence on the colors of human beings.[309] Şemseddin Sami tried to falsify such ideas, believing in the pivotal role of nature in the appearance of various types of humans.

Şemseddin Sami offered valuable knowledge about five various types of human on earth, namely Caucasia, Mongol, black, American, and Malay. What is more, he paved the way for the introduction of phrenological[310] studies that arose in 1930. These kinds of studies and "the cephalic index" were important for political reasons during the early Republican period.[311] He paid more attention to the skull because the main, distinctive traits of humans were determined by the skull. He divided the skulls of humans into categories, namely dolichocephalic and brachycephalic meaning "long and short skull," respectively.[312]

Overall, Şemseddin Sami was neither positivist nor materialist. His main motivation was to understand the world in the light of modern scientific findings, but in doing so, he did not move away from religious interpretations of nature and organisms. He was cognizant of the antitheological implications of the natural sciences. He left noticeable room for religion in the scientific interpretation of nature. Even so, he made tremendous contributions to the promotion of the idea of a dynamic earth and organisms in the Ottoman Empire by introducing recent anthropological and geological research in Europe.

309 Şemseddin Sami, *Yine*, 42-47.

310 Phrenology is the field that deals with measurement of skull in order to know the personality, traits and character of humans.

311 Toprak, *Popülizm*, 54.

312 Şemseddin Sami, *Yine,* 62-63.

4

The Rise of Anti-Darwinism in the Ottoman Empire

By 1900, Islamic world was in a political and intellectual crisis.[1] The idea of Islamism attempted to save Muslims from Western colonial rule and despotic rulers through rational methods. It covered not only political, but also intellectual and scientific issues.[2] The reinstitution of constitution in the Ottoman Empire in 1908 did not unfortunately finish the political crisis in the empire. The Islamist thinkers thought that even though this political regime was compatible with Islamic political theory, it did not bring about "a social and religious reform."[3] The relative freedom of the press, which remarkably emerged at the beginning of the Young Turk era (1908-1918), allowed the conflict between spiritualism and materialism to crystallize due to the rise in the number of books and journals. Evolutionary discussions were set into a philosophical context and anti-Darwinism was a direct product of these philosophical rather than scientific discussions. Anti-Darwinism should be put in the context of anti-materialism because it was regarded as a cornerstone of materialist ideas. The criticisms addressed to Darwinian theory were related to anti-materialist arguments. Ottomans' encounter with this theory took place in the context of materialism. Many intellectuals thought that the

1 İsmail Kara, *Türkiye'de İslamcılık Düşüncesi: Metinler-Kişiler I* (İstanbul: Risale Yayınları, 1986), XIX.

2 Ibid., XV.

3 Tarık Zafer Tunaya, *İslamcılık Akımı* (İstanbul: Simavi Yayınları, 1991), 62.

Ottoman Empire was being exposed to the so-called corrosive elements of Western influence, so Ottoman society needed to be defended against them. As the Ottoman state and society were witnessing a process of rapid change, these persons were afraid of its possible results.

The main basis of the state and society had to be protected against Western influence. Otherwise, they could lose their identity. As some ideas imported from the West were dangerous, there had to be a different way to deal with the problems of this transformation. Thus, the motivations behind anti-Darwinism were political, religious, and social. The stance of anti-Darwinist authors was not opposed to science since "the Ottoman relationship to European science had traditionally been a very comfortable and sometimes even collaborative one." They were generally enthusiastic about "the adoption of Western science."[4] Many Islamists in the empire often stressed that "Islam is not a hindrance to progress." It encourages progress, but not decline.[5]

Intellectuals such as Celal Nuri and Abdullah Cevdet were in one camp, and ones like Şehbenderzade Ahmet Hilmi of Filiba and İsmail Fenni were in the other.[6] The intellectuals in the latter group were outstanding representatives of spiritualist philosophy.[7] Spiritualism in the Ottoman Empire benefited from European science and philosophy in order "to bolster its main arguments." In fact, this philosophy was "a shelter for those who were troubled by the dangers of materialism and positivism" since it proposed ideas about the afterlife and the continuity of spirit and life.[8] It can easily be argued that the intellectual legacy of these intellectuals left a tremendous, deep impact on the

4 S. Nomanul Haq, "Islamic Philosophy and Science," in *The New Cambridge History of Islam* 6, ed. Robert W. Hefner (New York: Cambridge University Press, 2010), 558.

5 İslâmiyet mani-i terakki değildir. Tunaya, *İslamcılık*, 27-28.

6 Süleyman Hayri Bolay, *Türkiye'de Ruhçu ve Maddeci Görüşün Mücadelesi* (Istanbul: Yağmur Yayınları, 1967), 10.

7 A doctrine based on the notion that the ultimate basis and rational explanation of the universe is spirit - an over-mind akin to human spirit, but pervading the entire universe. It is opposed to materialism. Dagobert D. Runes, *The Dictionary of Philosophy* (New York: Philosophical Library, 1942), 300.

8 Süleyman Hayri Bolay, *Tanzimattan Günümüze Türk düşünürleri 4-A*, ed. Süleyman Hayri Bolay, (Istanbul: Nobel Akademik Yayıncılık, 2015), 1886-1887.

birth of creationism in the modern sense, and they paved the way for the introduction of the creationist movement in Turkey in the twentieth century.

The intellectuals in the second group are epitomized by similar Islamic educational and social backgrounds, but this does not imply opposition to modernization. In fact, they proposed a different modernization instead of a total Westernization. Thus, the conflict between modernity and tradition can be understated, because the main concern was the suitable appropriation of Western modernity in "a non-European setting." From their point of view, there was no dichotomy between science and tradition. Rather than a total Westernization, a belief that a selective modernization would be more fruitful for both the state and society.[9] Their approach to modernization was basically different from the notable proponents of Westernization such as Abdullah Cevdet and Kılıçzade Hakkı. First, a Muslim society had to avoid from "imitation" (*taklid*) because it is impossible to create a society that imitated all aspects of Western culture so as to survive. For example, Said Halim Paşa, who was one of the remarkable ideologues of Islamism and a grand vizier in the Young Turk Era, disproved the appropriation of French sociology, moral philosophy of Kant and Spencer, and English political theory since they could harm the social fabric of Muslim society.[10]

This chapter illustrates their challenge to the spread of evolutionary theory. A close reading and their studies is necessary to grasp their attitudes toward the idea of evolution. Importantly, philosophical and religious challenge they developed was to biological evolution rather than to the evolution of other things like society or language.

§ 4.1 Evolution and the Fight against Materialism

A number of authors challenged evolution in anti-materialist context, namely, Mehmed Emin Feyzi, İsmail Fenni (Ertuğrul), Şehbenderzade Filibeli Ahmed Hilmi, and Said Nursi (Bediüzzaman). The first one was Mehmet Emin Feyzi,

9 Serdar Poyraz, "Science versus Religion: The Influence of European Materialism on Turkish Thought, 1860-1960" (PhD Diss., Ohio State University, 2010), 3-6

10 Tunaya, *İslamcılık,* 84-85.

born in 1862 in today's Iraq. After receiving Rüşdiye (junior high school) and İdadi (high school) educations in Suleymaniyah and Bagdad, respectively, he moved to Istanbul to study in the Military School. In the course of his life, he served as a teacher in military schools and as a member of the martial court (Divan-ı Harb).[11] He was extremely conservative and in his autobiography, *Eser-i Hayat-ı Feyzi* (the work of Feyzi's life), he expressed his gratefulness to God for his being pious and a believer (*mümin*).[12] When he died is unknown, but it was after he wrote this autobiographic work in 1926.[13]

Feyzi's main fight is with materialist thinking, and he considered evolutionary theory as a source of materialism. In the post-war years, a remarkable number of writings on dialectical materialism were published in journals such as *Kurtuluş* (salvation) and *Aydınlık* (illumination). The communists were preparing for a communist revolution, and the political conjuncture after 1918 was comparatively favorable to the spread of dialectical materialism in Turkey.[14] What makes Emin Feyzi prominent in anti-Darwinian thought is his ideas on materialism. In 1924, he wrote *İlim ve İrade* (science and will) and criticized materialist thought severely. He claimed that this kind of thought was based on scientific foundations and that their ideas "conflicted" with Islam itself. In fact, his basic aim is "to refute materialist teachings by pointing out the false ideas of its thinkers."[15] What is more, he was so certain of his own ideas that he asserted their inevitable victory by science and belief. "Materialists will never prove their claims, they will always face debacle in the face of faith and science."[16] In the aforementioned book, he tried to place his view on a scientific foundation and mentioned the beginning of life and the natural law that led the first generation of organisms. However, as he was unsure of this natural law, he emphasized a number of thinkers such as Christian

11 Emin Feyzi, *İlim ve İrade* (Istanbul: Bedir Yayınevi, 1997), 6

12 Emin Feyzi, *Eser-i Hayat-ı Feyzi* (Istanbul: Necm-i İstikbal Matbaası, 1340 Rumi [1924]), 4.

13 Bolay, *Tanzimattan,* 2037.

14 Ülken, *Çağdaş Düşünce*, 563.

15 Emin Feyzi, *İlim ve İrade*, (Istanbul: Bedir Yayınevi, 1997), 2.

16 Maddeciler hiçbir zaman iddialarını isbat edemeyecekler, iman ve ilim karşısında sürekli hezimete uğrayacaklar. Ibid., 50.

Gottfried Ehrenberg and Moritz Wagner. In the end, he concluded that "due to supernatural conditions that appeared during the making of the earth and a mix of various matter, life emerged."[17] Feyzi emphasized that divine law was behind the beginning of life.[18]

Emin Feyzi emphasized that materialists had no teleological interpretation. That is, materialists accepted teleological aspect for either living or non-living beings in order to reject the existence of a creator. From his point of view, the lack of a teleological perspective in a philosophical approach is an essential problem.[19] Whatever exists in the world has a special goal in the divine order. He used the example of an automobile in which many parts were assembled. All the parts used in the production of the automobile have a specific "task" and play a primary role in the "motion" of the vehicle. The fact that the benefit of all these parts was taken into consideration prior to its "production" is proof of "intelligence."[20] He added that just as there exists intelligence in the production of "an automobile," the same is true for the creation of "animals." The origin of animals and their bodies are "the work of an absolute creator." All of them materialized within the frame of certain laws and order.[21]

Supposing that nature is the leading actor behind the origin and the biological diversity of organisms is wrong since God created them, not nature itself. "Ignorant" thinkers regard nature as a "superstition" agent in the making of organisms. Nature lost its "original meaning" and became "a supply of demagogy."[22] The replacement of God with nature and non-religious discourse on the origin and diversity of organisms were unacceptable. Materialist thinkers are "extravagant and ignorant" as they embrace nature as a "creator," and thus they are "sinners."[23] God's involvement cannot be rejected and the

17 Yer kürenin oluşumu sırasında ortaya çıkan bazı olağanüstü durumların etkisiyle ve maddenin çeşitli karışımlarıyla hayat ortaya çıktı. Ibid., 33.

18 Ibid., 32-33.

19 Ibid., 51.

20 Ibid., 13.

21 Ibid., 13-14.

22 Ibid., 52.

23 Ibid. 48-52.

transfer of divine powers to nature is unreasonable. Replacement of God with nature is incompatible with Islamic teachings.

Another intellectual who fulminated against materialist thinkers was İsmail Fenni (1855-1946), who left many valuable works on philosophy. He was born in Tarnova, today a city in north-central Bulgaria, where he received his primary and secondary education and simultaneously took Arabic and accounting lessons. Moreover, because of musical training and having learned to violin and zither, he composed music and wrote poetry in the later years of his life. His family was one of the notable families of Tarnova, and his parents paid strict attention to his education from his early childhood. Because of the Russian occupation during the Russo-Turkish War (1877-78), he and his brother moved to Istanbul and became an officer in the Maliye Nezareti (Ministry of Finance).[24] "He graduated from the Lisan Mektebi (Language School)" and took lessons from an English teacher. He served as a member in various units in the state and became the accountant of this ministry in 1896. He retired in order to have "sufficient time to write" in 1908. During "his thirty-eight-year period of retirement," he wrote approximately twenty books, including unpublished ones and he died in 1946. As he never married due to "chronic stomach problems," he dedicated himself to "writing, playing instruments, and composing music." "He lived a reclusive, modest life."[25]

Unlike Mehmet Emin Feyzi, İsmail Fenni elaborated on why he opposed evolutionary theories by using various kinds of evidence ranging from geology to biology. Hilmi Ziya Ülken calls him a modern Islamic philosopher and supporter of the unity of being (*Vahdet-i Vücut*). İsmail Fenni believed that the world descended from the existence of God. He derived his philosophy from his religious belief, and proving the existence of god was the basis of his philosophy. Due to his philosophical understanding, it is possible to regard him as a "pantheist" although he rejected this word.[26]

İsmail Fenni wrote on evolution mainly in *Maddiyun Mezhebinin İzmihlali* (The collapse of materialist doctrine) and the dictionary, *Lügatçe-i Felsefe* (dictionary of philosophy). In these works, he mentioned and introduced both

24 Bolay, *Tanzimattan*, 1891.

25 Münzevi ve çok gösterişsiz bir hayatı vardı. Ülken, *Çağdaş Düşünce*, 425.

26 Ibid., 427-428.

Darwin and Lamarck. He did not reject the notion of evolution altogether and even favored applying the notion to inorganic matter, which is subject to evolution. He wished a teleological evolution, which was in accordance with Islamic teaching. He denied the existence of haphazard mechanism in nature.[27] In addition, in the dictionary of philosophy, he explained and defined Darwin's views, Darwinism, evolution, and evolutionism…etc. That is, he introduced the idea of evolution and those who asserted it as a theory. He fulminated against materialist thinkers because he assumed that they "exploited" evolution to prove their non-teleological ideas. They removed evolution from its "original context" even though both Darwin and Lamarck accepted the existence of God. What materialists do is to corroborate their atheist worldview and superstitious beliefs through Darwinian and Lamarckian theories.[28] Even though "Charles Darwin timidly proposed his theory," those who denied the existence of God hastened to benefit from his theory and find a biological basis for their doctrine. They even "went a step further."[29]

Şehbenderzade Filibeli Ahmed Hilmi (1865-1913) is another thinker advocating spiritualist philosophy during the late period of the Ottoman Empire. Until the end of his primary education, he stayed in Filiba (called Plovdiv in Bulgaria) where he was born in 1865. Later, he moved to Istanbul and received education at Mekteb-i Sultani (Galatasaray High School). After 1890, he started to work for the Düyun-ı Umumiye (Ottoman Public Debt Administration) and this institution sent him to Beirut. But he eventually ran away to Egypt for "a political reason." When he returned to Istanbul in 1901, "he was exiled to Fezzan," the southwestern region of present-day Libya, and he devoted his energies to Islamic research. Owing to "the declaration of constitution," he returned to Istanbul again and "published a weekly newspaper" called *İttihad-ı İslam* (Islamic Union) where he wrote articles in "a plain, flowing style." Although the government banned this journal, he continued to write articles for other periodical publications such as *İkdam* and *Tasvir-i Efkar*. In 1910, he established a publishing house and published a new journal,

27 Ibid., 429.

28 Bolay, *Ruhçu ve Maddeci*, 238.

29 İsmail Fenni, *Lügatçe-i Felsefe* (Istanbul: Matbaa-i Amire, 1341 Rumi [1925]), 165.

Hikmet (wisdom), by which he received moderate fame because its issues were distributed to different regions in the Islamic world.[30] Before his sudden, unexpected death in 1913, he had given "the course of philosophy" in Darülfunun (Ottoman University). Even though he has no formal Islamic education, he made an enormous effort to spread Islamic ideas. His works and ideas are critically important for understanding the conflict between spiritualism and materialism.[31]

Actually, Ahmed Hilmi was a typical Young Turk and shared characteristics in common with other members of this movement, but the similarities ended when it came to religion and faith. Ahmed Hilmi was not a classical religious man. "Positivist, materialist, and antireligious" ideas had a deep impact on many Young Turk intellectuals, and he even "stopped practicing his faith for a while." But later, feeling "to fill the void in his mind and soul," he embraced faith anew. Since he was extremely uncomfortable with "the antireligious leanings" among members of the Young Turks, "he sought to reorient it on an Islamic path."[32]

With respect to his ideas on evolution, his studies contain evolutionary interpretations. Hilmi believed that societies underwent a process of evolution, which was an undeniable fact. "The salvation" of Muslim societies required developments in "natural sciences and education." TheMuslims disproved the results of natural sciences or disliked them.[33] He wished the Muslims to learn the developments in natural sciences, but he was opposed to the application of Darwinian theory to society since social Darwinism brought social debacles to humanity. He thought that the Darwinian principles of struggle for existence and natural selection were decontextualized and

30 Süleyman Hayri Bolay, "Şehbenderzade Ahmed Hilmi," in *Tanzimat'tan Günümüze Türk Düşüncesi 4-A*, ed. Süleyman Hayri Bolay (Istanbul: Nobel Akademik Yayıncılık, 2015), 1952-1953.

31 Ülken, *Çağdaş Düşünce*, 410.

32 Amit Bein, "A Young Turk Islamic Intellectual: Filibeli Ahmed Hilmi and the Diverse Intellectual Legacies of the Late Ottoman Period," *International Journal of Middle East Studies* 39 (2007), 609-613.

33 Kara, *İslamcılık*, 7 .

were used for European aggression. These principles were replaced with "religious and moral rules."[34]

His philosophical view is beyond the scope of this dissertation, but in order to understand his ideas on evolution, it is necessary to read between the lines of his philosophical writings. "The struggle against materialists, positivists, and the advocates of scientism became a mainstay of Ahmed Hilmi's agenda." Instead of accusing them of blasphemy, he sought "to denounce his materialist and positivist adversaries with philosophical critiques mainly borrowed from European thought."[35] This was the best way, he thought, to refute materialist, positivist, and scientist arguments.

According to Ahmet Hilmi, there are five main philosophical doctrines, namely spiritualism, materialism, positivism, criticism, and evolutionism. Even though the last, evolutionism, is much more scientific than the others, it is based on unprovable principles.[36] His writings are remarkable on this point: he rarely touched on the issue of biological evolution, perhaps because his knowledge of it was insufficient, and instead mobilized his efforts to fight antireligious ideas like materialism. His comments about evolution, Darwin, and Lamarck are relatively short in comparison.

One important note is that even though Ahmed Hilmi favored the term evolution, he opposed evolutionist philosophy since it made sense with other philosophical ideas. In other words, he claims that none of the philosophical doctrines (spiritualism, materialism, positivism, criticism, and evolutionism), are accurate; "an eclectic philosophy" is more acceptable. Ahmed Hilmi espoused a "sufistic" philosophy based on the unity of being" (vahdet-i vücut). "There is an eternal being, its unchanging aspect is God, and his appearances and changing images is the world."[37] Ahmet Hilmi argued that God did not make the world out of nothing, and he was therefore against religious

34 Ibid. 19.

35 Bein, "Filibeli," 612.

36 Neşet Toku, *Türkiye'de Antimateryalist Felsefe: Spritualizm* (Istanbul: Beyan Yayınları 1996), 80-81.

37 Ebedi ve ezeli bir varlık var olup, bu varlığın değişmeyen mahiyeti Tanrı ve onun tezahürleri, değişen görüntüleri ise alemdir. Toku, *Antimateryalist,* 84-85.

ontological interpretations. What God did is to make something "visible" from invisibility, not to make something out of nothing. Beings in the world appear by "divine act," and complete creation means making them "visible."[38]

Said Nursi (Bediüzzaman) held a remarkable position with respect to the relation of Islam to modernity and science. He lived in an era of transition and witnessed the birth of a new world and a new country: the Republic of Turkey. His life story is "exceptional" because he was born into a village of the province of Bitlis in 1877, one of the poorest areas of the Ottoman Empire. "He was endowed with an unusual intelligence and rare wisdom that he used to enhance the religious and intellectual foundations of a popular movement that came to be seen by the secularist state as its archenemy."[39] He attended a madrasa under the direction of ulama and sufi shayks, and in his youth, "he continued his education independently, first by memorizing all of the standard works of the Islamic sciences." Apart from books of the Islamic science, he read a large number of books ranging from chemistry to geography.[40] Presumably, he must have been cognizant of the findings of the modern sciences and the insufficiency of education in madrasa.

In 1907, he went to Istanbul to get "official support" for Medreset'üz-Zehra, a university that he dreamed of establishing. His arrival in the capital allowed him the opportunity to manifest his thoughts and abilities to other scholars there.[41] After victory in the Turkish War of Independence, he found himself at odds with the leaders of the new regime in Ankara and withdrew entirely from public life. During the Republican regime, he spent his life in different Anatolian cities, either in exile or in prison. When he was exiled in Anatolia, he had the chance to spread his thought to local people. The coming to the power of

38 Ibid., 88.

39 Ibrahim M. Abu-Rabi, "Editor's Introduction," in *Islam at the Crossroads: On the Life and Thought of Bediuzzaman Said Nursi* (Albany: State University of New York Press, 2003), XIII.

40 Şükran Vahide, "Toward an Intellectual Biography of Said Nursi," in *Islam at the Crossroads: On the Life and Thought of Bediuzzaman Said Nursi* (Albany: State University of New York Press, c2003), 2-4.

41 Şükran Vahide, *Islam in Modern Turkey: An Intellectual Biography of Bediuzzaman Said Nursi* (Albany: State University of New York Press, 2006), 33.

the Democratic Party (1950-1960) meant "the restrictions" on his works and "movement" were "lifted," the number of its readers and students expanded.[42]

As the old world system was collapsing, threating Islamic values and Muslim societies, he tried to "reinterpret Islam given current conditions" and to escape the threats to which Muslim societies were exposed. He focused on individuals and paved the way for the emergence of "a movement of faith" that attempted to convey "the message of Koran" to people. To do so, he published many works, collectively known the *Risale-i Nur* (epistle of light).[43] Actually, what he thought about evolution must be learned indirectly since his main fight was with materialist, not directly with proponents of evolutionary theories. The basic aim of his work *Tabiat Risalesi* (epistle of nature) is to prove the existence and unity of God removing the hazards of atheism. After the victory of the "Islam army" against Greece in 1922, he noticed that a movement of faithlessness was about to step into action in Ankara to take root among believers. He wrote in Turkish, not Arabic, in order that as many people as possible would read the epistle.[44] In a letter he wrote to the deputies of assembly, he stressed that only "religion and heart" had the capacity to revive Muslims. "Reason and science" were futile in their progress.[45]

Perhaps, Said Nursi strongly suspected aggressiveness of the secular political system in future. As a result, he was uncomfortable with anti-religious voices that explicitly appeared after the establishment of the Republican regime. He thought that a secular regime would increase the capacity of materialist thought to entrench itself in Muslim society. He thought of his writings as ghazi[46] because he was fighting atheism.[47] From his point of view, the building of a state by statesmen who entertained positivist and materialist thoughts would threaten the dynamics of Muslim society. Yet, his understanding of

42 Ibid., 305.

43 Fikret Karcic, "Risale-i Nur'a göre Kur'an'da Zaman, Tarih ve İnsan," in *Uluslararası Bediüzzaman Sempozyumu-V* (Istanbul: Yeni Asya Yayınları, 1991), 422-423.

44 Bediüzzaman Said Nursi, *Tabiat Risalesi*, prepared by Adnan Kayıhan and İlhan Atılgan (Istanbul: Ufuk Yayınları, 2012), 7.

45 Kara, *İslamcılık*, 398.

46 A title given to those who fight for Islam.

47 Şerif Mardin, *Bediüzzaman Said Nursi Olayı: Modern Türkiye'de Din ve Toplumsal Değişim* (Istanbul: İletişim Yayınları, 2002), 14.

Islam was not static. In fact, "Said Nursi was well aware of the importance of keeping Islamic tradition alive in the modern era." It was a serious question that Muslim societies would have to solve. He was a proponent of a "rapprochement between the Christian West and Islam" since he thought that "Islam was not an island" and needed to have "interaction with other worldviews and communities." On this point, he considered Islam a "faith," not a political agenda. Said Nursi is therefore different from other Islamic thinkers such as Muhammad Iqbal, Sayyid Qutb, and Hasan Benna who were in pursuit of Islam as a form of politics. "He was no longer interested in politics as a means of safeguarding Islam."[48]

As mentioned above, Said Nursi's thoughts about evolution can be inferred from his work, *Tabiat Risalesi* (epistle of nature), in which he summarized his approach to nature, though he referred to neither Darwin nor his theory. As mentioned above, his aim is to refute the ideas of materialist thinkers who use evolution to bolster their materialist worldview. In other words, he did not "explicitly discuss" Darwin's theory to explain "order in the world."[49] Ideas like evolution eliminate God's involvement in creation and substitute the rule of the universe and God with nature as the main actor in the world. For a pious Muslim person, acceptance of scientific theories might be an antireligious act. For this reason, Said Nursi tried to reconcile science and religion since he was aware of the importance of the natural sciences as well as their probable danger to Muslims.[50] However, he did not see these two fields as equal: science is inferior to religion.

His approach to natural issues was to analyze them within the scope of *kalam* (Islamic scholastic theology). Therefore, his arguments about nature were based on reasoning rather than scientific findings or direct observation.

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48 Ibrahim M. Abu-Rabi, "Introduction," in *Islam in Modern Turkey: An Intellectual Biography of Bediüzzaman Said Nursi* (Albany: State University of New York Press, 2005), xv.

49 Ian Markham, "Living Life in the Light of Death: A Conversation with Bediuzzaman Said Nursi," in *Theodicy and Justice in Modern Islamic Thought: The Case of Said Nursi*, ed. Ibrahim M. Abu-Rabi (Farnham, Surrey [England]; Burlington, 2010), 27.

50 Bekim Agai, Risale-i Nurlar'da Fen ve Dini İlimler," in *Uluslararası Bediüzzaman Sempozyumu-V* (Istanbul: Yeni Asya Yayınları, 1991), 288.

He never mentioned scientific theories like the evolutionary ones of Darwin or Lamarck. He argued that "nature itself is a complement of rules and laws formed by God… it is unacceptable that divine works descended from nature."[51] Attributing creation to nature is to associate others with God, which is a significant sin in Islam. In fact, nature itself is the product of divine will and it has neither the power nor will to rule. God has a monopoly on the creation and the rule of the universe.[52] Nature itself is proof of the existence of God. According to Said Nursi, Muslims sometimes absentmindedly use words promoting atheism. In order to protect them from this, he analyzed and criticized three ways of thinking. He is opposed to the desacralization of nature and organisms.

To begin with, reasons create organisms and matter, which he called evcedetü'l-esbab (the invention of reasons). He thought that attributing what happens in the world to reasons is meaningless and gives an example of pharmacy. He claimed that suppose there is a "pharmacy" where hundreds of "jars" of chemical substances are available. If one needs "a medicine," there must be a will to decide which substances are to be mixed and what amount should be used. There must be an able actor to prepare this "medicine," and there can be no "medicine" without him. That is, it cannot be prepared with "randomly" selected substances.[53]

With this analogy, he emphasized the necessity of a creator in the world, refuting the idea of a haphazard mechanism in nature. Second, Muslims sometimes think that organisms and matter are outcomes of spontaneous processes, which he called *teşekkele binefsihi* (self-formation). Nursi attacked this way of thinking.[54] He stressed the perfection of the human "body" by likening it to "a wonderful palace with 1000 domes." "In each dome of this palace,

51 Tabiat, Allah'ın koyduğu kanunların bütünü ve hülasası olmaktadır…Allah'ın eserlerinin tabiattan sudur ettiğini kabule imkan yoktur. Safa Mürsel, *Bediüzzaman Said Nursi ve Devlet Felsefesi* (Istanbul: Nesil Yayınları, 2010), 42.

52 Safa Mürsel, *Bediüzzaman Said Nursi ve Devlet Felsefesi* (Istanbul: Nesil Yayınları, 2010), 42-43.

53 Said Nursi, *Tabiat*, 10.

54 Ibid., 8.

stones are aligned and remain suspended in the air."[55] The human "body" is even "astonishing" than these stone domes.[56] In fact, like many others, Nursi uses "the perfection of the human body" to prove the existence of a super natural power.

Third, Said Nursi emphasized the capacity of nature to create organisms and matter, which he called *iktezathü't tabiat* (natural entailment). Blind agents, nature, or forces have no capacity to create and have no ability to think. Just as the sun's reflection and appearance on the earth are its direct outcome, organisms on earth are that of God. He told a story about why nature cannot be a creator

> In a lonely desert, a too savage man entered a magnificent palace decorated with the all artifacts of the civilization… He started thinking, saying that an insider entirely built this palace without foreign intervention… Then, he saw a notebook containing information about construction schedule, a fihrist of construction materials, and its administrative laws… As he completely associated the palace to the notebook, he turned his primitiveness into empty talks of fools, drunks, saying that it was this notebook that built, ruled, and decorated … this palace.[57]

Those who attribute the power of creation to the nature itself are like "the savage man in the palace." By telling this story, what Said Nursi tried to do was reveal insufficient capacity for reasoning. From his point of view, nature itself

55 O sarayın her kubbesinde taşlar, direksiz olarak baş başa vermiş, boşlukta durdurulmuştur. Ibid., 16.

56 Ibid., 16.

57 Issız bir çölde, medeniyetin meydana getirdiği bütün eserlerle donatılıp süslenen bir saraya çok vahşi bir adam girmiş… Vahşiliğinden ve ahmaklığından dışarıdan kimse müdahele etmeden bu sarayı her şeyiyle içeriden biri yapmıştır diyerek incelemeye başlamış… Sonra o sarayın yapılış proğramının, içindekilerin fihristinin ve idare kanunlarının yazılı olduğu bir defter görmüş. Sarayı tamamen bu defterle münasebetli gördüğünden bu sarayı inşa eden, düzenleyen ve süsleyen … bu defterdir diyerek ilkelliğini, ahmakların, sarhoşların saçma sapan konuşmalarına çevirmiş. Ibid., 25.

is "an art but not an artist, a mural but not a muralist … a law but not a lawgiver."[58]

Said Nursi was not opposed to the natural sciences, but he advocated a science that does not contradict Islamic teachings. He was cognizant not only of the benefits of science and technology, but also their potential dangers for Muslims.[59] To him, religion and science are not equal; the former is "superior" to the latter. Neither science nor philosophy can replace religion because their powers are limited to this world, while religion covers both earthly and eternal life. Science is "compliment" to religion and in need of it. Nursi pointed out that "even though positive sciences claim to be superior to religion, they do not have the names of Allah." Furthermore, "science is unable to create even a fly, which has a simple form in comparison to other organisms."[60] Actually, Said Nursi emphasized the irreplaceability of religion by comparing God and science in terms of creating capacity. Thus, his understanding of science is fundamentally various from that of positivists. When considering the discourse, he used in his epistles, science and especially the natural sciences possess a remarkable position because he tried to underpin his arguments with reference to nature.

His stance favors the principle "science for religion," since the basic aim of science, he argued, is to strengthen religion rather than to find the secrets of the earth. Science explains the environment in which human beings live, and in doing so, it must touch on creation. Without religion, science is dangerous for humanity. "The positivist understanding of science leads to atheism and deviance," but espousing only Islam is insufficient for a strong faith. Modern, Islamic education constitutes optimum channels to save Muslims from ignorance since "classical Islamic education" has difficulty providing modern scientific knowledge.[61] Believers should fulfill their duties and know God with the help of science. Said Nursi was in favor of the appropriation of science in an Islamic setting.

58 Ibid., 25-29.

59 Bekim Agai, "Risale," 295.

60 Ibid., 289.

61 Ibid., 285-291.

The essential point of Said Nursi's thought about nature is the creation and governance of the world by God. He made an effort to refute those who deny the existence of God with reference to nature. What Said Nursi tried is "to prevent the introduction of materialist thinking into Islamic culture." On this point, "the revival of Islamic legacy of Turks" was a necessary step to overcome materialist thought.[62] There are many Quranic verses stating that species emerged owing to the divine creation that neither organisms nor matters are eternal, and God gave rise to them. God has two ways to create. The first is to make something of nothing. For him, this is the providential work of God. The second is to reshape matter so that it has a new essence.[63] If an organism has a perfect order and precise balance in its body, this is a remarkable indication of its creation by God. Everyone must consider that this organism is the handiwork of a mighty creator because chaotic conditions cannot create such a spectacular organism.[64]

His legacy was the pioneer of an Islamic creationism that would flourish beginning in the 1980s when Islam would become a dominant factor in society. In particular, the *Nurculuk* movement, which was established by his followers, played a leading role having founded nationwide and worldwide educational institutions like private schools. This community felt uncomfortable with the teaching of evolution in schools, and wished that courses like biology should be taught by teachers faithful to Islamic religion. It started to establish schools and test preparatory school (dersane) across the country and became an important actor in Turkish education. They served as an influential anti-evolution lobby in the late twentieth century. This community started publishing a journal entitled *Sızıntı* (rivulet) in 1979 in which religious arguments about the origin of organisms were delivered. In addition, teachers belonging to this community prepared "alternative biology" books.[65] They mounted a

62 Mardin, *Bediüzzaman*, 20.

63 Mürsel, *Bediüzzaman*, 47.

64 Said Nursi, *Tabiat*, 12.

65 Ferhat Kaya,"Türkiye'de Biyolojik Evrim Kuramı Eğitimsizliği," *TMMOB Jeoloji Mühendisleri Odası Haber Bülteni* 1 (2013): 22-29 accessed 22 May 2015, http://www.jmo.org.tr/resimler/ekler/eaad3f40d73319e_ek.pdf?dergi=HABER%-20B%DCLTEN%DD

strong campaign against evolution not only in schools, but also in the media to prove that the nature is an indicator of the existence of God.

§ 4.2 The Refusal of Evolution

After criticizing materialism, some of the aforementioned intellectuals focused on the refusal of evolution. Emin Feyzi stressed the non-existence of teleological approach among materialist thinkers, concentrating on the evolutionary theories of both Darwin and Lamarck. Again, he scrutinized their works in terms of "divine teleology". Actually, the theistic interpretation of the universe requires teleological explanations for many subjects ranging from nature to society. He reached the conclusion that Lamarckian evolutionary theory is based on "adaptation to surrounding," while Darwinian theory advocates "mechanical coincidences" in order to understand "the world of organisms." Therefore, since Darwinian evolutionary theory conflicts with "divine science and will," it is not a fruitful method for comprehending nature. Emin Feyzi found Lamarckian theory favorable since it provided a proper context to consider "the world of the organisms" from a teleological point of view.[66] Nevertheless, this does not mean that Feyzi supported Lamarck, simply that he regarded Lamarck lesser evils.

Emin Feyzi criticized both Lamarck and Darwin by citing the example of the origin of "birds." He examined the reasons why "lizards" do not evolve into "birds" and concluded that the environment in which "lizards" lived cannot be an actor in the making of "wings" since it has no ability to create an organ within the body. In addition, he stigmatized as "mad" those who argue that birds grew "wings" by jumping in the course of time. He added that if an organism is not created to fly, it is not possible to accept that it could fly by jumping and running. Both necessity and task are worthless in the making of wings. Later, he started to question the Darwinian view of the origin of birds. If a lizard is unfit to adapt to its environment, it becomes extinct, it does not evolve. Instead of growing wing, lizards have much stronger legs. Life struggle

66 Ülken, *Çağdaş Düşünce*, 418-419.

does not lead to the appearance of a new species. Remarkably, maybe ironically, he used the principle of survival of the fittest to attack to the Darwinian explanation.[67] In doing so, he tried to prove the weakness of Darwinian evolutionary theory. Furthermore, he accused Darwin of forming evolutionary theory to refuse "the creation of man from clay."[68] Therefore, he did not believe in the scientific motivation behind Darwin's effort.

After the explaining on why birds did not originate from lizards, Feyzi continued to focus on winged animals. He attempted to disprove the claim that "some birds near the North Pole, resembling chickens, dive into the water to find food and obtained webbed feet in the course of time - becoming new species - like ducks and geese."[69] Yet, his opposition to this claim is superficial and rudimentary; he only attributed the making of webbed feet to divine power. He did not account for them comprehensively.

Emin Feyzi accepted that the environment where a species lived is influential, but it could not lead to the formation of a new species. For example, sunlight darkens hair, while damp air helps both hair to grow. The influence of environmental conditions is limited to this, and it cannot transform one organ into another. What is more, he overlooked the physiological and the anatomical reaction of organism to environmental factors and asserted that the same environment has to bring about the same results. He said

> though both horse and cattle eat grass and live in the same climate and environment, the former has a single hoof, the latter has a cloven hoof… Horses were created for running very much… cattle are given cloven hooves only to step properly. [70]

67 Emin Feyzi, *İlim ve İrade* (Istanbul: Bedir Yayınevi, 1997), 42.

68 Ibid., 49.

69 Ibid., 44.

70 At ile öküz otlarla beslendikleri, aynı iklimde aynı ortamda yaşadıkları halde, önceki bir tırnaklı, ikincisi ise iki tırnaklıdır. At çok koşmak için yaratılmış … öküz ise yalnız ayaklarını sağlam basması için iki tırnakla techiz edilmiştir. Emin Feyzi, *İlim ve İrade*, (Istanbul: Bedir Yayınevi, 1997), 46.

This is why they have various toes. He added that Darwin's idea is incorrect since "species remain the same" even if they undergo a profound change in the course of time. Its change or differentiation does not lead to "the emergence of a new species," and evolution does not take place.[71]

Emin Feyzi alleged that during the creation of the organs of the body, their use and purpose are taken into consideration. The organs serve certain purposes. In fact, this is "compatible" with Darwin's views, but Darwin's mistake is "the consideration of nature" as the main actor in the making of organisms. Darwin thought that nature had the capability of "motion, activity, and consciousness," by arguing that it selected the useful organs in accordance with the purposes of a species. One of Emin Feyzi's criticisms was concerned with the sexual selection. Like the principle of natural selection, sexual selection does not lead to the emergence of a new species. The capacity of this kind of selection is limited, and the only thing it can do is "to improve the sexual features of a given species."[72] He examined the main pillars of Darwinian evolution and found it scientifically unreliable.

In his book, Emin Feyzi touched on the conflicting aspects of the Darwinian and Lamarckian views to refuse the idea of evolution of organisms, suggesting that there should be unity among the ideas of those who advocate evolution. Although Lamarck accepted both "useful" and even "harmful" organs in the bodies of organisms, Darwin embraced the idea of natural selection. Again, while Lamarck accepted that "giraffe eat the leaves of tall trees as its neck is long."[73] Darwin rejected this idea arguing nature's role in the selection of long-necked giraffes due to their apparent advantage in finding food over short-necked ones.[74] These conflicting ideas illuminate the incoherence of evolution and the conundrum of the evolutionist.[75] Feyzi believed that materialists' goals are to prove the absence of God and undermine the reliability of

71 Ibid., 47.

72 Ibid., 48-52.

73 Zürefanın boynu uzun olduğu için yüksek ağaçların yapraklarını yemektedir. Emin Feyzi, *İlim ve İrade* (Istanbul: Bedir Yayınevi, 1997), 51.

74 Ibid., 51.

75 Ibid., 41.

religions. They "invented theories" in accordance with these goals. "All happenings in universe are art works of the almighty creator."[76]

As a religious man, Mehmet Emin Feyzi believed in the invalidity of evolutionary theories and tried to refuse their basic principles, using religious arguments, indicating points that he regarded incoherent. He always believed in the God's involvement in the world. He was cognizant of the antitheological implications of evolutionary theories, and as a result, his ideas can be interpreted as a safeguard against these theories.

İsmail Fenni (Ertuğrul) also criticized evolution. His criticisms to the idea of organic evolution can be classified into five categories. First, İsmail Fenni, like Emin Feyzi, supported teleological explanations for the origin of species and thus rejected any contingency in the creation of organisms. The argument that human beings emerged as a product of contingencies is "fallacious," and nature itself was no capable of selecting humans. İsmail Fenni gave the example of the reproduction of organisms and claimed that they have to find mates of the same organism to reproduce. If "any change" takes place to its body, it would need to find an organism that had undergone "the same change" for a new species could emerge. In fact, all the anatomical and physiological peculiarities had to be the same for the reproduction of two organisms. Coincidence is not a determining factor, and organisms cannot find mates without the help of God.[77] Any coincidental change in a member of a species has to take place in another member of the same species for that new species to persist through reproduction.[78]

While explaining the reproduction of organisms, he does not speak of the principle of sexual selection. Indeed, his criticism with respect to the reproduction of organisms is based on reasoning rather than a questioning of sexual selection in light of scientific findings in biology and other disciplines. Even though he received an education from the Lisan Mektebi (Language School) and took English lessons[79] he may not have read *The Origin of Species* and *The Descent of Man*. He probably learned biological evolution by reading the

76 Kainatta cereyan eden bütün olaylar … yüce yaratıcının sanat eserleridir. Ibid., 15-16.

77 İsmail Fenni Ertuğrul, *Materyalizmin İflası ve İslam* (Istanbul: Sebil Yayınları, 1996), 77.

78 Bolay, *Ruhçu ve Maddeci*, 232.

79 Ülken, *Çağdaş Düşünce*, 425.

secondary literature on the biological evolution and the works of materialist thinkers. Human beings would observe the process that some species evolved a change in nature.

Second, İsmail Fenni was suspicious of the duration required for evolution. He thought that if some species obtained a kind of qualification in case of environmental "change," human beings could observe this process. In fact, he supposed that if nature had the capacity to bring about a new species we would have chance to observe it.[80] As the age of the earth was just 50 million years, there had not been enough time for the evolution of species to take place.[81] In other words, he recognized the reality that there had to have been a billion year for evolution and those geological findings contradicted biological ones. While studying on evolution, Charles Darwin got preoccupied with this issue[82] since for evolution to take place, it would require a much longer time period than 50 million years. İsmail Fenni seems to have followed the latest discussions in geology about the age of earth, which was a hotly debated issue among scientists at the end of the nineteenth and beginning of the twentieth centuries. Nevertheless, İsmail Fenni was aware of nature's influence on species and did not reject it. He said,

> It is a fact that the rabbits in the temperate climates of northern and central France are stronger, taller, and darker compared with the ones living southern France and the rabbits of Mediterranean climate in general. When rabbits in Africa are considered, it was stated that Algerian rabbits are not even half size of European rabbits…However, observations show that this influences is not strong enough for transforming a species into another species.[83]

80 İsmail Fenni, *Materyalizmin*, 78.

81 Bolay, *Ruhçu ve Maddeci*, 236

82 Joe D. Burchfield, *Lord Kelvin and The Age of the Earth* (Chicago: University of Chicago Press, 1990), 70; G. Brent Dalrymple, *The Age of the Earth*, (California: Stanford University Press, 1991), 397.

83 Fransa'nın kuzeyindeki mutedil iklimle, merkezindeki tavşanların güney tarafının ve daha umumi olarak Akdeniz ikliminin tavşanlarından daha kuvvetli, daha boylu, daha tüylü ve bunların renginin boz ve koyu olduğu gerçektir. Afrika'ya geçilince Cezayir tavşanlarının

Lamarck himself did not recognize nature as an agent that leads to changes in organisms, and he claimed that there had to be necessity for the making of new organs.[84]

This does not mean İsmail Fenni supported Lamarckian evolutionary theory. What he tried to do was to refute the idea of evolution by comparing the views of outstanding evolutionary scientists. Moreover, he opposed the Lamarckian understanding of the making of new organs in body because the idea that the needs of an organism could create new organs within its body was irrational.[85]

Third, İsmail Fenni questioned the instincts of animals, criticizing the Darwinian view that instincts come about through a "coincidental, and gradual" process. He said that regardless of how often animals exhibit a behavior, it is not possible for acquired traits "to pass on to offspring." Instincts did not "gradually" emerge and perfectly existed "from the beginning."[86] On this point, İsmail Fenni did not evaluate Darwinian evolutionary theory on the merits of principles like natural selection and ignored the argument that nature itself eliminates animals whose traits do not bring them any advantage for survival and reproduction. Some of his criticisms are based on reasoning, not only on religious sources.

Fourth, İsmail Fenni emphasized that fossils do not provide proof of evolution since some in the uppermost strata of the earth belong not only to simple, but also "complex organisms."[87] Therefore, from his point of view, it cannot be argued that all organisms in the world evolved from simple to complex forms. There is no direct relationship between fossils that have been found and the arguments for evolution. Actually, he was aware of the fact that geological findings provided one of the most important proofs for evolution, and missing fossils of an organism led to complicated problems. Today's creationists often

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boyunun, Avrupa tavşanlarının boyunun yarısını geçmediği … beyan olunuyor. Lakin müşahedeler bu tesirin öyle bir nevi, büsbütün başka bir neve değiştirecek derecede derin olmadığını göstermektedir. İsmail Fenni, *Materyalizmin*, 76.

84 İsmail Fenni, *Materyalizmin*, 76.

85 Ibid.

86 Ibid., 79.

87 Ibid., 81.

accuse evolutionists of not having the necessary fossils to support their theories. From their point of view, the co-existence of the fossils of complex and simple species disproves the idea of biological evolution.

For his fifth and last criticism, İsmail Fenni mentioned the idea of a common ancestor, one of the hotly debated points of evolutionary theory. The claim that human beings and monkeys have a common ancestor is a serious problem since human beings are deemed a special organism. Having a common ancestor with an animal implies the dethronement of humans from the center of the universe. He compared two animals to refute the idea of a common ancestor. While a "parrot" can speak after a little education, monkeys, which is said to be a close relative of humans, cannot say even a single word. Later, he emphasized a difference between humans and monkeys, comparing their newborn babies. He pointed out that monkeys always act with their "instincts" and that after "a short period" their newborn babies are able "to meet their own needs." It takes respectively "long time for newborn humans" to meet their own needs. Furthermore, "the newborns of monkeys" are much "stronger" those of humans. This reality does not result from the fact that humans show affection for their babies, because monkeys have affection for their babies, too. Affection and caring for them does not mean rearing weak babies. In fact, the differences between their babies proves the reality that humans and monkeys are distinct organisms.[88] Fearing its materialist implications, he was opposed to the idea of a common ancestor, which devalued humankind. He argued that claiming that humans descended from animals is an evil idea. It jeopardizes the foundations of "friendship" and "fraternity" among humans. These evil ideas lead humans to forget their value as human beings - their duties and responsibilities - and increases "poverty and disaster instead of enhancing their welfare" Scientific progress must be for sake of humans, but evolutionary theory degrades them to the level of "quadruple animals."[89]

Like many anti-Darwinists, İsmail Fenni believed that humans should not consider themselves a developed form of monkey; they have been placed over animals. Thus, humans should make the best of their place, be conscious of

88 Bolay, *Ruhçu ve Maddeci*, 237-238.

89 İsmail Fenni, *Materyalizmin*, 97-98.

their "honor," not live "senselessly" as if they were "quadrupeds" and bear in mind that of all the organisms of the world, human beings have a unique character and a special mission.[90] In fact, he believes in the superiority of humans over other organisms. İsmail Fenni feared the moral and social implications of evolution since it displaced humans from their exalted position, which was a common fear among opponents of evolutionary theories.

Apart from Mehmed Emin Feyzi and İsmail Fenni, Ahmed Hilmi attempted to refute various pillars of biological evolution. Since his main fight was against materialism, he strongly criticized Ernst Haeckel, one of the most important sources of materialist thought in the late period of the Ottoman Empire and an influential intellectual among many members of the Young Turks. Haeckel played a leading role in the introduction of materialism in the Ottoman Empire due to his comprehensive physiological views.

Ahmed Hilmi's ideas about evolution became more apparent in his book *Allah'ı İnkar Mümkün müdür*? (Is the denial of God possible?). The focal point of his criticism is the evolutionary ideas of Haeckel rather than those of Darwin and Lamarck. From his point of view, the implications of evolutionary theories might lead to "the denial of a creator" and "materialist intellectuals exploit their theories to bolster their philosophies."[91] His criticism of Haeckel is put together of a number of common points. First of all, Haeckel's explanation of the origin of human beings by dividing the development into phases is wrong because there is no intermediate form "between protoplasm and fish." Indeed, the lack of necessary fossil evidence disconfirms his idea of gradual evolution. The essential points of Haeckel's ideas are based on "supposition" rather than scientific observation or experimentation. "He provides so explicit information about customs and eating habits of imaginary and nonexistent ape which he called anthropoid that they were friends for many years."[92]

90 Ibid.

91 Ahmed Hilmi, *Atatürk'ün Hayatını Değiştiren Kitap: Allah'ı İnkar Mümkün müdür?* (Istanbul: Yakamoz Araştırma, 2008), 143.

92 Antropoid adını verdiği hayali ve var olmayan kuyruksuz maymun adetleri ve yeme tarzı hakkında o derece açık bilgi veriyor ki sanki yıllarca birlikte olduğu bir arkadaştan söz ediyor. Ibid., 129-132.

Second, Ahmed Hilmi questioned the intellectual capacity of Ernst Haeckel, concluding that he had an intermediate level of intelligence and discernment and that he pursued a reputation. He thought that Haeckel told lies to persuade his audiences. For instance, in one of his books, he showed a picture of gibbon (biologically categorized as ape) as an example of monkey. In addition, he made changes to "a picture of a bat" and presented it as a different animal. In fact, Ahmed Hilmi directly accused Haeckel of manipulating scientific evidence and presenting suppositions as scientific truth. Haeckel had no suspicion of the foundations of Darwinian theory.[93] Ahmed Hilmi opposed Haeckel's scientific method and knowledge.

Third, Ernst Haeckel, Ahmed Hilmi argued, made a serious mistake by attributing creativity to nature.[94] In fact, this is a common accusation made against proponents of evolution. Like İsmail Fenni Ertuğrul and Mehmet Emin Feyzi, Ahmed Hilmi severely criticized the idea of replacing God with any agent such as nature for force, rejecting this idea out right. What he opposed was the use of evolution to deny the existence of God, but not evolution itself. Looking for scientific proof of atheism within the evolutionary theories is the mistake Haeckel made.[95] Ahmed Hilmi kept the scientific basis of evolution in his mind, but the evolutionary argument for the origin of life was not scientifically acceptable to him.[96]

Importantly, Ahmed Hilmi thought that Haeckel's comprehensive explanation did not benefit from scientific fields such as chemistry and anthropology, and as his intellectual capacity was limited, he drew "wrong and childish" conclusions.[97] Therefore, Ahmed Hilmi found Haeckel's arguments unreliable and thought that he did not have sufficient qualification. When comparing Ahmed Hilmi with the other intellectuals mentioned above sections of this chapter, he has relatively a distinctive place because his criticisms are raised

93 Ibid., 135.

94 Ibid., 121.

95 Ibid., 143.

96 Neşet Toku, *Antimateryalist*, 81.

97 Ahmed Hilmi, *Atatürk'ün*, 130.

against not only Haeckel's thought but also his personality and intellectual background. Furthermore, in some cases, Ahmed Hilmi even insulted him.

It must be stressed that Ahmed Hilmi rarely used hadiths and Koranic verses to bolster his ideas about evolution since their use is much more suitable to prove the fallacy of materialist thought. It is striking that he borrowed the criticisms of some European scientists like Karl Vogt to make his argument more convincing and prove Haeckel's thought nonsignificant.[98]

The conservative thinker, Mehmet Ali Aynî (1869-1945), criticized Ernst Heackel due to his evolutionary views. He gave lectures in the faculty of divinity and military school. He was worried about the deterioration of religion in social life in Turkey and praised the establishment of faculty of divinity. [99] He did not oppose the idea of biological evolution, arguing that "when entering a museum of natural history, progress and transformation from simple to complex, from deficient to perfect in the chain of creatures was highly clear."[100] However, he did not consider human beings to be ordinary organisms and labeled them as the most honorable of creatures.[101] He drew a sharp line between animals and humans, emphasizing the superiority of the latter. From his point of view, Haeckel's claim that human descended from apes is fallacious. [102]

§ 4.3 A Hot Debate on the Reconciliation of Islam and Evolution

In 1914, Ömer Faruki wrote a book (*Tenkid-i Muhik* [fair criticism]) on Ernst Haeckel's monist philosophy.[103] It generated a heated discussion on the relation of evolution and Islam between Ömer Faruki and Aksekili Ahmed

98 Ibid., 133-134.

99 İsmail Arar, "Mehmet Ali Aynî," In *İslam Ansiklopedisi* (Istanbul: Türkiye Diyanet Vakfı, 1991), 247.

100 "Bir tarih-i tabii müzesine girince mahlukat silsilesinde basitten mürekkebe, nakıstan mükemmele doğru olan seyir ve terakki pek barizdir." Kara, *İslamcılık*, 56.

101 Ibid.

102 Ibid., 59.

103 Ömer Faruki, *Tenkid-i Muhik* (Dersaadet [Istanbul]: Kanaat Matbaası, 1330 [1914])

Hamdi.[104] The latter prepared an open letter and published it in *Sırat-ı Müstakim* (straight path). Later, he wrote letters to him criticizing his arguments that human had tendency to be an organism like monkey in the beginning. Ömer Faruki and Ahmed Hamdi discussed Darwinian evolutionary theory rather than Lamarckian one. Actually, Ahmed Hamdi accepted the evolution of humankind in the course of history, but his idea of evolution was cultural or social rather than biological.[105] He was extremely angered by Ömer Faruki's attempt to find a kind of evolutionary proof in Koran. Actually, their discussion was essentially about the interpretation of several verses of the *Surah Al-Insaan* (Man) in the Koran and based on a difference in *tafsir* (Islamic exegesis). Thus, their discussion generally concerned various interpretations of some verses in the Koran and does not pay attention to scientific findings such as fossils.

Ömer Faruki interpreted the first verses in a way such that evolution did not contradict with Islam. In these verses, it is written that "Was there not a period of time when man was nothing to speak of? We created man from a drop of mingled fluid to put him to the test. We gave him hearing and seeing."[106] He came to conclude that human beings evolved over the course of a long time, but Aksekili Ahmed Hamdi opposed it since other verses of Koran do not corroborate this idea. The twelfth, thirteenth and fourteenth verses of the *Surah Al Mu'minun* (Believers) are about the creation of man. That is,

> We created man from an essence of clay, then We placed him as a drop of fluid in a safe place then We made that drop into a clinging form and We made that form into a lump of flesh and We made that lump

104 Aksekili Ahmed Hamdi was one of the leading religious scolar during the early Republican era. He became the third director of the Directorate of Religious Affairs (Diyanet İşleri Başkanlığı). For detail information: Süleyman Hayri Bolay, "Ahmed Hamdi Akseki," *İslam Ansiklopedisi*, v.2 (Istanbul: Türkiye Diyanet Vakfı, 1989),293.

105 Aksekili Ahmed Hamdi, "Tenkid-i Muhikin Cevabı ve Anlaşılmayan Noktalar 1," *Sırat-ı Müstakim 7*, No.180 (26 Safer 1330 AH [30 March 1908]): 374-376.

106 *The Quran*, trans. M. A. S. Abdel Haleem, New York: Oxford University Press, 2005, 401.

> into bones, and We clothed those bones with flesh, and later We made him into other forms.[107]

Also, one hadith says: "Each one of you collected in the womb of his mother for forty days, and then turns into a clot." Ahmed Hamdi asserted that these verses and this hadith cannot be assumed to indicate similarity between man and monkey. No one should infer the idea that in the process of time man acquired a number of his traits. These verses might be proof of the transition from clay to man, but not one from monkey to man.[108] Ahmed Hamdi thought that the lives of Adam and Eve was the beginning of human history and it is unreasonable to say that they were like monkeys. He was sure of the fact that Islam contradicts biological evolution. Adam was "one of the greatest prophets" in human history and Islam does not allow us to imagine him as a creature like a monkey.[109]

The second point of Ahmed Hamdi's criticisms for Ömer Faruki's book are concerned the implications of evolutionary theory. Indeed, he argued, the theory assumes that the nature of human being is "savage" and has an animal origin even though humans are special organisms. According to the Koran, "the foundation of humanity is not savage and its nature is based on perfection, the apparent proof of which is Adam." From the Islamic point of view, evolutionary claims to the nature of human beings are unacceptable. It is apparent that the evolutionary view of the origin of organisms is meaningless since considering the development of an organism from bottom to top is neither scientifically nor religiously reasonable. The verse "And of His signs is that He created you from dust; then, suddenly you were human beings dispersing" is proof of how humans appeared on earth. Ahmed Hamdi not only gives proof from the Koran but also emphasizes the ideas of great mufassirs (authors of *tafsir*) such as Fahreddin-i Razi who asserted that man was directly created as human, not as an animal, and denied the evolution of organisms.[110]

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107 Ibid., 215.

108 Aksekili Ahmed Hamdi, "Tenkid-i Muhik Sahibine Açık Mektup," *Sırat-ı Müstakim* 7, No. 177 (5 Safer 1330 AH [9 March 1908]):328.

109 Ibid., 327.

110 Ahmed Hamdi, "Tenkid-i Muhik Sahibine," 327-328.

Then, Ahmed Hamdi concluded that the origin of humans is Adam and that the progress of humans from his time forward is "a miracle." He wholeheartedly believed in this truth.[111]

Actually, it is reasonable to label İsmail Fenni as a soft-liner opponent to evolution because he claimed that if scientists "prove" that humans "descended from" animals, religion will not be "a hindrance" to the acceptance of scientific reality because the religion represents truth itself. In case, evolution is confirmed, Islam will reinterpret many issues such as the nature of humans and their relation to other organisms. Indeed, this is the power of God.[112] As İsmail Fenni is a relatively open-minded thinker, he is not against teaching evolution in schools provided teachers mention both the positive and negative aspects of it. The idea of evolution will not be detrimental to the teleological interpretation of organisms. What is more, looking for truth and escaping from it can be evaluated as contradictions: if evolutionary theory gets rid of its "hypothetical" character and becomes truth, it will be accepted as an indicator of "divine power." As a matter of fact, Islam accepts all "well-proven" scientific knowledge. After criticizing biological evolution, he pointed out that there might be reconciliation between scientific findings and religion itself. One of the points İsmail Fenni mentioned in his studies is the attitudes of Darwin and Lamarck toward religion. He said that both had belief in God[113] and considered changes in organisms as "the outcome of divine will."[114] In fact, his knowledge of the life of Darwin - who sometimes had doubts about religion and was said to be agnostic – was insufficient.[115] İsmail Fenni asserted that although Darwin and Lamarck did not have negative attitude toward religion, materialists exploited their theories to support their atheistic interpretation of life. Indeed, Darwinian evolutionary theory, he argued, is much more

111 Ahmed Hamdi, "Tenkid-i Muhikin," 374-376.

112 İsmail Fenni, *Materyalizmin*, 95.

113 Bolay, *Ruhçu ve Maddeci*, 238.

114 İsmail Fenni, *Materyalizmin*, 99.

115 John Hedley Brooke "Darwin and Victorian Christianity" in *the Cambridge Companion to Darwin*, ed. Jonathan Hodge and Gregory Radick (Cambridge: Cambridge University Press, 2009), 205.

concerned with the changes that organisms undergo in the course of history rather than "the origin of life." In other words, he stressed that the answer to how life started in the beginning is not the focal point of Darwinian theory.[116]

§ 4.4 Banned Books

The number of books and journals in the Ottoman Empire went up enormously at the end of the nineteenth century and the beginning of the twentieth century. "Printing and publishing had a special place in the cultural and intellectual life" in the empire. Many people took advantage of "the developments" in print culture, and their worldviews were influenced tremendously by printed materials. Even though "the number of books produced was low compared to Western countries," its rise was considerable.[117] The state began to develop control and "censorship mechanisms" over printed and published materials and implemented several regulations such as the *Matbuat Nizamnamesi* (Press Regulation) of 1864 and the *Matbaalar Nizamnamesi* (Printing Regulation) of 1888. Notably, control and censorship concerning the circulation of books crystallized during the reign of Abdülhamid II. Without the permission of the Minister of Education, printing a book was banned.[118] Thus, publishers had to undertake the approval of the state, leading to a strict control mechanism. This control meant supervision of the circulation of knowledge within the society.

The Hamidian regime played a dominant role in the intellectual life of the empire. It was difficult for political ideas to spread within its borders. Apart from materials printed in the empire, all books and journals "crossing the empire's border" were subject to be under censorship mechanisms because they

116 İsmail Fenni, *Lügatçe,* 163-165.

117 Johann Strauss, 'Kütüp ve Resail-i Mevkute' Printing and Publishing in a Multi-Ethnic Society," in *Late Ottoman Society Intellectual Legacy*, ed. Elizabeth Özdalga (London; New York: RoutledgeCurzon, 2005), 227-229.

118 Cevdet Kudret, *Abdülhamid Devrinde Sansür* (Istanbul: Milliyet Yayınları, 1977), 5.

could threaten "the state, society, and religion."[119] "Many words (anarchism, liberty, socialism, democracy, etc.) were deemed subversive. When such words did found their way into a dictionary, its translators had to shift the meeting to a harmless form." During the process of translation, translators had to winnow out these words from the translated text.[120] In addition, teachers had to be careful when assigning books to their students. A teacher of the Albanian language, Hristo Sani, was dismissed from his school for assigning a book that conflicted with Islamic teachings.[121]

Books containing harmful knowledge for the Ottoman state, society, Islam, and morality had no chance of being printed.[122] The regulations prioritized the preservation of the well-being of the state and the harmony of society. Censorship officers in the Ministry of Education and the Minister of Interior had the authorization to determine inappropriate publications, which Ottomans called *muzır neşriyat* (obscene publication). In addition, printed materials were supposed to reflect positively on the sultan and public officials. During the Hamidian era, newspapers had to inform public about "the commercial and industrial developments, the increase in agricultural productivity, and the well-being of the sultan." They were to abstain from mentioning personal accusations about public officials, "some geographical names like Armenia, and the assassinations of foreign statesman." What is more, censorship officers insisted the authors to use "favorable words" and avoid "ambiguous words" in their writings. In addition to these prohibitions, mentioning the aforementioned practices was banned. That is, Ottoman readers received censored knowledge and news, but did not know that it had been censored.[123] The print culture of the empire was in accordance with the political needs of the state. It had a considerable control on the circulation of news and knowledge.

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119 Ebru Boyar, "The Press and the Palace: The Two-Way Relationship between Abdülhamid II and the Press, 1876–1908," *Bulletin of SOAS* 69, No: 3 (2006): 423.

120 İpek Yosmaoğlu, "Chasing the Printed Word: Press Censorship in the Ottoman Empire, 1876-1913," *The Turkish Studies Association Journal* 27, No: 1-2 (2003):22.

121 PMOA, MF.MKT 1147-24 (21 M 1328).

122 Fatmagül Demirel, *II. Abdülhamid Döneminde Sansür* (Istanbul: Bağlam Yayıncılık, 2007), 92.

123 Ibid., 55-61.

However, the list of banned publications was so extensive that it contained not only political books, but also novels. In fact, the list of harmful books (*kütüb-ı muzırra cetveli*) were too long and relatively surprising.[124] In fact, neither Darwin's studies nor his name appears on archival documents even though there are many that mention materialism, Ludwig Büchner and Ernst Haeckel. The primary concern of censorship was generally materialist thinking rather than Darwin's theory. Thus, the second one was not a primary concern.

During the Hamidian regime, books on materialism were regarded as harmful for Muslim society. *Ulum-ı Nokta-i Nazarından İnsan* (Human from a scientific viewpoint) on humankind, written by Ludwig Büchner, was banned due to content that was thought to harm religious teachings.[125] In addition, Rıza Tevfik (Bölükbaşı), who was a remarkable philosopher at the late period of the Ottoman Empire, was accused of having books on Darwinism when he underwent through an interrogation. Nazım Paşa, the head of the *Zaptiye* (Police) department, warned him that such materialist readings might culminate in the denial of the existence of God.[126] As a high-ranking state officer, he was worried about implications of the materialist interpretation of life, which had the capacity to bring about corruption, degeneracy, and anarchy in the empire. As a result of this negative attitude to materialist and Darwinist materials - many books, many of which ignored the divine will, offering materialist views of universe and organisms - were banned. Felix Le Dantec's *L'atheisme* (İnkarü'l-Vahid) and Ernst Haeckel's *Les Enigmes de L'Universe* (Mimarü'l-Kainat), *Origine de L'Homme* (Menşe-i İnsan) and *Religion et Evolution* (Edyan ve Tekamül) were regarded as subversive books. Their main goals were considered to be anti-religious and they were thus stigmatized as harmful books (*kütüb-ı muzırra*).[127] In particular, the Hamidian regime played a leading role in the prevention of promotion of materialist thinking. When Hacı (Ismail) Ferid Efendi, the director of the land register and tax (*ma' tahrir*

124 Demirel, *Sansür*, 173-183; PMOA, (Prime Ministry Ottoman Archives), MF. MKT 641-8 (27 Ra 1320 [3 August 1902]).

125 PMOA, MF. MKT: 244-19 (11 B 1312).

126 Rıza Tevfik, *Biraz da Ben Konuşayım* (Istanbul: İletişim Yayınları, 1993), 302.

127 PMOA, MF. MKT 1002 (14 Ca 1325).

ve virgü müdiri) in Aydın, wrote a book (*İbtal-I Mezheb-i Maddiyun* [the refutation of materialist doctrine]) to refute materialism, he presented its one copy to the palace.[128] Also, an Arab-Ottoman author, Husayn Al-Jisr (1845-1909), had dedicated *Al-Risala al-Hamidiyya fi Haqiqat al-Diana al-lslamiyya wa-Haqiqat al-Sharia al Muhamadiyya* (A Hamedian Essay on the Truthfulness of Islamic Religion and the Truthfulness of Islamic Canon Law) in 1888. He wrote this book to ward off the dangers of materialism and irreligion in general and to demonstrate that the findings of modern science were in harmony with Islamic teaching.[129]

The censorship mechanism attempted to prevent those who knew foreign language from reading the publications that were assumed to attack religious teachings.[130] Their common point was that they left no room for divine involvement in the explanation of organisms and the universe. Notably, none of Darwin's books was banned, and the aforementioned books were mainly based on materialism. It is apparent that the main concern of the Ottoman regime was materialism rather than Darwinian theory of evolution.

The police sometimes made investigation to detect the sale of banned books and needed to inform inspectors at the Ministry of Education.[131] Strict control over the circulation of printed materials did not mean that no one read banned books. There was a secular, westernized audience in the Ottoman Empire owing to the European-style educational institutions like Mekteb-i Tıbbiye, so there was a demand for banned books on materialism.

128 PMOA, Y. MTV 106-60 (13 R 1312).

129 Marwa Al-Shakry, *Reading Darwin in Arabic, 1860-1950* (Chicago and London: The University of Chicago Press), 137.

130 PMOA, ZB 596-95 (14 H 1323)

131 PMOA, MF. MKT. 394-60 (28 Z 1315)

5

The Zenith of Scientism: The Early Republican Era of Turkey

After the Balkan Wars, the First World War, and the Turkish War of Independence, the Republican regime was proclaimed and a nation state was to be built. The Kemalist rulers regarded modernization as an urgent matter of survival. In fact, the establishment of modern Turkey marked the continuation of the reform movements of the Ottomans, but there was a greater chance to materialize modernization plans because of the abolishment of political powers such as sultanate and caliphate as well as the elimination of some Unionists who challenged new political regime. Despite the removal of these old actors from political life, many continuities are apparent. The political cadres of modern Turkey inherited the legacy of Ottoman modernization and the Young Turks. The values of Enlightenment and positivist thought deeply influenced the Kemalists as it had the Young Turks. However, the reforms carried out during the early Republican period were distinctive due to their "radical implementation" and content. Their policies were a further step in the Ottoman modernization movement. They materialized many of the reforms which the Young Turks had dreamt to save the empire. As a result, it can be

easily put forward that the "Kemalist revolution marked a dramatic and radical civilizational change."[1]

The main aim of the new regime was to create a modern state and society based on secularism and nationality. The Kemalist cadre wished to build a completely new order through a sharp disruption of the Ottoman past. In particular, secularism was of utmost importance for the new state's to goal of modernizing all fields of life. It was a considerable pillar of Kemalist ideology. Many reforms of the early Republic were directly drawn from a secular worldview. The abolition of the sultanate and caliphate, the abolition of the functions of sheikh'ul-Islam, the establishment of the Directorate of Religious Affairs (Diyanet İşleri Başkanlığı), the nationalization of education with the Law on Unification of Education (Tevhid-i Tedrisat Kanunu) and secular laws like the Turkish Civil Code (Medeni Kanun) can be evaluated in the context of secularism. Although the new constitution of 1924 acknowledged Islam as the official religion, his claws was removed from the constitution four years later. What is more, secularism became one of the non-amendable articles of the constitution in 1937. The Kemalist cadre was cognizant of that "the elimination of Islamic power and legitimacy" was a necessary to strengthen their political power.[2] As the political climate was suitable for taking secular steps, the new state materialized these plans. The role of Islam in decision-making by the state and in public affairs decreased remarkably. In fact, those who had received their education in modern Ottoman schools were familiar with secular ideas. In the nineteenth century, the Ottoman state had secularized some aspects of its education and judicial systems, and a secular-minded, Western-oriented generation emerged.

Kemalist rulers attempted to remove Islam from the public sphere and confine it to the private sphere. They thought that an effective modern state did not need religion to get secure popular support. Mustafa Kemal stigmatized Christ as "a weak ruler" since he used religion "to uphold" his political power. The removal of Islam from the public sphere created "a legitimacy vacuum" in the regime. After the abolition of the sultanate and caliphate, there

1 Umut Azak, *Islam and Secularism in Turkey: Kemalism, Religion and the Nation* (Leiden: I. B. Tauris, 2010), 9-10.

2 Ibid.

was a deficiency of "popular allegiance." As for the formation of a national, secular identity, rough scientism had no capacity to fill this gap and to serve as a new state ideology. Mustafa Kemal tried to fill it with "a new civic religion buttressed by a number of cults."[3] He emerged as the leading politician of the new country and became an apparent in public sphere.

Islam was not a main guidance for the Kemalist regime, and science was their most important guiding. Science was to play a considerable role in the process of building of a modern country and changing civilization. The political identity that the state wished for its citizens to adopt was based on scientific principles. The optimum way to modernize was to benefit from scientific findings rather than religious dogma. In this respect, science had to reorganize itself in order to serve the needs of the state.[4] The Kemalist regime strove "to instill a scientific point of view in the minds" of its citizens. While the sultanate and caliphate claimed legitimacy from supernatural sources, the new regime benefited from science. However, this far-reaching modernization was no easy process since infusing scientific thought into the minds of citizens was extremely "troublesome."[5] They overvalued the role of science in the construction of a Westernized, secular, national society on the ruins of the Ottoman Empire. Science had such a significant role in Turkey that the early Republican period can be described as the zenith of scientism. Thus, the transition from otherworldliness to worldliness was crystallized further. One of the ideas behind the revolution was that humans could control their own "destiny" and "environment." This idea was "a peculiarity of the West after the Renaissance" and its most apparent form was prevalent among European philosophers in the Eighteenth century.[6] They believed that the problems about society could be solved with the help of science.[7]

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3 Şükrü Hanioğlu, *Atatürk: An Intellectual Biography* (Princeton; Oxford: Princeton University Press, 2011), 160-161.

4 Suavi Aydın, "Cumhuriyet'in İdeolojik Şekillenmesinde Antropolojinin Rolü: Irkçı Paradigmanın Yükselişi ve Düşüşü," in *Modern Türkiye'de Siyasi Düşünce: Kemalizm*, ed. T. Bora, and M. Gültekingil (Istanbul: İletişim Yayınları, 2002), 344.

5 Niyazi Hüsnü, "İlim ve İnkılap," *Ülkü* 2, No.8 (September 1933): 115.

6 Şerif Mardin, *Türkiye'de Toplum ve Siyaset Makaleler 1* (Istanbul: İletişim Yayınları, 1990), 140.

7 Ibid., 160.

While building a new state, society, and individual, the Republican regime had to reinterpret human history from a secular point of view. The appearance of humankind on earth could not be explained by religious narratives like the story of Adam and Eve. As science was the leading guide, the origin and spread of humans had to be explained by scientific findings. Darwin's theory left no room for God in the scientific interpretation of nature and organisms. This was what Kemalist rulers needed. In this respect, the theory of biological evolution offered an optimum scientific toolkit for reinterpreting human beings. In other words, the Kemalist regime desired a past based on scientific and secular principles and received support from Darwinian theory, who provided an overarching and well-proven theory for understanding the origin of organisms and their evolution on earth. Darwinian theory of evolution and the scientism of Kemalist rule accorded with each other and the state itself promoted this theory. After consolidating their political power, Kemalist rulers would implement a cultural revolution.

During the 1920s, Turkey focused on political, and legal reforms and tried to resolve the problems left in the aftermath of the Treaty of Lausanne. However, Turkey's Westernization in cultural areas gained momentum as time passed. Education had utmost importance. In 1920, Rıza Nur, the Minister of Education, ordered the establishment of local museums to exhibit botanical and animal artifacts in high schools.[8] Three years late, Mustafa Necati, "the first Minister of Education of the Republican period, invited foreign experts like John Dewey" to Turkey to help the new state implement radical reforms to the Turkish education system and curriculum.[9] During his ministry, reform of the curriculum of primary schools was carried out.[10]

With respect to the educational policy of the 1920s, the Kemalist rulers paid special attention to matters of infrastructure in education since they had inherited a country that had suffered extremely destructive wars. Thus, building new schools, training teachers, preparing new regulations, and

8 Rıza Nur, *Hayat ve Hatıratım 3* (Istanbul: Altındağ Yayınevi, 1967), 626.

9 Etienne Copeaux, *Tarih Ders Kitaplarında (1931-1993) Türk Tarih Tezinden Türk İslam Sentezine* (Istanbul: Tarih Vakfı Yurt Yayınları, 2000), 78.

10 M. Rauf İnan, *Mustafa Necati: Kişiliği, Ulusal Eğitime Bakışı, Konuşma ve Anıları* (Ankara: Türkiye İş Bankası Kültür Yayınları, 1980), 103.

disseminating education all over the country required significant effort. For the creation of national and secular identity, education was deemed vital.

As well as dealing with primary and secondary education, the young Republic embarked on an enterprise to establish institutions of higher education. The only university that modern Turkey had inherited from the Ottoman Empire was Darülfünun in Istanbul, but Kemalist rulers had a negative opinion of this educational institution, accusing it of insufficiently supporting the National Struggle. Thus, due to this disappointment, it was "harshly criticized" in the newspapers.[11] "National institutions" had to be established as alternatives to Darülfünun, which evoked the Ottoman past. Before 1923, a commission called the Heyet-i İlmiye (Commission of Science) was founded, and it planned to establish a faculty of social sciences, consisting of twelve institutes. The names of these national establishments - like Milli Hukuk Enstitüsü (Institute of National Law), Milli Edebiyat Enstitüsü (Institute of National Literature) and Milli Tarih Enstitüsü (Institute of National History) – are important. In doing so, the commission emphasized the national character of their educational policy.[12] In fact, the stress on the nation in the titles of these institutions indicates the educational policy of the new regime. While Darülfünun evoked the plurality of the Ottoman Empire, the aforementioned institutes were symbols of homogenous national identity.

The plans of the Heyet-i İlmiye did not materialize because the Milli Hars Heyeti (Committee of National Culture [1923]), whose members were outstanding intellectuals of Turkey, established a faculty of law in Ankara in 1925, but not a faculty of sociology. In fact, sociology fell into disfavor in terms of the institutionalization of the educational system. Moreover, when the Dil ve Tarih-Coğrafya Fakültesi (Faculty of Languages, History, and Geography) was founded, it included no department of sociology. As time passed, the state itself sponsored and promoted anthropology, which took the place of sociology in Turkey.[13]

The Kemalist cadre aimed to create "a strong, homogenous political structure" based on Turkish nationalism, and they suppressed "opposing" views. In

11 Toprak, *Darwin'den*, 93.

12 Ibid., 74-75.

13 Ibid., 94-95.

doing so, an authoritarian regime was constructed around a single party, the Republican Peoples Party (RPP). In order to build the new state, the party exploited "the legitimacy" from "military victory" in the National Struggle. That is, the victory strengthened its power. "Opposing groups" were eliminated from the political area and their ideas were partly wiped away. Kemalism became the leading ideology and the Republican Peoples Party monopolized politics. "All national resources" were mobilized to create a modern, national, secular country, but its political orientation was authoritarian, a political hallmark between the world wars. The party emulated many authoritarian regimes including the leading fascist countries of Europe: Italy and Germany, as well as the Soviet Union.[14]

All means were exploited for the sake of the young Republican regime, but the role of history cast by the Kemalist cadre was much more stunning. A secular, national reinterpretation of the past was a vital necessity. The field of history lived up to the expectations of the Kemalist regime. History had the capacity to reinforce the making of national solidarity.[15] In this respect, one of the main motivations behind the historical studies were political; purely scientific endeavors remained in the background. The role of history was considerably functional and met the expectation of the Kemalist rulers.[16] Thus, practices in the reform of educational system had to be radical since the educational system inherited from the Ottoman Empire needed to undergo profound changes. In particular, the curriculum was of utmost importance for creating the new citizen. Education was essential for raising a generation that would embrace the secular, national basis of the Kemalist regime.

§ 5.1 Reading Evolution in School Textbooks

The approach of the state to history can be seen in an analysis of school textbooks. The Kemalist cadre paid significant attention that school textbooks

14 Büşra Ersanlı Behar, *İktidar ve Tarih: Türkiye'de Resmi Tarih Tezinin Oluşumu (1929-1937)*, (Istanbul: AFA Yayıncılık, 1996), 91-98.

15 Zafer Toprak, "Türkiye'de Tarihyazımının Evrimi," *TÜBA Günce*, No. 37 (Kasım 2007): 28-30.

16 Zafer Toprak, "Erken Cumhuriyet Döneminde Türkiye'de Tarihçilik,"in *Bugünün Bilgileriyle Kemal'in Türkiye'si - La Turquie Kamâliste* (Istanbul: Boyut Yayıncılık, 2012), 176.

reinterpret Turkish history from a secular point of view. This discourse and interpretation was mainly based on three features. To begin with, the Kemalists found Islam to be "a tarnish on Turkish culture," and they desired to leave no room for religious interpretations of human nature. Instead of accepting the sense of belonging that religious groups and communities provide the Republican regime sought to eliminate religious notions from the secular, national identity that they imagined. Second, the Kemalist rulers endeavored to restore the role of Turks in the history of civilization in order "to efface the hatred of the West toward Turks". Without doing so, Turkey could not be a respected country in the world. In addition, they had to prove the cultural contributions of the Turkish race to world civilization. Social sciences had to respond to the challenge made by Western scholars about the inferiority of the Turks. Last, the new regime had to create "a historical basis for its existence in Anatolia."[17] As mentioned above, Anatolia was of utmost importance in their minds, and they had to find historical ties to the past of this land. Complementing their political and military control over it, a historical narrative would reinforce the existence of new country.

While scrutinizing the school textbooks published during the 1920s, it is apparent that there was a considerable continuity between the last years of the Ottoman Empire and the aforementioned decade. The authors of textbooks often classified human beings within animal species or emphasized similarities between humans and apes. However, they did not abstain from mentioning the elevated place of humans among organisms and their uniqueness.[18]

17 Copeaux, *Tarih*, 36.

18 Ali Galip, *Musavver Tarih-i Tabii* (Konstantiniyye [Istanbul]: Matbaa-i Ebuzziya, 1310 AH [1893]), 7; Ebu'l-Muhsin Kemal, *Mebâdi-i Ulum-ı Tabiiyeden Tarih-i Tabii ve Tatbikatı* (Istanbul: Kasbar Matbaası, 1326 AH [1910]), 51; Satı, *Mebâdi-i Ulum-ı Tabiiyeden Tarih-i Tabiiye ve Tatbikatı* (Dersaadet [Istanbul]: Kitaphane-i İslam ve Askerî, 1328 (1912), 95; Fuad Münir, *Eşya Dersleri* (Istanbul: Kitabhane-i Hilmi (Orhaniye Matbaası, 1339-1342 AH-Rumi [1923]), 25; Ahmed Refik and Mehmed Emin, *Hayvanat* (Istanbul: Türk Matbaası, 1927); Ebu'l-Muhsin Kemal, *Yeni Usül Eşya Dersleri* (Istanbul: Şirket-i Mürettibiye, 1337 Rumi [1921]), 48; Mahmud Esad bin Emin Seydişehri, *Tarih-i Tabii* (Istanbul: Cemal Efendi Matbaası, 1313 AH [1895]),307.

The transition from otherworldliness to worldliness in school textbooks did not take place overnight. The approach of the Kemalist rulers to history crystallized during the 1930s. With respect to the textbooks, the 1920s were a transitional period and the historiography in this era was a continuation of that of the Young Turk period. Students benefited from textbooks focused on the French Revolution. But developments between the world wars had a tremendous impact on historiography. Europe was discredited for political and economic reasons, so many textbooks focused less on Europe. The rise of authoritarian regimes, the Great Depression (1929), and the fall of democratic regimes led many to question the contemporaneous historiographical approaches. In addition, the values of the Enlightenment was also discredited.[19] Thus, there was a strong correlation between the spirit of the time and historiography.

During the late period of the Ottoman Empire and the early Republican era, Ali Reşad and Ahmet Refik (Altınay) were among the authors of history textbooks. In 1919, Ali Reşad wrote a general history entitled *Tarih-i Umumî* (General History) that contained religious teachings. While he explained the formation of the universe in a secular way, he included the story of Adam and Eve to demonstrate the spread of humankind all over the world. He said that

> after God created Adam and Eve and dismissed them from heaven, they had four children, who were one son, one daughter and one twin, from their marriage. Of the sons, Qabil was born first, then Habil was born... Noah's third son was Seth (pbuh). He was the seventh generation descendant of Noah. During Noah's time, a flood took place to punish and banish humankind. He was commanded to build an ark by God. Except him, he took his wife, his sons with their wives, and two males and two females of all animal species on board. It rained for forty days and forty nights…His ark came to rest on Mount Judi. There were

19 Toprak, "Erken Cumhuriyet," 176-177.

> eighty people on board else. But, all perished. Humankind descended and spread from Noah's (pbuh) three sons, Ham, Shem, and Japheth.[20]

According to Ali Reşad, the appearance of humankind on earth took place in accordance with what was explained in the holy book. However, ten years later in 1927, he omitted these religious stories from *Umumî Tarih* (General History) due to the new curriculum of the Ministry of Education. He wrote a short introduction about the appearance of humankind on earth, but his approach to the issue was neutral. Even though he removed the story of Adam and Eve, he did not add the theory of evolution to the textbook. He wrote that

> when the first humans emerged on earth is not known. However, it is precise that humans existed on earth in ancient times. Human remains found in soil and rock layers that had never been excavated, miscellaneous tools and weapons made of stone prove it. The scholars of geology divided the various layers of the earth into various eras such as the first second and third etc. and have estimated the time of each era. According to these estimates, humankind existed at the beginning of the fourth geological era, in short BC 1000.[21]

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20 "Cenab-ı Hakk Hz. Adem ve Havva'yı tekvin ve cenneten ihraç ettikten sonra ikisinin izdivacından biri erkek biri kız ve ikiz olmak üzere 4 evlad hasıl oldu. Erkeklerden önce kabil sonra habil doğdu… Hz. Adem'in üçüncü oğlu olan Şit aleyhiselamdır. Hz. Nuh aleyhiselamın yedinci batındaki ahfadındandır. Hz. Nuh'un zamanında hak yolundan çıkmış olan ben-i ademi kahr ve tenkil için tufan vukua geldi. Hz. Nuh taraf-ı rabbaniden bir gemi inşaasına memur oldu. Kendisinden başka zevcesini, oğullarıyla bunların zevcelerini, her cins hayvandan ikişer erkek ikişer dişi gemiye aldı. Sonra 40 gün 40 gece yağmur yağdı…Hz. Nuh'un gemisi Cudi dağında durdu. Hz. Nuh'un gemisinde kendi kavminden seksen kişi daha vardı. Lakin cümlesi helak oldu. Ben-i beşer-i Nuh aleyhiselamın Nuh'un Yafes, Sam, Ham namındaki üç evladından tekessür ve intişar etti." Ali Reşad, *Tarih-i Umumî* (Istanbul: Şirket-i Mürettibiye Matbaası, 1335 Rumi [1919]), 14-15.

21 İlk İnsanların ne vakit nerede zuhur ettiği malum değildir. Yalnız çok eski zamanlarda yeryüzünde insanların bulunmuş oldukları muhakkaktır. Şimdiye kadar hiç kazılmamış toprak ve taş tabakalarında bulunan insan kemikleri, taştan yapılmış muhtelif aletler, silahlar bunu ispat ediyor. Jeoloji alimleri arzın muhtelif tabakalarını birinci, ikinci, üçüncü ilh muhtelif devirler diye ayırmışlar ve her devrin zamanını tahmini olarak tayin etmişlerdir. Bu

Another leading historian, Ahmet Refik (Altınay), left no room for religious stories in his textbooks. Like Ali Reşad, he does not touch on the evolution of species. Egyptian civilization was the starting point for his history of the world.[22] In fact, "the creation of Adam and Eve and the flood myth" were present in history textbooks up to the early years of modern Turkey. Religious stories gradually came to be excluded from these educational materials. Turkey did not escape "the anti-clerical trend" in the world. After the dramatic destruction caused by the First World War, many values - including those of religion – were reconsidered and the aforementioned religious stories in these textbooks were discredited. While textbooks since 1908 called Muhammad "Hazret-i Peygamber-i Zî-Şan Efendimiz" (Our Glorious Prophet Muhammad), he was called "Hazreti Muhammed" in the 1920s and simply "Muhammed" in the 1930s. The history of Islam was taught from a secular point of view, and teachers decontextualized the subject from its "holiness."[23] These choices of names illustrate the secularization of textbooks in Turkey. Thus, the transition from traditional historiography to a national, secular was significantly and apparent by this point.

History books concentrating on world history gained intellectual popularity in the 1920s. Mehmed Fuad (Köprülü), one of the leading historians of Turkey at the time, noticed this trend in historiography. He said that many remarkable books on "general history" and the development of humankind were published in major European countries such as France and Germany. In the historiography of Turkey, Mehmed Fuad expected a similar intellectual dynamism to be led by the state, which unfailingly promoted "nationalism and national culture."[24] In fact, he guessed the role of the new state in the intellectual life of Turkey correctly, since the cultural revolution that the Kemalist cadre led in the 1930s played a leading role in the formation of a new history. A

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tahmini hesaplara göre insan dördüncü devrin iptidasında yani milattan even bin sene önce mevcut idi. Ali Reşad, *Umumî Tarih*, v.1 (Istanbul: Yeni Matbaa, 1928), 5.

22 Ahmet Refik, *Umumî Tarih* (Istanbul: Devlet Matbaası, 1929); Ahmed Refik, *Umumî Tarih: Tarih-i Kadîm-Kurun-ı Vusta* (Istanbul: Milli Matbaa, 1926).

23 Toprak, *Darwin'den*, 255-258.

24 Köprülüzade Mehmed Fuad, "Fransa'da Neşredilen Son Umumî Tarihler Münasebetiyle," *Hayat* 1, No.4 (23 Kanun-i Evvel 1926): 2-3.

national history was a vital necessity for them and it needed to be written by a Turkish rather than a foreign historian. While he praised the writing of these kinds of general histories, he advocated the writing of history books by Turkish historians. What he emphasized is that Turks should write their own history.

Mehmed Fuad did not mention Herbert George Wells (1866-1946), a famous English author who wrote *The Outline of History: Being a Plain History of Life and Mankind* (1920). As a magnum opus in scope and perspectives, the book was an intelligent aggregate of "all that had made the world what it is today - physically, civically, industrially, commercially, socially, educationally, and religiously." His writings appealed to many readers around the world[25] and later influenced Mustafa Kemal. Wells believed that history was more than the stories of great men such as kings and soldiers, and he advocated a historiography that covered other scientific areas such as geology and biology. His history writing was fundamentally interdisciplinary.[26] He attempted to tell the whole story of life and humankind so far as it was known at the time. In fact, the reason he wrote such a voluminous book was because of "the tragic happenings" of the time. There was "the need for a common knowledge of the general facts of human history throughout the world." He argued that "there could be no peace and prosperity without common historical ideas."[27] It can be inferred that was pursuing a practical goal in writing this book, and he believed that a total history could make the peoples of belligerent countries more civilized. In addition, he dreamed of the idea that "the possible unification of the world into one community of knowledge and will" could assure world peace.[28]

His book was overarching, covering a wide range of topics from art to geology. It included forty-eight pages on the appearance of humankind on earth and had a considerable further look at their biological evolution. One chapter

25 "H.G. Wells's Outline of History," *The Journal of Education* 94, No.21 (December 8, 1921): 578.

26 Mehmet Alp Fazlıoğlu, "Dünyaların Savaşında İki Müttefik: H.G. Wells ve Atatürk," http://bonpurloryan.com/2016/07/11/h-g-wells-ataturk-dunyalari-savasi-tarih-9316/

27 H. G. Wells, *The Outline of History: Being a Plain History of Life and Mankind* (London: Cassell, 1920), v.

28 Ibid., 601.

of *The Outline of History* covers natural selection and changes to species. He says that "no organism goes on living for ever… Every species of living is continually again. Some of the individuals will be stronger and better suited to succeed in life in some way than the rest." The latter have less chance to get food and fight against enemies. Thus, they will be eliminated because of a natural rule: the survival of the fittest. When conditions in nature change, "these species change … generation by generation, and old sort of individual that used to prosper and dominate will fail and die out." After this change, the new organisms appear. After complaining about natural selection, Wells emphasized the vitality of water in organic life. "No creature can breathe and digest its food without water." Water was always "home and medium" of life.[29]

Mustafa Kemal was fond of reading history books, but they were mostly limited to the books of the French Republican historians like Charles Seignobos. "The only exception was Wells' world history." He interpreted the appearance of humankind from a scientific viewpoint instead of on religious stories, and in so doing, he wrote their history from a broad perspective. He introduced "many subjects which were unknown to many historians at that time, such as the first organisms and the change of species." In fact, Wells' book provided a historical toolkit that Mustafa Kemal needed in the 1920s when he was imagining a secular, national Turkish identity.[30] Wells had a tremendous impact on history in Turkey. The reason he was a key figure in the formation of new history textbooks is the impression Mustafa Kemal had about *The Outline of History*. When he read its French translation, *Esquisse de L'histoire Universelle*, "he instantly ordered its translation into Turkish." Thus, its volumes were "distributed" to various translators so that Turkish intellectuals could benefit from it and embrace a new understanding of history. "Professors, translators, the Ministry of Education and the government printing office" were ordered to play a role in its translation. However, as there was more than one translator, there were disharmony among the volumes of the Turkish

29 Ibid., 9-12.

30 Toprak, *Darwin'den*, 248.

translation of the book, but these problems were considered negligible.[31] Despite these minor problems, the translation popularized a secular approach to human history and Wells was a frequently spoken about in the milieu close to Mustafa Kemal. "He read quotations from the book and shared with his guests at Çankaya meals (Çankaya sofraları).[32] The Darwinian interpretation of the origin of organisms on which Wells touched in his book fitted well with Mustafa Kemal's secular worldview.

Mustafa Kemal's considerable interest in history can be considered the harbinger of cultural revolution. Reading history books was not a simple activity to enjoy in his free time. As a political leader who wholeheartedly believed in the fruitfulness of science, he pursued practical goals in the formation of a modern nation state. Religion had no capacity to do so because he thought that when religion was politicized, it became "deceptive."[33] Thus, the best way to form a modern nation state from the ruins of the Ottoman Empire was to base it on science.

Towards the end of the 1920s, the studies on history that Mustafa Kemal initiated produced "results and some historian published them in the form of note," but institutional developments took place only after the establishment of the Türk Tarih Tetkik Heyeti (Turkish Committee of History) within Türk Ocağı (Turkish Hearths).[34]After the committee carried out a historical research on Turkish history, it published "the voluminous *Türk Tarihinin Anahatları* (Outlines of Turkish History)." Nevertheless, the target group of the study was "elites" rather than the ordinary public, and "only one hundred copies were published."[35] The main motivation of the book was to prove the superior role of the Turkish nation in world history. Because Turkish people had "misinformation about their ancestors," they had difficulties in knowing their

31 Ruşen Eşref Ünaydın, *Atatürk: Tarih ve Dil Kurumları Hatıralar* (Ankara: Türk Tarih Kurumu Basımevi, 1954), 51.

32 Kitaptan bazı alıntıları sofrada okur ve misafiryleriyle paylaşırdı. Mustafa Kemal Ulusu, *Atatürk'ün Yanı Başında: Çankaya Köşkü Kütüphanecesi Nuri Ulusu'nun Hatıraları* (Istanbul: Doğan Kitap, 2008), 65-66.

33 Mardin, *Makaleler 1*, 165.

34 Ersanlı Behar, *İktidar*, 96.

35 Copeaux, *Tarih*, 39-40.

national identity. The goals of this committee were to clear out misinformation in history books and write "a national history."[36] The book touched on the appearance of humankind on the earth. This committee wrote that the fact that life was a product of natural and necessary physical and chemical processes without the intervention of any supernatural power must be accepted. In the book, it was emphasized that "the first link of life chain" existed in sea. "Life started on the surface of the mud or sand in a warm, sunny, shallow marsh, and from there, it spread to the beaches, open waters, and high seas. The first animal with eyes, teeth, and bones was a fish."[37] Reptilians were the significant animals which had bones. Their development and evolution culminated in "the first mammal," and then they evolved into more developed mammals. After these organisms, "the era of monkeys, apes and humans started."[38] This book illustrates that organisms evolved from simple to complex structure in the long course of evolution, as opposed to the story of Adam and Eve. The intelligence, comprehension, and strength of human kind came about over millions and billions of generations.[39]

This book had an interdisciplinary approach to history, but its intellectual and academic level was unsatisfactory. Even though it was not accepted as a textbook in the schools, it was precursor for *Tarih*, a four-volume history that would be written soon afterward.[40] "The Türk Tarih Tetkik Heyeti carried out a remarkable historical study despite its short life span. The Türk Ocakları and its journal,*Türk Yurdu* (Turkish Homeland), enormously influenced Kemalist elites in terms of historiography."[41] It and its periodical played a remarkable role in the making of a national historiography. The Kemalists inherited their

36 Türk Ocağı Türk Tarih Heyeti, *Türk Tarihinin Anahatları* (Istanbul: Devlet Matbaası, 1930), 1.

37 Hayat sıcak, güneşli sığ bataklık suda, çamur veya kum üzerinde başladı. Oradan sahillere ve açık sulara, denizlere yayıldı… gözü dişi, kemikleri olan ilk hayvan balıktır. Türk Ocağı Türk Tarih Heyeti, *Türk Tarihinin Anahatları* (Istanbul: Devlet Matbaası, 1930), 15-16.

38 Maymun, kuyruksuz maymun ve insan devrine girildi. Türk Ocağı Türk Tarih Heyeti, *Türk Tarihinin Anahatları* (Istanbul: Devlet Matbaası, 1930), 15.

39 Ibid., 15-16.

40 Ersanlı Behar, *İktidar,* 99.

41 Türk Ocakları ve yayın organı olan *Türk Yurdu* dergisi tarihyazımı notkasında Kemalist seçkinleri büyük ölçüde etkiledi. Copeaux, *Tarih*, 39.

intellectual legacy from the Türk Ocakları.[42] During the Young Turk era, "a literature on Turkish history" grew because of the journals. [43] The establishment of historical institutions was the zenith of the writing of national history. In fact, the intellectual orientation toward national history gained momentum because of the establishment of modern Turkey, which aimed to create a national, secular identity. The state itself had a considerable role in the promotion of this historiography.

After the Türk Ocakları were closed in 1930, a new establishment, called the Türk Tarihi Tetkik Cemiyeti (Society for the Study of Turkish History) was founded in 1931, the name of which changed to the Türk Tarih Kurumu (Turkish Historical Society, THS) in 1935. This society was patronized by President Atatürk himself.[44] Furthermore, other members of this historical society had close affiliations with the state.[45] The founder of modern Turkey, Atatürk, dealt with history so closely that he put forward the Turkish History Thesis (Türk Tarih Tezi). He disapproved of what "foreign" historians wrote about "the history of the Turks" and believed that Turks had to write their own history in order to rectify historical errors. He argued

> the motherland of the Turks was Central Asia. Turkish race have spread from Central Asia to West, Eastern Europe since the first ages and they brought their pure Turkish culture and lifestyle, and civilization to all the places they went. The indigenous peoples of these lands developed thanks to the Turks.[46]

State-sponsored historical studies and the thesis cannot be evaluated from a rudimentary perspective. They marked a cultural revolution, demonstrating the spread of Turks throughout the world. History was built on a much

42 Copeaux, *Tarih*, 39.

43 Toprak, *Darwin'den*, 246.

44 *İkinci Türk Tarih Kongresi* (Istanbul: Kenan Matbaası, 1943), XXXIII.

45 Copeaux, *Tarih*, 38.

46 "Türkleri anayurdu Orta Asya'dır. İlk çağlardan beri Türk ırkı Orta Asya'dan batıya değin, Avrupa'nın doğusuna kadar yayılmışlar ve her gittikleri yere de kendi öz Türk kültür ve yaşamlarını, medeniyeti, uygarlığı diğr tüm kıtalara Orta Asya'dan Türkler götürmüştür. Bu gittikleri yerlerdeki insanlar bu şekilde gelişmiştir." Ulusu, *Atatürk'ün Yanı Başında*, 64-68.

broader context.[47] Turks were such a developed nation that "they entered the Paleolithic age five hundred years before Europeans. While Turks in Central Asia used lumber and mine, other people lived in rock hollows." They were the founders "the Egyptian, Sumerian, and Mediterranean civilizations."[48]

Mustafa Kemal played a leading role in the nationalization of history, and institutional steps brought about a broad change in this field. Kemalist rulers became "the main producers of the discourse of history." They not only controlled the state but also part of the intellectual realm in Turkey. In particular, Mustafa Kemal was cognizant of the importance of a total historical view. The first work of the Türk Tarih Tetkik Cemiyeti was to prepare a new history textbook since "the transmission of the Turkish history thesis to the next generation was critical."[49] As a result, it prepared a four-volume history entitled *Tarih* (history) for high schools in 1931 which was published just before the First Turkish History Congress. Later, it prepared history textbooks for both primary and secondary schools.[50] There is a striking point about the authors who prepared this book. Many were closely affiliated with state: M. Tevfik (General Secretary to the President), Samih Rifat (Çanakkale deputy), Yusuf (Akçura) Bey (Istanbul deputy), Hasan Cemil (Bolu deputy), Baki Bey (colonel in the Ministry of War), İsmail Hakkı (Balıkesir deputy), Reşit Saffet (Kocaeli deputy), Sadri Maksudi (Şark-i Karahisar deputy), Şemseddin Bey (Sivas deputy), Şemsi Bey (a colonel in General Command for Mapping), and Yusuf Ziya (Eskişehir deputy).[51] The fact that these people were the authors of *Tarih* alone is evidence of the extent to which historiography in Turkey was nationalized.

The textbook was distinctive study in the Turkish educational system since it crystallized the transition from otherworldliness to worldliness. In a chapter introducing the history of humankind and earth, the authors emphasized mistakes in holy books. They argued that the age of earth was "millions of years, not six thousand." The earth detached from sun and its appearance changed in the course of a long time. When the first life started in the sea, "there was

47 Toprak, *Darwin'den*, 371.

48 Toprak, "Erken Cumhuriyet," 178.

49 Copeaux, *Tarih*, 40.

50 *İkinci Türk Tarih Kongresi* (Istanbul: Kenan Matbaası, 1943), XXXIII.

51 *Tarih I* (Istanbul: Devlet Matbaası, 1932), VII-VIII.

no soil on the surface of the earth." After centuries, organisms in the seas started to move onto land, but these animals were amphibious. As the earth's surface was "marshland," it was not difficult for these organisms to adapt to their environmental conditions. Life did not originate from any supernatural power, and natural conditions were the leading factors in the beginning of life.[52] It is apparent that major replaced God in the book. The earth was desacralized and divine will was excluded from the explanation of the first organisms.

As for evolution, *Tarih* was concerned about directly confronting holy books. It argued that "the last link of an organic chain was humankind… In fact, it was generally claimed that humans and big apes had common ancestors."[53] Their creation as separate organisms, which is argued in the holy books, was a point that it neither mentioned nor attempted to falsify. It explained the origin of humankind from a Darwinian perspective. It emphasized the fact that all organisms had evolved from simple to complicated organisms. Due to slow-moving evolution, humans as they presently exist appeared. The ancestors of humankind and of some reptiles lived in the same period a million year ago. These animals climbed trees easily and had the ability to hold onto things with their hands. As ancestors of humankind, they produced stone artifacts that prove their historical existence. In comparison with present-day humans, their bodies were coarsely structured. Even though natural selection was not clearly explained in this textbook, this Darwinian principle is present between the lines. The authors argued that when weather became colder 50 thousand years ago, "humans started to live in caves." However, some organisms similar to humans failed to adapt to this new climate, and "went extinct." The fittest organisms survived.[54] This evolutionary trend was apparent in other history books, as well. A preparatory book for middle school and high school exams was based on this perspective. It argued that "the first simple life forms started in the seas, and later organisms moved to the land. After a long period

52 Ibid., 3-5.

53 Hayat zincirinin son halkası insandır… Filhakika umumiyetle iddia olunuyor ki insanın ve büyük maymunların müşterek bir cetleri vardır. *Tarih I* (Istanbul: Devlet Matbaası, 1932),5.

54 Ibid., 6-7.

of evolution, animals and plants appeared. Humans are the last link of the animal chain. Nothing perishes in nature."[55]

As well as the origin of humans, the authors of *Tarih* touched on the emergence of religion. Instead of giving a divine explanation, they interpreted its origin in materialist terms. "It was understood that primitive humans were afraid of ancestors … they tried to please them after even death… Fear of ancestor gradually inconceivably passed to fear of tribal god."[56] The noble ancestors paved way for the emergence of a notion of divinity. Not only fear of ancestors, but also "epidemic disease" played a role in the making of fear among humans. As this notion was common, humans discovered sacred traditions. When language evolved, traditions, prohibitions, and religious ceremonies arose. Humans told "stories" about "themselves, their belief, and the world" to each other. All these common stories, traditions, and beliefs led them to establish "mental and emotional ties among humans themselves." This system of belief was called "religion." When humans started to live together as a community, they produced religion. At the beginning, humans had had no "notion of god." Religion was an outcome of a long period of evolution. "It was human intelligence that discovered notion of divinity and… its secrets."[57] The approach to the history of religions was based on absolute, anticlerical ideas, and divine arguments were explicitly eliminated. Instead of divine interpretations, a rational understanding of the universe and the origin of humans was the basis of the text.

Teaching a new history to students was a focal point for the Kemalist regime since historical knowledge that promoted a secular, national identity would play a leading role in the formation of the new type of citizen. *Türk Tarihinin Anahatları* (the outlines of Turkish history) was published in 30 thousand copies and distributed to teachers.[58] The book contained many maps

55 *Tarih El Kitabı* (Istanbul: Kainat Kitabevi, 1938), 6-7.

56 İptidai insanların atadan korktukları anlaşılıyor… Öldükten sora [sic.] bile onu hoşnut etmeğe çalışıyorlardı… Ata korkusu yavaş yavaş anlaşılmaz bir surette kabile allahı korkusuna intikal etti. *Tarih I*, 21.

57 Ülûhiyet mefhumunu bulan, bu mefumun sırlarını keşfeden …. insan zekasıdır.*Tarih I*, 21-24.

58 Toprak, *Darwin'den*, 246.

and pictures, and its physical quality was high. When compared to history textbooks published in the 1920s, its distinctive quality was "proof "of the attention paid to this study.[59] Also, many history teachers participated in the first and second Turkish history congresses of 1932 and 1937. These activities offered a fruitful opportunity for the new regime to teach the new curriculum to teachers who had the chance to hear from many outstanding scholars at one time.[60] Approximately 196 teachers from various parts of Turkey participated in the First Turkish History Congress (in 1932),[61] while 432 teachers participated in the second one (in 1937). What is more, history teachers from high schools like the Lycée Notre Dame de Sion were present.

During the 1930s, the Darwinian perspective was not limited to history textbooks. In other textbooks for different courses, Darwin became entrenched in the Turkish educational system. In addition to history textbooks, biological, geological, and geographical sources contributed to the trend. As a result, evolution became "an inseparable part of the textbooks" of the period.[62] In this respect, Faik Sabri (Duran), who was one of the translators of *The Outline of History*, wrote a remarkable high school geography textbook. The influence of Darwin was obvious. He built his arguments on Darwinian principles such as the struggle for existence and the idea of common ancestor. As he was one of the translators of the aforementioned book by Wells, he was familiar with such kind of topics. In a textbook of geography, he argued that animals were influenced by climate and in a struggle for existence. He added that organisms, "not capable of defending themselves through their poisons, tricks, and foul smells," were subject to extinction. They had no chance to survive, and only the fit ones did so. The most capable animals in terms of "survival" were those that could camouflage themselves in "their habitats."[63] Although he did not imply a struggle among humans, he paid attention to their origins. He stated

59 Copeaux, *Tarih*, 41.

60 Ibid., 46.

61 *Birinci Türk Tarih Kongresi* (Ankara: Maarif Vekâleti, 1932), VIII-XIII.

62 Toprak, *Darwin'den*, 326.

63 Faik Sabri, *Umumî Coğrafya Dersleri I*, (Istanbul: Kanaat Kütüphanesi, 1933), 337.

> it is guessed that humans or anthropoid creatures, which were the ancestor of humans, lived in the different parts of world toward the end of the third geological era. In the last century, Charles Darwin, Worthington Smith and Professor Osborn etc. carried out scientific study on the origin of humankind and their relationship with other organisms. Among scientists, it was the most well-accepted idea that humankind descended from simple ancestors like other mammals… The old human remaining having been found in the different parts of the world until now do not enable us to trace the changes from old anthropoid ancestors to present day humans.[64]

Faik Sabri (Duran) was aware of the lack of fossils to fully demonstrate the evolution of humans and emphasize the missing, intermediate forms. Even so, from his point of view, there were three important fossils of early humans. The first one was "a skull, some teeth, and thighbone discovered by Eugène Dubious," a Dutch paleoanthropologist. "The size of this skull" was smaller than that of a human, but bigger than that of chimpanzee. The fossil was of "a walking ape" called *Pithecanthropus Erectus*. In this respect, the point of view of geology textbooks was similar to that of geography textbooks mentioned above which also mentioned the bones of *Pithecanthropus Erectus*. This organism did not have the psychology of human beings, but resembled them. The second fossil, a jawbone, was found in Heidelberg in southwest Germany and was assumed to have belonged to a 250 thousand-year "semi-human." "Due to the size and thickness of the bone, it was understood that it was a strong organism." The last fossil was found in Sussex in south England. "Its bones marked a more developed organism." It was called *Eoanthropus*, which means

64 Üçüncü jeoloji zamanının nihayetlerine doğru dünyanın muhtelif yerlerinde insanların veya insanın ceddi olan insana yarı benzer mahlûkların yaşamış oldukları tahmin ediliyor…Son asır içinde Charles Darwin, Worthington Smith, Profesör Osborn gibi âlimler insanın menşei vesair mahlûklarla münasebeti meseleleri etrafında birçok tetkikler yapmışlardır. İlim adamları arasında en ziyade kabul edilen fikir, insanın sair memeli hayvanlar gibi daha basit bir sınıfa ait cetlerden inmiş olmasıdır…Dünyanın muhtelif yerlerinde şimdiye kadar bulunmuş olan eski insan bakiyeleri, eski yarı insan ceddinden bugünkü insanlara gelinceye kadar vukua gelen tahavvülleri sıra ile takip etmemize imkan vermiyor. Ibid., 344.

"first human." While explaining the evolution of organisms, Faik Sabri used the phylogenetic tree rather than a linear line of evolution. As time went on, the branches of this tree divided into different races (white, yellow and black…etc.).[65]

Faik Sabri (Duran), did not hesitate to argue that both humans, and apes descended from a common ancestor and that species were in conflict to survive. However, his evolutionary perspective can be labeled as neither completely Darwinist nor Lamarckist. He was sure that evolution occupied a significant place in the explanation of species and their diversity, but he failed to decide by which mechanism occurred. From his point of view, the evolutionary theories of both Darwin and Lamarck were based on "assumptions," rather than well-proven scientific facts.[66] The reason he remained prudent to decide what was the mechanism of evolution was due to the eclipse of Darwinism during the 1930s. In the history of science, Darwinian theory of evolution declined between the 1880s and 1930s. It was "supposedly obscured and discarded." Many scientists found it an "old-fashioned" interpretation of organic life.[67] Since Faik Sabri may have been confused about the mechanism of evolution, he preferred to espouse both evolutionary theories. At that time, many scholars were scrutinizing and reviewing evolutionary mechanisms and attempting to rectify these theories. As a result, the fact that the author of this geography textbook was confused is understandable. Apart from history and geography textbooks, biology and geology textbooks were extremely important in terms of the evolutionary tendency in the Turkish educational system. They demonstrated that biological evolutionary theories were entrenched in the curriculum.

In high school textbooks, Darwin was introduced as one of the great men in biology. "Much of the progress in this field" was owing to Darwin who had looked for the similarities and distinctions among organisms for twenty years.

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65 Ibid., 344-345.

66 Ibid., 346.

67 Mark A. Largent, "The So-Called Eclipse of Darwinism," Transactions of the American Philosophical Society, New Series, Vol. 99, No. 1, in *Descended from Darwin: Insights into the History of Evolutionary Studies*, 1900-1970 (2009): 3.

His contribution to science was undeniable.[68] However, Darwin's remarkable elevation in the textbooks did not mean Lamarckian theory of evolution was totally excluded. Ahmet Tevfik (Göymen ?), who wrote *Tabiiye Dersleri* (Biology lessons), introduced both evolutionary theories. He said

> the influence of environment leads changes in life of organisms… Habits require organ to change. While some organs might have be more active, others might atrophy… Teeth of many animals, like some animals that swallow their foods without chewing, atrophied.[69]

As well as the evolutionary theories of Darwin and Lamarck, Ahmet Tevfik paid attention to the origins of life on earth. There were five main theories about this issue. The first theory assumed that "life existed elsewhere in both the universe and on earth. Organisms themselves together matter. The former is as old as the latter." The second approach put forward that the first living creatures arrived on earth on "a meteoroid" from space. The third theory asserted that the first life came to the world on "cosmic dusts in a mixed and slow way," but many scholars disapproved this claim. The fourth theory was asserted by W. Preye who argued that organic creatures had existed since the very beginning. "Organisms existed even when the earth was a fireball." However, Ahmet Tevfik stated that this theory lacks well-proven scientific evidence and was based on "religious" belief.[70] This was a striking: even though the author favored materialist explanations for the origin of life, he covered a religious argument in his book. Even so, this was a negligible point; his entire approach to organic life favored scientific explanations. In fact, he prepared a preparatory book for the exams rather than a textbook.

During the late Ottoman Empire, there were a couple of scholars who attempted to accommodate science within Islamic culture and demonstrate that

68 *Yeni Biyoloji 1* (Istanbul: Devlet Matbaası, 1934), 6.

69 Muhitin tesiri uzviyetlerin hayatlarında değişmeleri yapar… Bu itiyatlar azanın değişmesini mucip olur. Bazı uzuvlar daha faal bazıları daha âtıl olur… Dişler bir çok hayvanlarda, mesela yiyeceklerini çiğnemeden yutan (karınca yiyen, balinalar gibi) bazı hayvanlarda domura duçar olmuştur. Ahmet Tevfik, *Tabiiye Dersleri* (Istanbul: Gazetecilik ve Matbaacılık T. A. Ş., 1934), 77.

70 Ibid., 159-161.

evolution was reconcilable with Islamic culture and Muslim societies. Ahmet Tevfik attributed the idea of evolution to Turkish philosophers. He traced its history back to Turks, who figured out the union of existence in nature. A Turkish thinker, İbrahim Hakkı (1699-1770) of Erzurum, opposed the idea of "the stability and creation of species." Before the outstanding evolutionists, he argued human descent from other organisms and touched upon their animals' ancestry.[71] Ahmet Tevfik tried to demonstrate that the Turks were long familiar with the idea of organic evolution.

A similar argument to Ahmet Tevfik's was espoused in the 1930s. In the Second Turkish History Congress, İsmail Hakkı İzmirli (1869-1946) who was a religious scholar in Darülfünun and retired from the İslam Tedkikleri Enstitüsü (Institute of Islamic Research),[72] argued that Turkish scholars (İbrahim Nazzam Belhî, Ebu Bekir Razî [Muhammad ibn Zakariya Al-Razi], and Ebu Nasr Farabî [Al-Farabi]) had concentrated on "the basis of reason and logic before famous philosophers such as Francis Bacon and Réne Descartes who laid the foundations of the new philosophy in Europe.[73] Furthermore, Nasîrüddin Tûsî and Mevlânâ Celâleddîn-i Rûmî, he claimed, were familiar with Darwinism. "Tûsî explained Darwinism broadly, while Mevlânâ stated the natural selection and the survival of the fittest, touching on the struggle for existence in a poetic way.[74] Many contemporaneous philosophical and scientific thoughts had been held by Turkish scholars for hundreds of years. In fact, İsmail Hakkı ignored that Darwin's theory was based on scientific observation and experiments rather than speculation. Mentioning struggle within a species and the role of nature does not amount to a scientifically acceptable theory. Thus, his evaluation of the Turks' contribution to the scientific legacy of the world was extreme.

During the early Republican period, there were two remarkable book about Darwin and his theory, namely, İbrahim Alaaddin's (Gövsa) *Büyük*

71 Ibid., 139.

72 Ali Birinci, "İsmail Hakkı İzmirli," İslam Ansiklopedisi 23, accessed February 17, 2017, http://www.islamansiklopedisi.info/dia/pdf/c23/c230257.pdf

73 İsmail Hakkı İzmirli, "Peygamber ve Türkler" in *İkinci Türk Tarih Kongresi* (Istanbul: Kenan Matbaası, 1943), 1026-1027.

74 Ibid., 1040-1041.

Adamlar Serisi: Darvin (the series of great men) and Galip Ata's *Darvin*. The first book is so short (only fifteen pages) that it can be called a booklet - rather than a book. İbrahim Alaaddin mentioned both Darwin's name and his theory, emphasizing its valuable contribution to science, not solely to biology. He said that "he saved philosophy and nature from a blind valley and proved that a clear, scientific consideration based on experiment could be applied to life…Darwin's views deduced from experiment and research demonstrated that all organisms descended from one origin."[75] The author explicitly challenged the religious narrative that human beings were created from clay, but he did not directly portray any of Abrahamic religions as a target. He said that

> life is an evolution. This evolution engendered non-fixed species. The main things brought about these species were natural section and struggle for life. Humans were not created from clay. They are included in the chain of animal kingdom. They appeared by evolving from chimpanzees. Darwin's ideas were not composed of imagined views. [76]

The second book, Galip Ata's Darvin, was a momentous step by the Ministry of Education because it was published by the ministry and the harbinger of the promotion of Darwin in the 1930s. It contained a brief biography of Darwin and summarized his theory. What made it momentous was "its publication by the state" rather than a private publisher.[77] In 1930, the ministry started publishing special books on great men such as Voltaire and Bismarck. Charles Darwin was selected as one of such men. The fact that the ministry published 3 thousand copies proved its importance for the natural sciences.

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75 Darvin felsefeyi ve tabiatı çıkmaz yoldan kurtarmış ve tecrübeye müstenid bir ilim telakkinin hayata tatbik edilebileceğini de ispat etmiştir… Darvin'in tecrübeden tetkikten çıkan nazariyeleri bütün uzviyatın bir menşe'iden inkişaf ettiğini göstermiştir. İbrahim Alaaddin, *Büyük Adamlar Serisi: Darvin* (Istanbul: Sebat Matbaası, 1927), 5.

76 Hayat bir tekâmüldür. Bu tekâmül gayri-müstakırr nev'ler vücuda getirir. Bu nevlerin husule gelmesinde esas olan şey tabii ıstıfa hayat mücadelesi. İnsan topraktan hulk edilmemiştir. Hayvanlar silsilesine dahildir. Şempanzeden tekâmül ederek husule gelmiştir. Darvinin bu fikirleri hayali nazarlardan ibaret değildir. Ibid. 6.

77 Ergi Deniz Özsoy, "Önsöz," in *Darvin-Galip Ata* (Istanbul: Bilim ve Ütopya Kitaplığı, 2011), 13.

As well as the aforementioned textbooks and Galip Ata's book, the Ministry of Education endeavored to coin Turkish words to curtail the use of Arabic and Persian words in Turkish. The Kemalist elites envisaged a secular Turkish identity, and language had a vital role in the nation-building process. The annihilation of the influence of Arabic and Persian was one aim of this language reform. The commission that modified the Latin alphabet in 1928 considered Arabic letters unfit for Turkish phonetics.[78] The Kemalist regime aimed not only to nationalize language but also to make the Turkish nation part of "Western civilization."[79] In ensuing decades, many Arabic and Persian words in fields such as science and politics were winnowed out of Turkish. The ministry suggested the word "evrim" (for evolution), instead of the Arabic-originated word "tekâmül."[80]

In the early Republican period, pedagogy was to serve "the nationalist ideology" and to live up to its expectations the nationalist, secular ideology.[81] Kemalist elites were cognizant of the vital role of education in the making of a generation that would wholeheartedly embrace the main principles of the regime. During the 1930s, they paid enormous attention to education. The spirit of the age deeply influenced pedagogy. "Authoritarian, nationalist, and militarist" sentiments were even realized in "children's literature." This process can be called "the political construction of childhood."[82] The Kemalist regime was trying to create a new generation that would embrace the main principles of the modern Turkey, and evolutionary ideas can be noticed in its pedagogy. A well-known pedagogue, İsmail Hakkı (Baltacıoğlu), paid attention to Darwinian and Lamarckian theories to have a better pedagogical approach. For him, evolution and development were identical. He benefited from both to understand child development. While examining the issue, he touched on

78 Hüseyin Sadoğlu, *Türkiye'de Ulusçuluk ve Dil Politikaları* (Istanbul: Istanbul Bilgi Üniversitesi Yayınları, 2003), 226.

79 Ibid., 294.

80 *İlk ve Orta Öğretim Tabii İlimler Terimleri ve Yeni Teklifler* (Ankara: Devlet Basımevi, 1939), 18.

81 Güven Gürkan Öztan, "Türkiye'de Çocukluğun Politik İnşası" (PhD. diss., Istanbul University, 2009), 113.

82 Ibid., 180.

discussions of what determined human traits – that is, the nature and nurture debate. Instead of adopting either of them, he argued that both environment and heredity play a role in child development. He looked at evolutionary theories to understand the influence of heredity. Primitive organisms appeared on the earth in "cellular form."[83] He stated that "life was subject to certain laws." Acquired traits are transmitted to "following generations" and that "new organs are the product of need." When an organ went "unused," it would "atrophy" over a long period. On the other hand, when an organ was used often, it would become stronger. The main mechanism by which they are transmitted is "heredity" itself. After elaborating on Lamarckian theory, he paid attention to Darwinian theory, mentioning natural selection and the struggle for existence.[84] Even though İsmail Hakkı accepted the transmissibility of acquired characteristics and natural selection, he did not overlook the benefit of education. Irrespective of the results of "environmental conditions," pedagogues had to educate children. They should not "dispraise" behaviors or thoughts of children. What he tried to demonstrate was that the negative outcomes of heredity and other biological factors could be eliminated through education.[85] Despite the fact that racist interpretations of human nature were prevalent in intellectual circles in the 1930s, he maintained a moderate attitude.

§ 5.2 Anthropology and Building the Nation State

In their attempts to build a nation state, "Atatürk moved away from sociology" and had a keen interest in anthropology.[86] As time went on, Émile Durkheim fell into disfavor, and the reputation of anthropologists like Eugène Pittard in Turkey became considerable. During the 1930s, anthropology became an assistant to the study of history and "it promoted geology and biology" that was based on evolutionary theories.[87] Anthropological findings such as the skulls

83 İsmail Hakkı, *İçtimai Mektep* (Istanbul: Semih Lütfü Sühulet Kütüphanesi, 1932), 39-40.

84 Ibid., 40-41.

85 Ibid., 53-54.

86 Toprak, *Darwin'den*, 73.

87 Ibid., 317.

of ancient humans required a certain level of evolutionary viewpoint. Without knowledge of evolution, it would be difficult to explain the biological development of humankind. In other words, the theories of evolution gave scholars of anthropology a better scientific tool. There were three fundamental reasons behind the Kemalists' enthusiasm for anthropology. To begin, they wholeheartedly believed in the scientific foundations of Western Civilization and interpreted science as the "truest mentor in life." In other words, scientism was their political program. During the transition from otherworldliness to worldliness, "scientific precision, measurements, and methodology" played a role in the decreasing Islamic influence. Many fields from politics to science underwent an obvious process of "de-Islamization."[88] The considerable number of anthropological studies in the period demonstrated "how scientism could be applied to theorizing about the past."[89] Second, the new state endeavored to prove that Turks were members of "brachycephalic Caucasoid/Alpine race" rather than "despised Mongoloids." In the Turkish History Thesis, it was argued that the Turks, who had migrated from Central Asia, were the founders of "ancient civilizations" such as Sumerian and Egyptian. They wished to overturn "the Eurocentric image of barbarous Turks" in order to demonstrate that they were the friends of civilized world.[90] Turks were claimed to have been members of "the yellow race" and the beginning of their history was the establishment of the Ottoman Empire. In this respect, anthropology had a mission to restore the national pride of Turks. During the 1930s, it was argued that "the ancient inhabitants of Anatolia had the same anthropological character as Ottomans and Seljuks."[91] Finally, anthropology was to serve the creation of a national myth so that the Kemalist regime could form "a Turkish nation out of various elements imported from the Balkans and the Caucasus." The collective sense of belonging to a nation with a deep-rooted past offered a tool

88 Sibel Özbudun Demirer, "Anthropology as a Nation-Building Rhetoric: the Shaping of Turkish Anthropology (from 1850s to 1940s)," *Dialectical Anthropology* 35, No.1 (March 2011): 121-122.

89 Hanioğlu, *Atatürk*, 171.

90 Özbudun Demirer, "Anthropology," 121-122.

91 Toprak, *Darwin'den*, 114.

with which to hold the citizens together.[92] The rise of anthropology, especially physical anthropology, must be evaluated in the context of building the nation state. This is the reason the state promoted and sponsored it.

The Republican regime found the past of Anatolia politically workable because it hosted ancient civilizations. It aimed to unveil this cultural "richness." The Minister of Education emphasized this issue and accused the Ottoman Empire of "neglecting" archeology and its potential for "research on a national history." The Republican regime promoted and supported research in these fields and the personal interest of President Atatürk was proof of the attention paid to them.[93]

The stunning rise of anthropology in the early Republican period was not particular to Turkey. Previously, some Western researchers had asserted that the Japanese had been cannibals, which paved way for "the beginning" of anthropology in Japan. "A group of young scholars" there coordinated "a workshop" to refute such assertions. They called themselves *Junruigaku no Tomo*, which meant "friends of anthropology."[94] It can be inferred that elites among the peoples whom Westerners racially or physically humiliated, gave them a dose of their own medicine. At this point, they used anthropological arguments for the refutation of pejorative accusations against themselves.

Physical anthropology in Turkey skyrocketed between 1925 and 1939 such that it became one of "the leading" sciences. As for the political motivations behind anthropological studies, the efforts of Atatürk were indisputable. His interest in this science helped its introduction in Turkey, and its researchers acquired a reputation. Anthropologists like Eugène Pittard met the president himself when they came to Turkey. [95] Some physical anthropologists such as H. V. Vallois and Marc Sauter admired Atatürk.[96] Pittard had come to Turkey

92 Özbudun Demirer, "Anthropology," 122.

93 Reşit Galip, "Tarih, Arkeologya ve Etnografya Dergisi Niçin Çıkıyor?," *Tarih, Arkeologya ve Etnografya Dergisi* 1, No. 1 (July 1933):3.

94 Özbudun Demirer, "Anthropology," 111-112.

95 Toprak, *Darwin'den*, 120.

96 Metin Özbek, "Cumhuriyetle Başlayan Antropoloji," *Hacettepe Üniversitesi Edebiyat Fakültesi Dergisi* 15 (1998): 105.

many times and looked to its educational developments with admiration.[97] He thought that Turks had laid down the foundations of Western civilization. The Kemalist regime provided him the opportunity to reach a large audience. He delivered many speeches in the Halkevi (Peoples's House) in Ankara on various subjects on the origin of civilizations and the evolution of humankind. He argued that "humans evolved from animals." "Agriculture and the domestication of animals" were critical stages in the history of humans."[98]

In spite of the unprecedented development of modern anthropology in Turkey in the 1930s, the field's Ottoman past cannot be ignored. In particular, Şemseddin Sami, Mustafa Satı (el-Husrî) and Abdullah Cevdet played leading roles in the introduction of anthropology to the Ottoman Empire. Though the development of this field is identified with modern Turkey,[99] the contribution of the scholars to the introduction of racial anthropology was noteworthy. At least, their contribution can be considered proto-anthropology.

While it first started to thrive in Istanbul, it became a science of the state in Ankara. "In 1925, the Türkiye Antropoloji Tetkikat Merkezi (Center for Anthropological Research) was founded within the faculty of medicine in Darülfünun." At that time, it was not a coincidence that it was directly linked to this faculty because "anthropology meant the knowledge of bones." Thus, only physicians could engage in physical anthropology. This center produced students to conduct anthropological research in the various corners of Anatolia and send their "scientific findings back to the center." What is more, it began publishing a journal called *Türk Antropoloji Mecmuası* (Turkish review of anthropology), but only twenty-two issues were produced.[100] There were many articles on physical anthropology in this periodical.[101] This journal argued that the Turkish nation deserved an anthropological research since Turks had to

97 *Cumhuriyet*, 15 Eylül 1937, 7.

98 Ibid., 3.

99 Özbek, "Antropoloji," 105.

100 Toprak, *Darwin'den*, 76-77.

101 Mac-Auliffe, "Morfolojiya-i Beşer," *Türk Antropoloji Mecmuası*, No.1 (October 1925):12-25; *Türk Irkı ile Istanbul'da Yaşayan Diğer Irkların Mukayese ve Tetkiki*, Türk Antropoloji Mecmuası, No.2 (March 1926): 5-8; Th. Lefebvre, "Coğrafya ve Irk Meselesi," *Türk Antropoloji Mecmuası*, No. 6 (March 1928): 29-41.

have "many characteristics" that should have been unveiled. The main goal of anthropology was to determine "the place of Turks in racial classifications."[102] The political motivation behind anthropology in Turkey was noteworthy in the 1920s. Furthermore, Mustafa Kemal sometimes "visited" the Türkiye Antropoloji Tetkikat Merkezi when he was in Istanbul.[103] Despite striking state-sponsorship in the 1930s, high-ranking officials paid attention to this center. For example, "Hamdullah Subhi (Tanrıöver), the Minister of Education, was its honorary president."[104] In 1940, Şevkez Aziz (Kansu) who was a leading scholar of anthropology in Turkey stated that Mustafa Kemal supported "anthropological and prehistoric sciences."[105] The state's interest in anthropology have grown since the 1920s and reached its zenith a decade later.

Towards the end of the 1920s, some young scholars such as Seniha Tunakan and Muzaffer Süleyman (Şenyürek) were sent abroad for their graduate education. While the former moved to Berlin, the latter received his doctoral education from Harvard University under the chair of Prof. Dr. Earnest Albert Hooton.[106] The young Republican regime continued a tradition of sending students abroad that had started in the nineteenth century, but with a difference. Many of them would receive the education of anthropology. Even this indicates the state support for the development of anthropology. Kemalist elites sent "twenty-three students" and "majority of them went to Nazi Germany" for higher education in "anthropology, archeology, and agriculture in 1935."[107] This trend went up with the cultural revolution of the 1930s. These young scholars would help the Turkish race reach the level it deserved.[108]

Şevket Aziz (Kansu) tremendously influenced the development of anthropology in Turkey. He received his doctorate the Ecole Pratique des Hautes Etudes in France after writing a dissertation under the chair of Prof. Dr.

102 *Türk Antropoloji Mecmuası*, No.1 (October 1925): 6.

103 Özbek, "Antropoloji," 106.

104 *Türk Antropoloji Mecmuası*, No.1 (October 1925): 3.

105 Şevket Aziz Kansu, *Türk Antropoloji Enstitüsü Tarihçesi* (Istanbul: Maarif Matbaası, 1940), 1.

106 Özbek, "Antropoloji," 106-107.

107 *Cumhuriyet*, 7 September 1935.

108 Toprak, *Darwin'den*, 76.

George Papillaut in 1929. After he returned to Turkey, Şevket Aziz offered a course in anthropology, which was comprised of theoretical and practical parts. The former offered an education on "the comparative history of human organisms, the principles of pathological morphology, knowledge of the body and traits, medicine, and anthropology." The second helped students examine "blood types and carry out "craniometrics, cephalometric, and anthropometric" measures.[109] After the foundation of the faculty of language, history, and geography in 1935, he moved to Ankara.[110] He talked the latest practical and theoretical developments in racial anthropology to the students there. Şevket Aziz wholeheartedly believed in the practical benefits of science, especially racial anthropology and bio-sociology. He strived to contribute the identity of Turkish nation and history of their ancestors through scientific research. This was fruitful for proving "the existence of the nation" and helping it acquire "self-respect and self-confidence."[111]

During the 1930s, there was a "harmony" between archeology and anthropology. Furthermore, Şevket Aziz himself participated in some archeological "excavations."[112] He was an industrious scholar in his fields. Apart from applied anthropology, he wrote many books and translated studies on history.[113] He explained the appearance of humankind with the idea of evolution by mentioning *Pithecanthropus Erectus* and *Homo Heidelbergensis*.[114] He was a typical scholar of anthropology and his racial interpretation of human beings was evident in his theoretical and practical studies.

Of anthropological studies, probably the most striking was carried out by Afet İnan. She was one of the students sent abroad, and she received her doctoral degree under the supervision of Eugène Pittard, who had a close friendship with Atatürk. What made her distinctive was her dissertation and the

109 Kansu, Türk, 7.

110 Özbek, "Antropoloji," 106.

111 Şevket Aziz Kansu, "Biyososyoloji," Ülkü 3, No.18 (Haziran 1934): 253.

112 Toprak, *Darwin'den*, 82.

113 Şevket Aziz Kansu, *İnsanlığın Kaynakları ve İlk Medeniyetler* (Ankara: Türk Tarih Kurumu Basımevi, 1946); Georges Poisson, *Avrupa'nın İskan Tarihi*, trans. Şevket Aziz Kansu (Ankara: Türk Tarih Kurumu Basımevi, 1950), XI.

114 Kansu, *İlk Medeniyetler*, 91-100.

state's painstaking efforts for its preparation. She carried out a "nationwide" anthropological study.[115] For instance, Şevket Aziz "trained" a number of physicians who moved to various regions of the country. They measured the skulls of "64 thousand" people and prepared "tables, graphics, and an index." They collected so much "information" that they needed the support of the Devlet İstatistik Enstitüsü (State Institute of Statistics). The support of state was evidence of the Kemalist regime's interest in racial anthropology. The state itself wished to refute claims that the Turks belonged to an inferior race and had no ability to progress. Many scholars in Europe argued that only "brachycephalic" skulls could progress while "dolichocephalic" ones were inferior.[116]

Afet İnan was more than an anthropologist. For Atatürk, she represented an ideal woman of the Republic. Despite her young age, she became an outstanding academic with the encouragement of Mustafa Kemal. She presented a paper in the first historical congress in 1932, and in 1937, "she was head of the Turkish delegation" to the International Congress of Anthropology and Archeology in Bucharest. "She informed about the recent anthropological and archeological research."[117] The next international congress would be in Turkey, but the coming war prevented scholars from participating in this academic event.

§ 5.3 Evolutionary Arguments from the Turkish Historical Congresses of 1932 and 1937

When the proceedings of the first two historical congresses are taken into considerations, a secular point of view towards past is easily noticed. History was assisted by anthropology and archeology. Race was a dominant factor in Turkish historiography and was evident in these congresses. Sacred narratives were discredited by Turkish historians. Esat Bey (Sagay), who was the Minister of Education in 1932, made an opening speech describing sacred narratives as

115 Toprak, *Darwin'den*, 82.

116 Ibid., 106-112.

117 *Cumhuriyet*, 8 September 1937.

"stories and myths." He criticized the argument that "Turks had descended from Japheth, one of the sons of Noah." The history of the Turks had to be explained and restored in a scientific context. They were the leading figures of world civilization.[118] In addition, during the discussion section of the congress, Şevket Aziz stated and evolutionary opinion to Mehmed Fuad (Köprülü). He said that "humans were the outcome of evolution and it was known that this evolutionary range took place from animals to humans."[119] Although he did not mention the ideas of a common ancestor and natural selection, it was obvious that he embraced evolutionary theory. As an anthropologist, he explained the forms of natural life in materialist rather than sacred terms.

In the First Turkish Historical Congress, Sadri Maksudi (Arsal) who was an important public official and scholar in the 1930s, presented a striking paper about the factors that led the course of history. He recognized biological evolution as "a factor in the making of history." He argued that while Lamarck emphasized the adaptation of organisms to their environment and the use or disuse of organs as important factors in their evolution, Darwin emphasized natural selection and the struggle for existence. Then, "Herbert Spencer built a philosophy based on evolution" that included "all aspects of life."[120] In fact, Sadri Maksudi summarized two leading theoreticians of evolution. What he implied was that evolution was an important factor to which scholars of historiography had to pay attention to. As the majority of the participants to the congress were teachers, the presentation of a paper on evolution was important for planting evolutionary ideas into Turkish education. Because of new textbooks and these congresses, these ideas were introduced to Turkish teachers. In other words, an evolutionary mindset gradually became entrenched in Turkish education. Thereafter, students and teachers alike were much more familiar with evolutionary subjects.

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118 Esat Bey, "Maarif Vekili Esat Beyefendinin Açma Nutku," in *Birinci Türk Tarih Kongresi* (Ankara: Maarif Vekâleti, 1932), 5-8.

119 Dünyada insanın tekâmül mahsulü olduğu ve bu tekâmül silsilesinin hayvanlardan insanlara kadar geldiği malûmdur. *Birinci Türk Tarih Kongresi* (Ankara: Maarif Vekâleti, 1932), 48.

120 Sadri Maksudi,"Tarihin Amilleri," in *Birinci Türk Tarih Kongresi* (Ankara: Maarif Vekâleti, 1932), 351.

The Second Turkish History Congress was similar to the first since many proceedings contained remarkable knowledge of anthropology and archeology that, in turn, served historical studies. Şevket Aziz Kansu informed participants about recent archeological excavations conducted near Ankara. Owing to the archeological findings found there, he argued that there was an ever-increasing similarity between early human remains in Anatolia and those of *Homo Heidelbergensis* and *Homo Neanderthalensis*. He seemed to hope that archeologists would unearth human fossils that would demonstrate an anthropological relationship between Anatolia and Europe.[121] In fact, he expected Turkish scholars to find fossils of early organisms within the borders of Turkey so that the role of the Turkish nation in the making of European civilization could be proved. In other words, he expected the conclusion that the first humans spread from Anatolia to other regions of the world. In addition, Henri V. Vallois, who was a French anthropologist and paleontologist, emphasized the inseparability of the Near East from Europe in terms of racial anthropology. The courses of their biological evolution had "significant similarities" in prehistory.[122]

§ 5.4 Reflections of the Scopes Trial in Turkey

In the first quarter of the twentieth century, evolution was attacked by Evangelical Christians in the United States. "The suspicion of science as an aspect of modernism, the rise of populism, and the association of social Darwinism with German aggression in the World War I" gave rise to anti-Darwinist sentiments. Evangelicals thought that their values were being eroding by industrialization and urbanization. Thus, the Tennessee legislature banned "the teaching of evolution in public schools" with the Butler Act, a striking success for anti-Darwinists in the United States.[123] John Thomas Scopes, a teacher in

121 Şevket Aziz Kansu, "Ankara ve Civarının Prehistoryasında Yeni Buluşlar," in *İkinci Türk Tarih Kongresi* (Istanbul: Kenan Matbaası, 1943), 39-40.

122 Henri V. Vallois "Garbi Asyanın Irklar Tarihi," in *İkinci Türk Tarih Kongresi* (Istanbul: Kenan Matbaası, 1943), 462.

123 Garland E. Allen, "The History of Evolutionary Thought," in *The Princeton Guide to Evolution,* ed. David A. Baum and others (Princeton; Oxford: Princeton University Press, 2014), 21.

this state, was "prosecuted in a high-profile trial" as he "deliberately" infringed this law by teaching evolution in his classroom. "The fundamentalist politician William Jennings Bryan" carried out "the prosecution," and the agnostic lawyer Clarence Darrow defended Scopes. At the end of the trial, Scopes had to pay a $100 fine. This case was known as the "Scopes Trial" or the "Monkey Trial" around the world. This judicial case was "a watershed in the modern relationship between science and religion."[124] What makes this trial distinctive was its worldwide impact. It led to a serious "controversy" and the anti-Darwinist movement became more persistent.[125] It was the most attention-grabbing affair in the history of Darwinism. When the Lewis Affair took place at the Syrian Protestant College in 1882, it did not attract so much attention. The fact that the teaching of evolution was banned by the Tennessee government in the United States was a much greater success for the anti-Darwinist groups.

Like journals all over the world, some journals in Turkey paid close attention to the Scopes Trial. A number of articles on Darwinism and biological evolution were generated in periodicals.[126] In particular, a monthly journal entitled *Resimli Ay* (illustrated moon) scrutinized this judicial case, concluding that Turkey, which had begun implementing radical "reforms" in different fields, a chance to learn "lessons" from "the United States, where science and technology were remarkably advanced." In other words, this trial offered Turkey an opportunity to understand the results of religious fanaticism. This journal put forward that some groups in "educational backward, conservative states of the Southern United States" disfavored curricula that conflicted with

124 Bowler, *Evolution*, 324.

125 Allen, "History," 21.

126 İbrahim Aşkî, "Darwin Nazariyesi," *Tabiat Alemi* 1, No.1 (December 1925):13-15; "Amerika'daki Maymun Davasını Takip Eden Sulh Mahkemesi," *Resimli Perşembe*, No.16 (10 Eylül 1341 Rumi [10 September 1925]); "Beş Yüz Bin Sene Evvel İnsanın Yaşadığını İddia Ediyorlar," *Resimli Ay* 2, No.8 (Eylül 1341 Rumi [September 1925]):12-14; "Son Maymun ile İlk İnsan Arasındaki Kafa Tası," *Haftalık Mecmua*, No.29 (1 February 1926); Mustafa Şekip, "Amerika Davası Münasebetiyle," *Milli Mecmua* 2, no.42 (1 August 1341 Rumi[1 August 1925]): 678-679; "Maymun Sonra da Dünya'da Yaşayan İlk İnsan," *Resimli Ay* 2, No. 12-2 (Mart 1341 Rumi [March 1925]): 15-16; "İnsanlar Maymunlardan mı Gelmiştir, Allah Tarafından mı Yaratılmıştır," *Resimli Ay* 2, No.7 (Ağustos 1341 Rumi [August 1925]): 31-32.

the teachings of Christianity. The main reason for their attitude was "religious fanaticism and ignorance." "They learnt the creation of the world in six days and the creation of humans from clay from bible."[127] Due to their religious beliefs, they were not willing to listen to scientific arguments that could refute any divine interpretation of life. "This religious fanaticism led them to deny truths that science discovered."[128] In fact, many anti-theological implications of evolution made them worried and they did not hesitate to attack science. However, it is not possible to stigmatize them as enemies of science because they favored a science that would not conflict with their beliefs. Thus, their attitude should be evaluated in the context of a conflict between evolution and religion rather than between "science and religion."

In the aforementioned article, it was stressed that there was "a large mass of the uneducated who were uninformed of scientific discoveries" in Turkey. These were similar to the anti-evolutionists in the United States. They accepted Koran as their guide and "believed in the creation of world in seven days and the creation of humans from clay." Religions in the Judaic traditions confirm these myths. There are similar explanations about the making of the world and the origin of humankind in Christianity and Judaism. The Scopes Trial was an opportunity to demonstrate that religious fanaticism could misdirect the masses. In Turkey, the newly established Republic, which would embrace science as the true mentor needed to remove superstitious belief among its citizens.[129] As time went on, the secular character of this regime crystalized in fields ranging from politics to education. As they regarded scientism as their main guide, Kemalist elites were unafraid of the implications of evolution. They favored materialist interpretations of life and left no room for miraculous creation. However, it must be stressed that evolution became a vital part of Turkish education during the 1930s because the early years of the young Republic were characterized by internal problems, political purges, and reforms.

127 Onlar İncil'de dünyanın altı günde yaratıldığını, insanın topraktan hulk edildiğini öğrenmişlerdir. *Resimli Ay* 2, No.8 (Eylül 1341 Rumi [September 1925]):12.

128 Bu taassup onları fennin keşfettiği hakikatleri inkara sevk ediyor. "Beş Yüz Bin Sene Evvel İnsanın Yaşadığını İddia Ediyorlar," *Resimli Ay* 2, No.8 (Eylül 1341[September 1925]):12.

129 Ibid., 12.

A radical cultural revolution took place in this formative decade of the Republic.

In Turkey, some writers accepted that Darwin concluded "conflict" between evolution and religion as he had constructed his theory on observations and well-proven principles. "He classified animals according to their level of evolution" and established evolutionary relationships between humankind and apes. His theory gave rise to the argument that humans descended from apes. Scholars began to make painstaking efforts to find the first human. They carried out research on "the bones and teeth of people who lived in the first three geological eras." These people were "similar to humans," but the present-day human beings appeared only at "the end of the fourth ice era."[130] There was a lack of knowledge of evolution. Journals that published any kind of article on Darwinian theory of evolution contributed to its introduction to the masses in Turkey.

Resimli Ay maintained a moderate attitude to the conflict between evolution and science, arguing that evolution did not require denying God. "Ancient peoples used religion to try to rule and explain the world. Religion was involved in every aspect of life ranging from the making of world to shopping in bazaar, to the relationship of husband and wife."[131] This journal thought that "religion was withdrawing" from daily life to its real purview. In other words, the impact of religion on human life was gradually decreasing. Its real involvement is merely "spiritual and otherworldly issues." Focusing on the businesses of science "does not make religion stronger;" it even "makes it weaker." The making of the world and the origin of humans are scientific issue that no religion has the capacity to explain. Thus, the areas of interest of science and religion are completely different. While science focuses on worldly issues, religion deals with spiritual and otherworldly ones. "Conflict starts when either of them violates their area…As the border of science and religion was completely defined in some countries, the Scopes Trial, taking place in the United States,

130 Ibid., 13.

131 Eski insanlar dünyayı din ile idare ve izah etmeye çalışırlardı. Dünyanın teşekkülünden pazardaki alışverişimize, karımızla olan münasebetimize kadar her şeyimize din karışırdı. Ibid., 14.

considered to be a ridiculous case."[132] The Kemalist regime had to keep close watch on the trial because there was "no complete distinction there between science and religion" in Turkey. Thus, it needed to be taken into consideration as if it had taken place in Turkey.[133]

The Scopes Trial inspired anti-Darwinist authors in Turkey to write articles. İbrahim Aşkî (Tanık), who was a teacher of literature and was influenced by Islamic mysticism, tried to disprove Darwinian theory only in part. In fact, his point of view can be evaluated as anti-Darwinism. To begin with, he emphasized that Darwin's view was just a "theory." He assumed that it was based on assumptions rather than well-proven scientific facts. What is more, he accused Darwin and his proponents of "distorting" natural facts for the sake of their arguments. "When Darwin traveled around the world at age twenty-one, he devised the idea of evolution and then tried to affirm it throughout his travels and return."[134] That is, İbrahim Aşkî thought that Darwin had not formed the theory of evolution after completing his analysis of his findings, but before. Even though he had no real knowledge of the theory or of Darwin's life and family, he questioned his reliability. As for the Scopes Trial, he favored the position of the American fundamentalists by labeling this case "a storm in a teacup." He found the ban on the teaching of evolution appropriate. The major criticism İbrahim Aşkî levied against Darwinian evolution was the idea of a common ancestor. He argued that "the similarity" between humans and apes did not imply the former's descent from the latter. The animal ancestry of humans was widespread in evolutionary discussions. He must have been afraid of the displacement of humans from their exalted position on earth. Even living for millions or billions of years could not conclude evolution. İbrahim Aşkî considered the moral values that human beings have that apes do not.[135] Any claim about the descent of humans from a lower organism contradicts their

132 Mücadele ancak biri diğerinin hududuna tecavüz ettiği zaman başlar…Başka memleketlerde artık fenle dinin hududu tamamen ayrıldığı için Amerika'da cereyan eden dava medeni alemde gülünç bir hadise olarak telakki edilmiştir.

133 Ibid., 14.

134 Darwin 21 yaşında dünyaya dolaşmaya çıktığı vakit tekâmül fikri zihninde doğmuş ve gerek seyahatte gerek avdetinde hep o fikri besleyip büyütmeye çalışmış.

135 İbrahim Aşkî, "Darwin," 14-15.

uniqueness among the organisms. Even though he knew about the idea of common ancestor and the taxonomical place of both humans and apes, he believed in the superiority of humans due to their nature and nurture. As he was inspired by Islamic mysticism, the discourse in the explanations on the nature of humans contains mystic elements.

The relationship between humans and apes was clearly discussed in many periodicals. One author asserted the striking claim that "apes were more civilized than humans in some respects." Although many people refused the idea of common ancestor, apes did not "do evils" observed among humans. Their treatments of evil to each other were not aggressive.[136] In fact, this information was easily falsified since violence and aggression is sometimes a part of the life of apes.

While building a nation state and a Republican regime, Turkey implemented many radical reforms for secularization. Furthermore, the young Republican regime was affected by the Sheikh Said Rebellion that sought to revive the caliphate and pursued the goal of Kurdish nationalism. The rebellion demonstrated how religious fanaticism brought about serious destabilization, proving the importance of secularism. The ban of the teaching of evolution in public schools and the punishment of a teacher - successes for anti-Darwinists in the United States - were evaluated as a warning to Turkey.

§ 5.5 Eugenics, Heredity, and Evolution

Successive wars (the Balkan Wars, the First World War, and the War of Independence) wreaked havoc on the demography of the lands on which modern Turkey was built. The demographic landscape of modern Turkey was various from that of the Ottoman Empire in qualitative and quantitative terms. Hundreds of thousands of young men died due to war injuries and epidemic diseases. While the Ottoman population in present-day Turkey in 1906 was about 15 million, the first census of the Republic in 1927 showed that it had decreased

136 "Medeni Geçinen Bizler Maymundan Bile Alınacak Dersler Vardır," *Resimli Perşembe*, No.18 (24 Eylül 1341): 2.

to 13.6 million.[137] The relocation of Armenians in 1915, the dissolution of the empire, and the population exchange of the 1920s were the main reasons for this demographic rupture. In total, "approximately 2.5 million non-Muslims (Armenian and Greek subjects) were killed or forced to leave the country."[138]

Due to this demographic devastation, modern Turkey paid special attention to its human capital. "The physical health of citizens was highly important" for the reconstruction of the country. "National interest, public health, pronatalism, and a long and healthy life" became essential mottos of the Kemalist regime. The quantity and quality of its population were alarming to the regime. It aimed "to adopt a policy to improve collective and individual practices of hygiene."[139] In particular, physical training and sports activities were evaluated as vital practices for daily life. Selim Sırrı (Tarcan), who was an outstanding educator and politician, stated that

> physical training is a crucial issue … for societies and nations. Showing interest in it is a national duty for those who sincerely love their countries. The Republic of Turkey attaches the importance that training deserved. Gymnastic festivals organized in every corner of the country in the month may and their popularity demonstrated the extent to which people cared for their bodies. Teachers appreciated physical training as a tool to win the struggle of ideas.[140]

Tarcan anticipated three results, namely, "the evolution of the race, the improvement of health and morality, and friendly relationships with other

137 Çağlar Keyder, *Türkiye'de Devlet ve Sınıflar* (Istanbul: İletişim Yayınları, 2009), 102.

138 Ibid., 92.

139 Yiğit Akın, *Gürbüz ve Yavuz Evlatlar: Erken Cumhuriyet'te Beden Terbiyesi ve Spor* (Istanbul: İletişim Yayınları, 2004), 88.

140 Beden terbiyesi ... milletler için hayati bir meseledir. Ona alaka göstermek memleketi candan sevenler için vatani bir borçtur. Türkiye Cumhuriyeti idaresi beden terbiyesine layık olduğu ehemmiyeti veriyor. Vatanın her köşesinde mayıs içinde yapılan cimsantik şenlikleri ve bu şenliklere halkın gösterdiği rağbet milletin vücuduyla alakadar olduğuna en büyük delildir. Muallimler beden terbiyesinin fikir mücadelesinde muvaffak olmak için vasıta olduğunu anlamışlar ve mesailerine göre bir istikamet vermişlerdir. Selim Sırrı, *Radyo Konferanslarım* (Istanbul: Devlet Matbaası, 1932), 116.

nations." However, sports and physical training had to be based on rational "guidance" for a better race or nation.[141] In addition, Selim Sırrı emphasized the benefits of sports and took English people as an example, claiming that this nation was aware of the role of sport in the struggle for existence.[142] "The greatest wealth of a nation was the health of its race and generation." "Of the civilized nations, the healthiest races" were attention-grabbing and obtained the ability to have a better "future." Modern biology and Eugenics demonstrated how to improve the quality of races. The Republican regime implemented practices to enhance the racial quality of some animals with the help of modern natural sciences.[143] The same or similar methods can be applied to nations as to healthy individuals. There was a direct relationship between fitness and the survival of the nation. It was believed that there was a direct relationship between survival and physical training since it made a nation much more powerful. It can be easily argued that Eugenic measures were of utmost importance for improving human capital in Turkey. While scholars were debating measures such as sterilization, physical training, and promoting the birth of healthy babies, the Darwinian concepts such as the struggle for survival and natural selection were put on the agenda. The Darwinian interpretation of organisms offered a basis to those who demanded eugenic measures. While the Republican regime expected children to display "loyalty" and embrace its values, their physical bodies were not ignored in politics.[144] They were supposed to be physically and mentally fit.

During the 1930s, it was apparent that the social sciences were partly biologicized. That is, biological points of view with respect to the interpretation of society and the individual attained a considerable following in scientific milieu. It was believed that human biology affected societies directly. Thus, those who dealt with social issues had to be familiar with biological facts. In

141 Selim Sırrı, *Radyo Konferanslarım* (Istanbul: Devlet Matbaası, 1932), 119.

142 Ibid., 110.

143 Mahmut Şemsi, *Harbin Istıfaî Tesirleri ve Zabitlerimizin Neslimizin Islahındaki Ehemmiyetleri* (Ankara: Askeri Matbaası, 1933), 4.

144 Güven Gürkan Öztan, "Türkiye'de Çocukluğun Politik İnşası" (PhD diss., Istanbul University, 2009), 173.

addition, biologists had to understand the problems of individuals in society, otherwise they might be "semi-intellectual."[145] As a result, having knowledge of biology was deemed a kind of requirement for scientists. At this conjecture, scientists who desired to enhance the racial quality of the nation had to know the ideas of Charles Darwin and Francis Galton, who played a leading role in the improvement of the racial quality of humankind. While humans improved the animals used for agriculture, hunting, gathering, and protection, they did not favor this practice for themselves. In the nineteenth century, scientists, especially Galton, laid down the foundations of Eugenics. However, their influence was limited to Britain. English people was cognizant of "the delicacy and severity" of racial problems facing humankind at the end of this century and began "applying" eugenic measures to society.[146]

Mahmud Şemsi (Kural) who was a scholar from Ankara University argued that Charles Darwin had a striking role in the appearance of the science of Eugenics due to his enormous contribution to biology. He explained how species survived through evolution and how their hereditary characteristics were passed on to ensuing generations. Organisms underwent "certain changes" in their lives. The result was that only the fittest organisms, which had certain biological advantages, could "survive." Others "went extinct." In other words, nature selected the fittest organisms and eliminated the others. Natural selection was the basis of Darwinian evolution.[147] In fact, Darwin never developed a social theory, even though the implications of his theory remarkably contributed to the making of Eugenics. What he tried to explain was merely the evolution of organisms by means of natural selection. His attention was directed at nature rather than society. Scholars wished to apply natural selection to human societies. The distinctive aspect of Darwinian evolution was its foundation on the principle of natural selection.

The main problem was that the number of racially, intellectually, and socially superior people was decreasing while that of inferior ones was

145 Sadi Irmak, *Millet Bünyesinin Hayati Meseleleri* (Ankara: Ulusal Matbaa, 1941), 2.

146 Mahmut Şemsi, *Harbin Istıfai Tesirleri ve Zabitlerimizin Neslimizin Islahındaki Ehemmiyetleri* (Ankara: Askeri Matbaası, 1933), 3.

147 Mahmut Şemsi, *Terbiyenin Biyolojik Temelleri* (Ankara: Çankırı Matbaası, 1934), 11-12.

increasing. That it is, the number of unfit individuals was gradually going up and bringing about demographic degeneration. Because humankind knew the laws of the evolution of organisms, they could interrupt it. This demographic problem was not considered fatal, and human reason could solve it.[148] To prevent demographic deterioration in the world, man-made selection was considered essential. There were two types of Eugenics, namely negative and positive. "The first entailed preventing the birth of inferior - "untalented, asocial people with a biological inclination toward prostitution or homicide." The second entailed promoting those whose heredity were noble.[149] In doing so, the biological quality of a nation could be enhanced through scientific methods. Pronatalist policies, premarital medical examinations and family allowance can be considered in the eugenic context.

The implications of Darwinian evolution were a striking point in Eugenics, but did not go unchallenged. Mahmud Sadi (Irmak), a prominent eugenicist in Turkey, severely criticized Darwinian evolution and social Darwinism. Even though he accepted that Darwin had broadened the horizons of science and that biology had progressed as a result of his research in the Galapagos, Mahmud Sadi (Irmak), found problems with this theory. However, some of these criticisms were based on misinterpretation. Whether he had read any of Darwin's books is unclear, though he assumed that Darwinian evolution and Social Darwinism were the same explanation. To begin, he examined the idea of the struggle for existence, claiming that it was difficult to distinguish between strong and weak organisms.[150] Instead of continuous struggle, they sometimes helped one another. The struggle did not take place continuously. Thus, the basis of the relationship between organisms was not continuous warfare given that it was possible to observe cooperation. There was no definite "criterion" for deciding which organisms were strong or weak. It was impossible to prove that population growth brought about more organisms than could survive in an environment. He opposed "the application" of Darwinian

148 Mahmud Sadi, *İçtimai Biologie* (Istanbul: Sebat Matbaası, 1935), 53.

149 Irmak, *Millet*, 84-85.

150 Sadi Irmak used the words "strong" and "weak," rather than "fit" and "unfit". This might be evidence of his misinterpretation. A strong species is not always the same as a fit organism.

theory to human societies. If Darwinian principles were applied, the common heritage of humanity that had emerged after "thousand year evolution – religion, medicine, justice - would be destroyed."[151] He assumed that the dynamics of society were various from that of nature, and he was worried about the corrosive, degenerate influence of Darwinian evolution. From his point of view, undermining the main foundations of human societies would result in chaos.

In addition to criticizing the theory of biological evolution proposed by Darwin, Mahmud Sadi (Irmak), fulminated against social Darwinism. First of all, he argued the absence of selection in human societies. Rather than "selection," he believed a process of "degeneration" took place. He cited the decreasing number of "noble families in Sweden" as an example. Cities eliminated the most talented people in a society as if they were "a death machine." Second, he believed that those who proposed that "social Darwinism ignored the division of labor in a society." Society needed all kinds of individual, not just talented and noble ones. That is, a well-functioning societal structure required different kinds of individuals, not only the most talented ones. Third, "the methods that social Darwinists suggested" for their social projects were unacceptable. Neither poverty nor social inequality can serve as the main mechanisms of selection as there was no well-accepted criterion for deciding who was weak. Brutal, social interventions cannot solve the main problems that modern societies faced. He added that "many geniuses" were born among the so-called inferior groups of people, and this is not a hindrance for upward mobility.[152] His arguments against Darwin and social Darwinism can be evaluated in the context of anti-Darwinism in spite of his lack of apparent religious concerns. He was afraid of the social implications of evolution. His fulmination against Darwinism was either scientifically or religiously motivated. He was afraid of the potential destruction of the common legacy of human beings.

151 Mahmut Sadi, *Veraset ve İçtimai Terbiyevi Neticeleri* (Istanbul: Kader Matbaası, 1934), 28-29.

152 Ibid., 73-76.

§ 5.6 The Death of Atatürk: A Victory for Anti-Darwinism?

Turkey faced a profound cultural revolution during the 1930s Atatürk was indisputably the leading actor. To consider him only as a politician would be wrong because he dealt with many fields. He made remarkable efforts to carry out "one of the greatest societal transformation" - not only in modern Turkish history, but in world history. "Not only as a statesman but also as a self-made thinker, he invested tremendous energy in preparing the intellectual groundwork for this momentous project." He studied a wide range of "subjects" from "religion" to "science."[153] He wholeheartedly embraced the idea of scientism and favored its application for the modernization of both state and society. That is, his "intellectual interests" were more than a leisure activity and he "materialized" his dreams.[154] The abolishment of the sultanate and caliphate, and the proclamation of the Republican regime offered a suitable political conjuncture to implement radical reform. Secular tendencies in different fields ranging from justice to education that had started in the Ottoman Empire gained momentum in modern Turkey. Atatürk thought science would be "the basis of his political system." In fact, "he was under the considerable influence of positivism" like other members of the Young Turk generation. Dependence on science was the most reliable way to build a secular country for him.[155] As an instrument, science was of utmost importance in his political life. The idea of scientism remarkably embodied the early Republican period. Thus, his encouragements and promotion of various science such as history and anthropology were an evidence of his keen interest in science. He played a leading role in the establishment of the Turkish Historical Society, the rewriting of textbooks, the promotion of racial anthropology and archeology, and the Sun Language Theory. Turkey witnessed the institutionalization of the cultural revolution led by Atatürk.

The death of Atatürk ushered in a decline in state initiatives promoting certain sciences such as anthropology and history. As a high-ranking politician, he was enthusiastic about the entrenchment of modern science,

153 Hanioğlu, *Atatürk*, 194.

154 Toprak, *Darwin'den*, 102.

155 Mardin, *Makaleler 1*, 163-164.

particularly of history and anthropology, in accordance with the political claims of the Kemalist elites. His death left a lack of strong political authority behind these sciences. None of his successors created a scientific dynamism. The political climate after 1938, the Second World War, and a multiparty system changed the priorities of politicians in Turkey. In addition, the war discredited the racial interpretation of human beings, particularly racial anthropology. Thus, the center of anthropological studies moved to cultural research. This was a worldwide trend but not particular to Turkey. Atatürk was so interested in science that when Eugène Pittard came to Turkey, "he welcomed the anthropologist to Dolmabahçe Palace" despite being his severely ill. Without the support of Atatürk, Afet İnan could not have carried out such an extensive anthropological study.[156] As he had much leisure time in Çankaya Mansion during his presidency, he got involved personally with such issues.

Thanks to Atatürk, the level of certain sciences including anthropology, history, geology, and biology was stunning, but his death did not result in a complete reversal with respect to scientism. As the state implemented steps for Turkey to catch up to the level of contemporary civilization, scientism became more institutionalized. His death disrupted the pace of some scientific breakthrough, but the cultural revolution of the 1930s continued to a point. For example, even though the Sun Language Theory declined after the death of Atatürk, efforts to Turkifying words continued although at a relatively slower pace. In 1945, the constitution was written with new, original Turkish words.[157] In fact, the Republican People's Party abandoned its militant secularism and embraced a smooth policy vis-à-vis religious issues.

After 1938, the evolution trend declined and humans were again perceived as "static" organisms. Biological evaluations of human beings deteriorated due to both the death of Ataturk and to the Second World War.[158] Even so, Darwinian and Lamarckian theories continued to be taught in schools in Turkey, and the Turkish Historical Society continued translating and publishing studies that contained evolutionary perspectives. For example, Şevket Aziz Kansu wrote *İnsanlığın Kaynakları ve İlk Medeniyetler* (the sources of humanity and

156 Toprak, *Darwin'den*, 108.

157 Hanioğlu, *Atatürk*, 180.

158 Toprak, *Darwin'den*, 368.

first civilizations) in 1941 and translated Georges Poisson's *Le Peuplement de l'Europe: État Actuel, Origines et Évolution* (*Avrupa'nın İskân Tarihi: Bugünkü Durum, Kaynaklar ve Evrim*). Another leading anthropologist in Turkey, Muzaffer Süleyman Şenyürek, translated *İnsanın Maymunlar Arasındaki Yeri* (*The Place of Humans among the Apes*), but the study was not published. It can be inferred that a diligent generation continued their scientific activities as well as scientific institutionalization.

To ascertain the attitude of the state to the idea of biological evolution, a look at various textbooks written after 1938 is fruitful. It was apparent that evolution had become an inseparable part of school texts in the 1930s, and this trend continued after 1938. Thus, the death of Atatürk did not cause a complete disappearance of the cultural revolution of the 1930s. Textbooks in biology and geology contained evolutionary ideas. Muhsin Adil Binal, who prepared a biology textbook for high school students, said that

> Darwin leaned his theory upon …the population theory of Malthus… After a few generations, food in habitats of organism will not be enough to feed all of them. As a result, a serious conflict will emerge within species to share food. Of organisms making a struggle, those who are weak and not able to find food and resist enemies … and environmental conditions will become extinct. However, those who are stronger and well equipped for life struggle organisms will survive.[159]

In fact, both Darwinian and Lamarckian theories of evolution were taught to students and were regarded as "great men" of biology.[160] In addition, a textbook on the knowledge on nature (*Tabiat Bilgisi*), was prepared for primary

159 Darven, teorisini bir İngiliz iktisatçısı olan Maltüs (Malthus)'un … yasasına dayandırmaktadır…Birkaç döl sonra canlıların işgal ettikleri yerdeki besin maddeleri, hepsini beslemeye yetmeyecektir. Bunun neticesi olarak aralarında besin maddelerini paylaşmak için ciddi bir mücadele başlıyacaktır… Mücadele edenler içinde, herhangi bir sebeple diğerlerinden zayıf olanlar, besin maddelerini tedarik etmeğe güçleri yetmiyenler ve nihayet düşmanlarına… ve iklim şartlarına mukavemet edemiyenler inkıraza mahkûm olacaklardır. Fakat daha mukavemetli ve hayat mücadelesi için daha iyi teşkilâtlanmış olanlar yaşamakta devam edeceklerdir. Muhsin Adil Binal, *Biyoloji II* (Istanbul: Maarif Matbaası, 1945), 171.

160 Ibid., 160-172.

school students in harmony with the idea of biological evolution. It emphasized the descent of animals from other species. Fossils were the ancestors of present-day animals. Elephants descended from mammoths.[161] Reading between the lines, the textbook contains an evolutionary perspective with respect to *The Origin of Species*. Thirty years on, it was still possible to see evolution in high school textbooks. Even in 1960, Adil Yüksel, who prepared a biology textbook, said that "life originated in "the seas" and then spread to "fresh water, humid soil, and later to land." Some animals adapted to life on "land" while others lived "underwater." For example, "mosquitos spend the larval stage in water."[162] The number of pages introducing evolution comprise one fifteenth of the book and its quality is satisfactory since it offers knowledge ranging from the geological ages and to the fossils of extinct species to Darwinian theory.

In addition to biology textbooks, this trend was apparent in geology textbooks after 1945. Geology textbooks contained evolutionary points of view. For example, Ahmet Kantar published a high school textbook emphasizing non-stability of species and their descent from other species. He said that Darwin revolutionized biology providing proof of the fact that humans and anthropoid apes had had "a common ancestor." The biological origin of present-day humans is observable in anthropoid apes that lived in the third geological era.[163] All of these textbooks are evidences that Darwinism persisted in Turkish textbooks after 1938, and they left no room for divine interpretations. Nevertheless, the death of Atatürk signaled the lack of strong motivations behind the promotion of Darwinian sentiments in the country.

This lack of strong support for evolutionary thought in Turkey encouraged some conservatives after 1950. Some conservative circles formed a harsh opposition to evolution. The religious groups that had remained silent in the 1930s had the opportunity to make their voices heard across the country. In Turkey, there was a direct relation between the spirit of the age and the promotion of evolution. In particular, the political conjuncture after Atatürk's death was suitable for anti-Darwinian sentiment to grow gradually. By the

161 Nimet Çalapala, *Tabiat Bilgisi* (Istanbul: Atlas Yayınevi, 1951), 91.

162 Adil Yüksel, *Biyoloji II* (Istanbul: Milli Eğitim Bakanlığı, 1960), 9.

163 Ahmet Kantar, *Jeoloji Dersleri* (Istanbul: Gün Basımevi, 1945), 205.

1980s, high-ranking officers promoted anti-Darwinism. Thus, the death of Atatürk can be regarded as a remarkable turning point for anti-Darwinism in Turkey despite the fact that the teaching of evolution in schools and the activities of the Turkish Historical Society continued. Despite the absence of Atatürk, his cultural revolution was partly embraced and sustained owing to the studies of scholars such as Şevket Aziz Kansu and Muzaffer Süleyman Şenyürek as well as to universities and scientific societies.

6

Conclusion

The rise of Darwinian theory of evolution took place during the secularization in the Ottoman Empire. At the same time, both the state and society were faced with serious challenges from Europe. Reforms carried out for the recovery of the state paved the way for the emergence of secularism. Thus, contact with Europe was deemed necessary to solve the problems in fields ranging from the military to education. New schools and new state institutions resulted in the increasing conveyance of scientific thought from Europe to the Ottoman Empire. In particular, journals published in the late period of the empire were the primary transmitter of this European influence. Their encyclopedist and positivist traditions contributed to the secular interpretation of organisms and the earth. Despite financial problems, censorship, and low numbers of readers, they played an influential role in the intellectual life of the empire. Journals such as *Mecmua-yi Fünun, Dağarcık, Felsefe Mecmuası,* and *Ulûm-ı İktisadiyye ve İçtimaiyye Mecmuası* left an enormous impact on the intellectual orientation.

When the state and society faced a range of crises, science was believed to offer both statesman and intellectuals practical solutions. The ideas imported from Europe were assumed to resolve the crises. In lieu of abstract issues, practical concerns were prioritized. The supremacy of Europe was accepted and its intellectual influence became more apparent as time went on. The

Westernization of the empire spread from the military to many areas like medicine. Despite the fact this process began in the military, its impact was on intellectual life was much broader. The materialism of European philosophers such as Ludwig Büchner and Félix Isnard were favored by students who received their education at modern institutions like the Mekteb-i Tıbbiye, which was the hotbed of materialism in the empire. In particular, Ernst Haeckel's books that contained interpretations of Darwin were read by those interested in materialist philosophy. What is more, some of his books were banned by the state as they were assumed to be harmful to the social fabric of Muslim society. The history of Darwinism must be evaluated in the context of materialism in the Ottoman Empire because materialists played a remarkable role in the introduction of modern biological evolutionary theories. Darwin's theory offered an important toolkit for understanding biological life. Interestingly, a leading figure of materialism in the Ottoman Empire and one of the translators of Ernst Haeckel's book (*Vahdet-i Mevcud: Bir Tabiat Aliminin Dini*), Baha Tevfik, never focused on Darwinian theory and promoted vulgar materialism instead. In fact, the biological theory of evolution was of secondary importance in his point of view. On the other hand, when Abdullah Cevdet translated Ludwig Büchner's *Natur und Geist*, he informed the readers about Darwinian theory in detail. Many Ottoman readers learned this controversial theory through the studies of materialist thinkers and benefited from Darwinian and Lamarckian explanations of natural life and these theories formed the biological dimension of their materialist philosophy. They were heavily influenced by evolutionism, just like Western intellectuals of the time.

Science was regarded as an effective tool to solve the problems of the state and society. In particular, many sciences such as sociology and biology were fruitful for understanding society and the individual in the modern age. Asaf Nef'i and Hakkı Behiç recognized natural selection as the basis for the relationship between organisms and nature as well as the importance of sexual selection within species. Bedii Nuri tried to infer a social philosophy based on biology. Like Asaf Nef'i, he was cognizant of the decisive role of the struggle in natural life and attempted to analyze the present condition of human societies accordingly. Science was attributed great importance by many Ottoman intellectuals. For example, Beşir, who was an ardent proponent of positivism,

preferred to regard science as an absolute guide. Even though he challenged religion, he generally refrained from criticizing Islam. In a Muslim state where there was strict censorship of printed materials, challenging Islam was not a reasonable method for publicizing materialist thoughts. All the aforementioned authors investigated human nature and benefited from findings in biology since they regarded science as a guiding light for interpreting individuals and society.

Despite the fact that Darwin's books were not translated into Turkish, it is possible to see the systematic introduction of evolutionary theory, including Lamarckian theory, to Ottoman audiences after the Young Turk revolution of 1908, which was a turning point in the intellectual history of the empire. In the past, Ahmed Midhat Efendi and other authors had briefly mentioned Darwin and his theory, but comprehensive books and journals on biological evolution emerged after 1908. Three remarkable authors who introduced the subject were Subhi Edhem, Edhem Necdet, and Memduh Süleyman. Subhi Edhem believed that Ottoman youth had insufficient knowledge of evolution, so he wished to popularize the latest scientific developments. As well as publications on Lamarckian theory of evolution, he wrote a book on Darwinism which was derived from his course on natural history. However, while introducing this theory, he emphasized its weak points as well. He was not an ardent supporter of this scientific argument, and his main goal was simply to introduce it to its students and to general readers. Like Subhi Edhem, Edhem Necdet praised Darwin's success in explaining natural forms using a secular approach, but he had a critical stance toward the theory. He looked for other factors that influenced the course of evolution in nature. He favored the idea of evolution for interpreting society, his critical approach to biological evolution notwithstanding. He assumed that organisms and society were similar and accepted an organicist understanding of society. Of the three, the place of Memduh Süleyman is distinguished since he translated a book critical of Darwinian theory. Probably, he found the introductory and critical approaches of Subhi Edhem and Edhem Necdet insufficient and thus decided to translate the book of Eduard Hartmann. In other words, he wished that the introduction of biological evolution not go unchallenged in the Ottoman Empire and that youth learn its weak points.

The aforementioned thinkers played a significant role in the introduction of Darwinian theory, but contributions in the field of physical anthropology should not be ignored. In particular, the legacies of Mustafa Satı and Şemseddin Sami in this field are striking. Both believed in the change of organisms in the past and favored the idea of biological evolution. They are mindful of the importance that biology had in the interpretation of individuals and society. Particularly, Satı advocated an anthropology that dealt with the natural history of humankind and assumed the existence of a close relationship between racial anthropology and biology. Like many thinkers, he favored an organic understanding of society. Şemseddin Sami, unlike Satı, used both science and religious teaching in his explanation of natural life. Even so, he played a considerable role in the making of the literature on scientism.

While the Darwinian evolutionary theory was being introduced to the Ottoman Empire, its opponents also began to publish a critical literature. Those who feared Darwinian evolution criticized it in order to protect their societies from collective and individual degeneration. The main motivations behind anti-Darwinism were social and religious. There were scientific arguments against the theory postulated by some conservative Ottoman intellectuals such Mehmet Emin Feyzi and İsmail Fenni, but what their primary concerns were related to the potential outcomes of the acceptance of this theory. Any explanation of natural life without reference to the divine references would mean the elevated position of God on earth. The popularization or public acceptance of biological evolution had the capacity to alienate the masses from religion. In fact, their concerns were conventional and similar to others expressed throughout the world. Darwinian theory was assumed to occupy a pivotal place in materialist philosophy, and the aforementioned thinkers regarded it as subversive for a Muslim society. Opposition to Darwinian theory was indirect because the theory was placed in a materialist context in the intellectual realm. That is, Darwin's thoughts were assumed to belong to materialism, and anti-Darwininst sentiments were targeted mainly at materialist thoughts.

Anti-Darwinists in the Ottoman Empire sought a science whose findings would not and should not conflict with the teachings of Islam. Their religious and social concerns formed their attitudes towards Darwin. There is a striking point here. Despite the harsh criticisms of Darwinian theory, Lamarckian

theory was not subject to such evaluations. The former was demonized all over the world. As a hotly-debated issue, Darwinian theory was assumed to be the biological basis of materialist philosophy. Despite the harsh criticisms some authors like Ömer Faruki attempted to reconcile Islam and Darwinian evolution. In doing so, he tried to demonstrate that Islam was a friend of science. Indeed, anti-Darwinists in the Ottoman Empire were not against science. Their concern was to protect the pillars of Islamic teaching and Islamic values against scientific findings that could harm them. Even though in their worldview they did recognize science as an absolute guide, it was seen as a well-respected guidance.

The rise of Darwinian theory in modern Turkey was stunning due to the construction of the secular state on the ruins of the Ottoman Empire. The founders of modern Turkey, the Kemalist elite, sought a state and society whose main pillars would be based on science, which was assumed to have an exalted place in life. While implementing radical reforms to make the country and society more secular, statesmen profited from science so much that the early Republican period can be called the zenith of scientism. In fact, modern Turkey inherited certain secular aspects of the Ottoman intellectual legacy. The process of secularization that had deep roots in the Ottoman past gained momentum. The abolishment of the sultanate, caliphate, and madrasas meant the decreasing influence of Islam in the decision-making of the state. In other words, religion was not a point of reference for Kemalist leaders who wholeheartedly embraced a more secular policy.

While the Republican regime was creating a secular Turkish identity, Islam was not regarded as an important element of national identity. Education and sciences like anthropology and history were the most significant fields in this context in Turkey. These sciences were the flagship of "the cultural revolution" of the 1930s and were promoted by the state. Kemalist rulers had some racial concerns because Europeans regarded the Turkish people as a member of an inferior (yellow) race. Anthropology were recognized as the instruments to get rid of these claims about the nation. Thus, both anthropology and history developed enormously as the science of the state. As a result, racial anthropology, which benefited from a secular approach to biology, medicine, and history was promoted by the state.

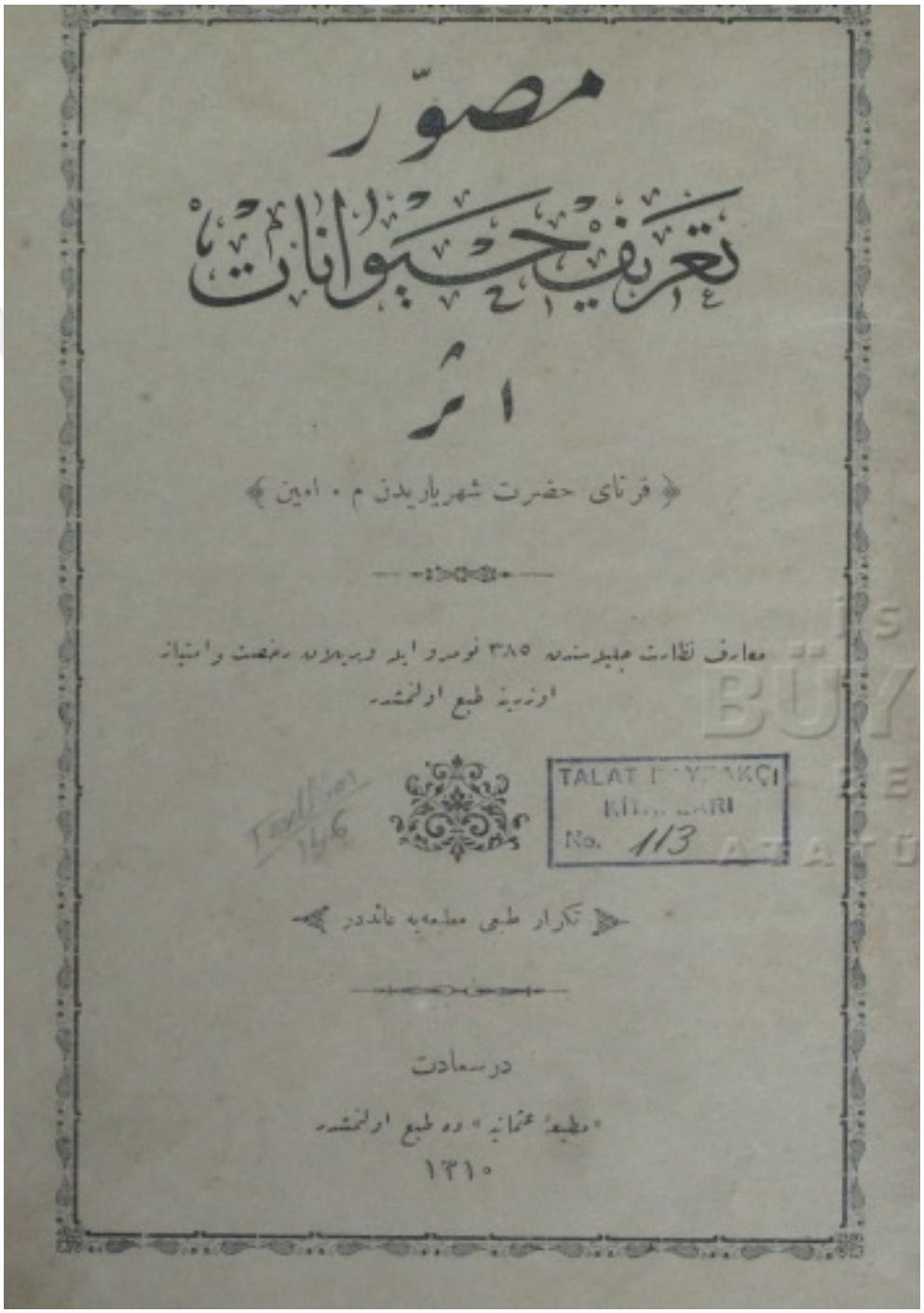
While the Republican regime was creating a new citizen, the past of humanity required a reinterpretation in accordance with the needs of the political power. Anthropology and history were regarded as the tools to create the citizens that the Kemalist elite envisaged. That is, the history of humankind had to be explained from a secular point of view. Even though some Ottoman textbooks were used in the 1920s, new ones had been prepared by the end of this decade. Evolutionary theories, including Lamarckian theory, were promoted to students in the new school textbooks. In particular, textbooks on biology, geology, and history were striking in this respect. The new regime was unafraid of the implications of Darwinian theory and promoted it through education. The state played a leading role in rewriting these educational materials, and the president, Atatürk himself was involved in this process. His interest in the preparation of new books was a signal of the state's effort.

Evolution became a part of curricula and the state paved the way for its popularization through education. What Atatürk wanted was textbooks based completely on scientific facts. His contribution to the institutionalization of science in Turkey was influential even after his death. When he passed away in 1938, textbooks continued to contain Darwinian interpretations, but it is obvious that his death meant the lack of a strong encouragement for the scientific breakthrough of the 1930s. His enormous support for anthropology, history, and archeology led to considerable developments in Turkish intellectual life and paved the way for their institutionalization. It can be argued that the influence of Darwinian theory gradually decreased after 1938, but did not disappear completely.

As the state had a decisive role in intellectual life, voices of anti-Darwinists were stifled. In particular, the era post-1925 witnessed the appearance of an authoritarian regime under which intellectual plurality suffered. The Şeyh Said Rebellion, a challenge to the secular, nationalist character of the new regime, frightened Kemalist rulers. Even so, some anti-materialist thinkers like İsmail Fenni opposed Darwinian theory in the 1920s, even as it was promoted and popularized by the state itself. Thus, the anti-Darwinists remained in the background in these golden years of scientism in Turkey.

All in all, the history of the Darwinian theory in the Ottoman Empire and Turkey did not follow a straight line and was influenced by political

conjunctures. The debates on it were motivated not only by scientific, but also by political, religious, and social concerns. Also, this hotly-debated issue must be placed in the context of materialism since it was recognized as a cornerstone of materialist philosophy. Many anti-Darwinist thinkers equated it with materialism and worried about its implications for society and religion. The secular trend in the state, society, and other fields of life, which had begun in the Ottoman Empire, peaked in the early Republican period.



مصوّر

تعريف حيوانات

اثر

﴿ قرنای حضرت شهریاریدن م ۰ امین ﴾

معارف نظارت جلیله‌سنده ۳۸۵ نومرو ایله ویریلمه رخصت و امتیاز
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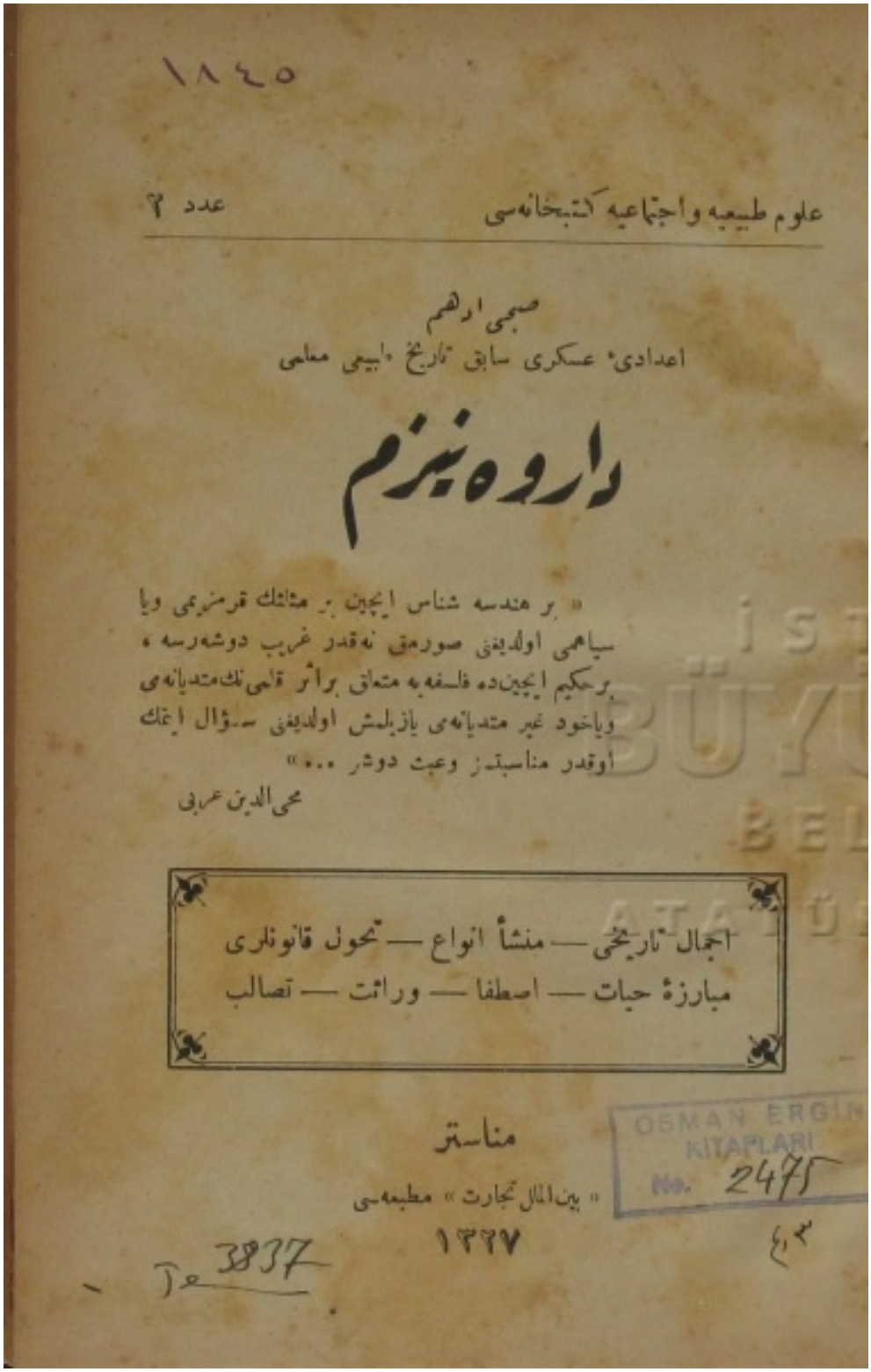
﴿ تکرار طبعی مطبعه‌یه عائددر ﴾

درسعادت

مطبعهٔ عثمانیه ده طبع اولنمشدر

۱۳۱۰

Appendix B Subhi Edhem - *Darvenizm*



١٨٤٥

علوم طبیعیه واجتماعیه کتبخانه‌سی عدد ٢

صبحی ادهم

اعدادی عسکری سابق تاریخ طبیعی معلمی

داروه نیزم

« بر هندسه شناس ایچین بر مثلثك قرمزیمی ویا سیاهمی اولدیغی صورمق نه‌قدر غریب دوشه‌رسه ، برحکیم ایچین‌ده فلسفه‌یه متعلق براثر قالمی‌دیگی‌تقدیرده ویاخود غیر متدیانه‌می یازیلمش اولدیغی سؤال ایتمك اوقدر مناسبتسز وعیث دوشر ... »

محی‌الدین عربی

اجمال تاریخی — منشأ انواع — تحول قانونلری
مبارزهٔ حیات — اصطفا — وراثت — تصالب

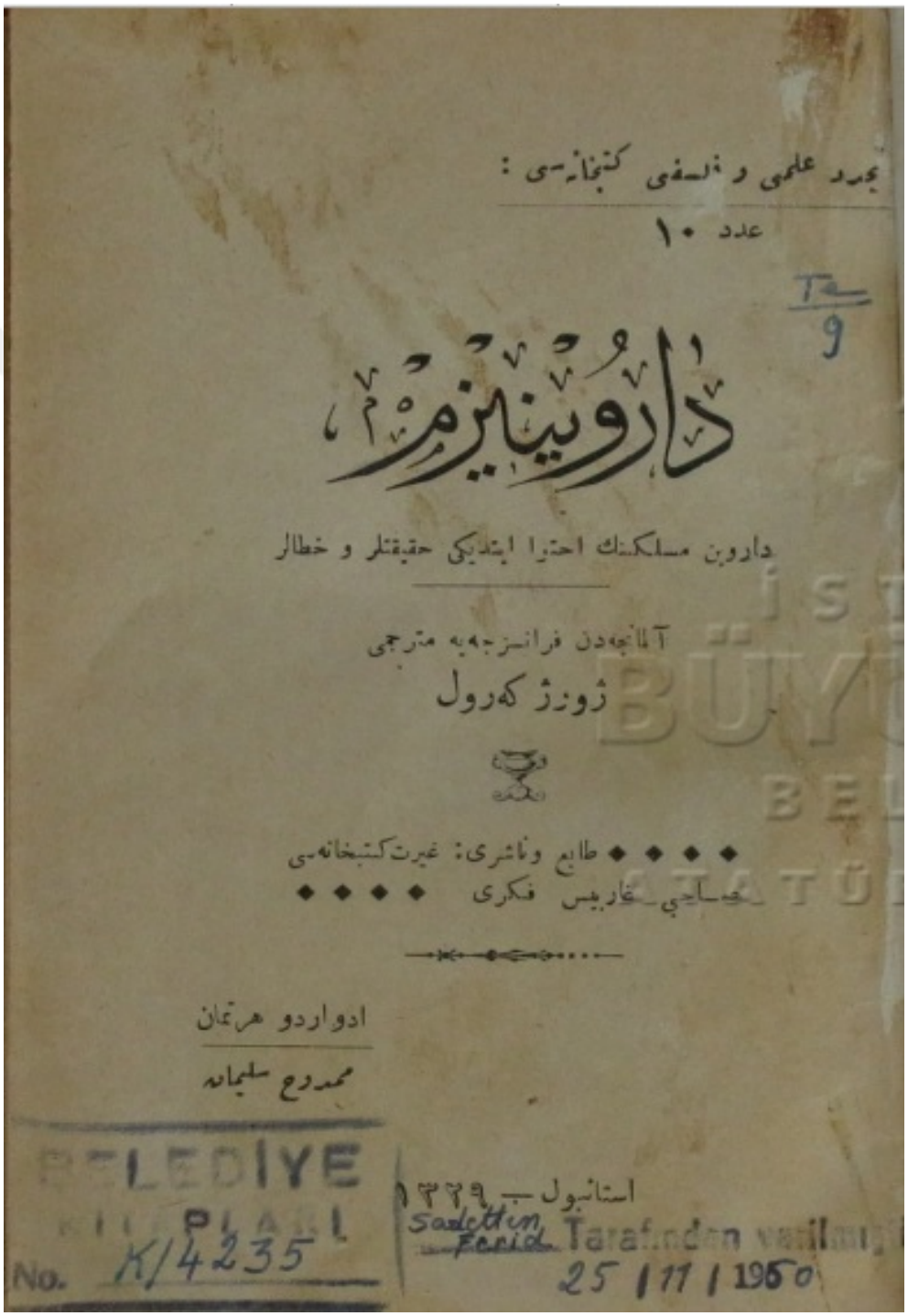
OSMAN ERGİN KİTAPLARI No. 2475

مناستر

« بین‌الملل تجارت » مطبعه‌سی

١٣٢٧

Te 3837



مجرد علمی و فلسفی کتبخانه‌سی :

عدد ۱۰

T2
9

داروینیزم

داروین مسلکنك احتوا ایتدیکی حقیقتلر و خطالر

آلمانجه‌دن فرانسزجه‌یه مترجمی

ژوزژ که‌رول

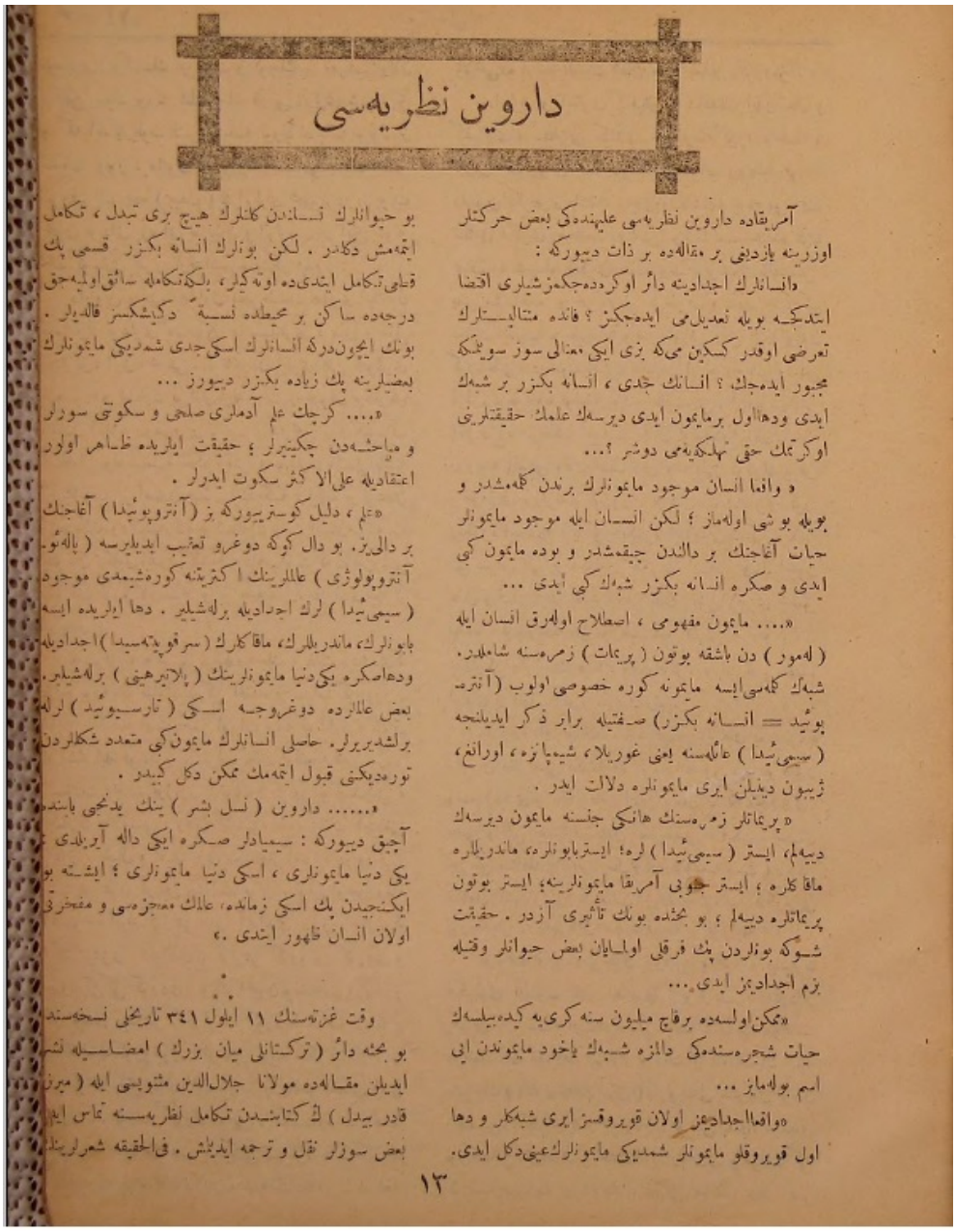
طابع وناشری: غیرت کتبخانه‌سی
صاحبی غاریس فکری

ادوارد هرتمان

ممدوح سلیمانه

BELEDİYE
PLAN
No. K/4235

استانبول — ۱۳۲۹
Sadettin Tarafından
Farid
25 / 11 / 1950



داروین نظریه‌سی

آمریقاده داروین نظریه‌سی علیهنده‌کی بعض حرکتلر اوزرینه یازدیغی بر مقاله‌ده بر ذات دیورکه :

«انسانلرك اجدادینه دائر اوکردده‌جکمز شیلری اقتضا ایتدکجه بویله تعدیل‌می ایده‌جکز ؟ فائده متنالیستلرك تعرضی اوقدر کسکین میکه بزی ایکی معنالی سوز سویلمکه مجبور ایده‌جك ؟ انسانك جدی ، انسانه یکزر بر شیمك ایدی ودها اول برمایمون ایدی دیرسه‌ك علمك حقیقتلرینی اوکرتمك حقی نهلکه‌یه‌می دوشر ؟...

« واقعا انسان موجود مایمونلرك برندن کلمه‌شدر و بویله بر شی اولهماز ؛ لکن انسان ایله موجود مایمونلر حیات آغاجنك بر دالندن جیقمشدر و بوده مایمون کبی ایدی و صکره انسانه یکزر شیمك کبی ایدی ...

«.... مایمون مفهومی ، اصطلاح اولهرق انسان ایله (له‌مور) دن باشقه بوتون (پریمات) زمره‌سنه شاملدر. شیمك کلمه‌سی‌ایسه مایمونه کوره خصوصی اولوب (آنتروپوئید = انسانه یکزر) صفتیله برابر ذکر ایدیلنجه (سیمی‌ئیدا) عائله‌سنه یعنی غوریلا ، شیمپانزه ، اورانغ، ژیبون دیکلن ایری مایمونلره دلالت ایدر .

« پریماتلر زمره‌سنك هانکی جنسنه مایمون دیرسه‌ك دییه‌لم، ایستر (سیمی‌ئیدا) لره؛ ایسترسه مایمونلره، ماندریللره ماقاکلره ؛ ایستر جنوبی آمریقا مایمونلرینه؛ ایستر بوتون پریماتلره دییه‌لم ؛ بو بحثده بونك تأثیری آزدر . حقیقت شوکه بوتلردن یك فرقلی اولمایان بعض حیوانلر وقتیله بزم اجدادیمز ایدی...

«ممکن اولسه‌ده برقاچ ملیون سنه کریه کیده‌بیلسه‌ك حیات شجره‌سنده‌کی دالمزه شیمك یاخود مایموندن ایی اسم بوله‌مایز ...

«واقعا اجدادیمز اولان قویروقسز ایری شیمکلر و دها اول قویروقلو مایمونلر شمدیکی مایمونلرك عینی‌دکل ایدی. بو حیوانلرك نسلدن کلمك هیچ بری تبدل ، تکامل ایتمه‌مش دکلدر . لکن بونلرك انسانه یکزر قسمی یك قطعی تکامل ایتدی‌ده اونه کلر، بلکه تکامله سائق اولیه‌جق درجده ساکن بر محیطده نسبةً دکیشکسز قالدیلر . بونك ایچون‌درکه انسانلرك اسکی‌جدی شمدیکی مایمونلرك بعضلرینه پك زیاده یکزر دیورز ...

«.... کرچك علم آدملری صلحی و سکوتی سوزلر و مباحثه‌دن چکینیرلر ؛ حقیقت ایلریده ظاهر اولور اعتقادیله علی‌الاکثر سکوت ایدرلر .

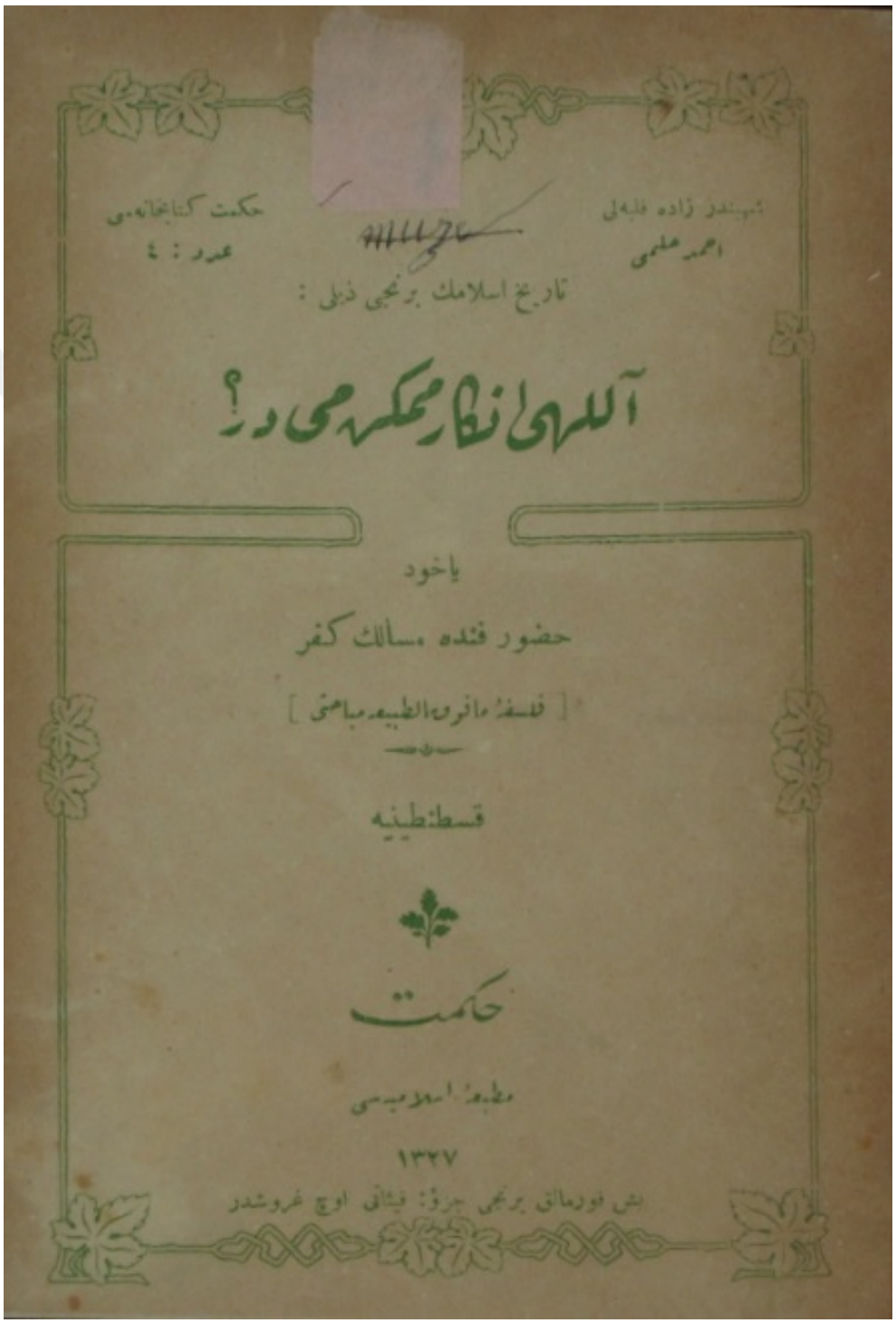
«علم ، دلیل کوستریورکه بز (آنتروپوئیدا) آغاجنك بر دالی‌یز. بو دال کوکه دوغرو تعقیب ایدیلیرسه (پالئو آنتروپولوژی) عالملرینك اکثریتنه کوره شیمه‌دی موجود (سیمی‌ئیدا) لرك اجدادیله برله‌شیلیر . دها ایلریده ایسه مایمونلرك، ماندریللرك، ماقاکلرك (سرقوپیته‌سیدا) اجدادیله ودهاصکره یکی‌دنیا مایمونلرینك (پلاتیرهینی) برله‌شیلیر. بعض عالملرده دوغروجه اسکی (تارسیوئید) لرله برلشدیریرلر. حاصل انسانلرك مایمون‌کی متعدد شکللردن تورمدیکنی قبول اتمهمك ممکن دکل کیدر .

«..... داروین (نسل بشر) ینك یدنجی باسمده آچیق دیورکه : سیمیادلر صکره ایکی داله آیریلدی یکی دنیا مایمونلری ، اسکی دنیا مایمونلری ؛ ایشته بو ایکنجیدن پك اسکی زمانده، علمك معجزه‌سی و مفخرتی اولان انسان ظهور ایتدی .»

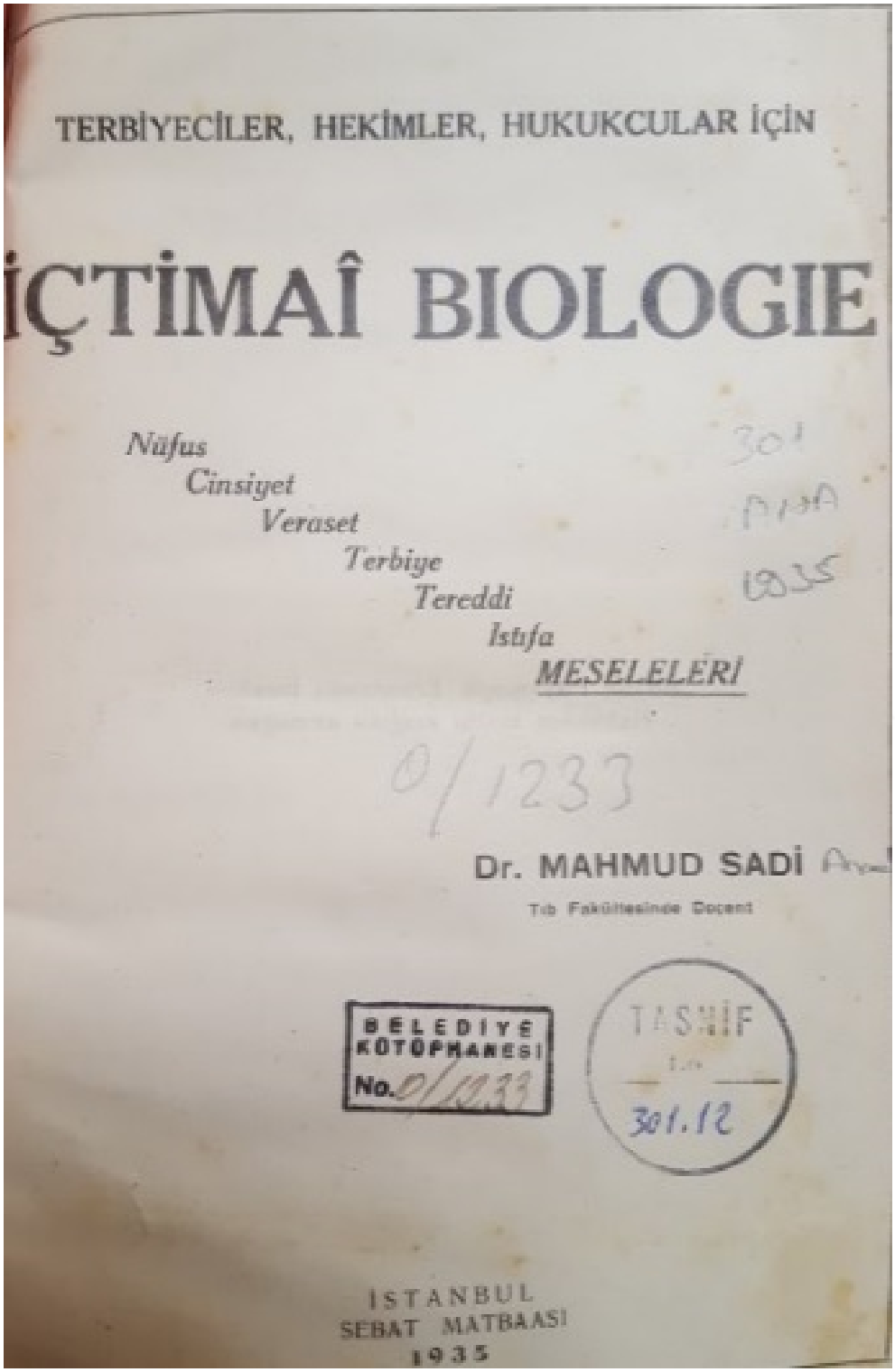
* * *

وقت غزته‌سنك ۱۱ ایلول ۳۴۱ تاریخلی نسخه‌سنده بو بحثه دائر (ترکستانلی میان بزرك) امضاسیله نشر ایدیلن مقاله‌ده مولانا جلال‌الدین مثنویسی ایله (میزان قدر بیدل) ك کتابشدن تکامل نظریه‌سنه تماس ایدن بعض سوزلر نقل و ترجمه ایدیلش . فی‌الحقیقه شعرلرینك

Appendix E Filibeli Şehbenderzade Ahmed Hilmi - *Allah'ı İnkar Mümkün müdür?*



Appendix F Mahmud Sadi - *İçtimaî Biologie*



TERBİYECİLER, HEKİMLER, HUKUKCULAR İÇİN

İÇTİMAÎ BIOLOGIE

Nüfus
Cinsiyet
Veraset
Terbiye
Tereddi
Istıfa
MESELELERİ

301
PİSA
1935
0/1233

Dr. MAHMUD SADİ
Tıb Fakültesinde Docent

BELEDİYE KÜTÜPHANESİ No. 0/1233
TASNİF
301.12

İSTANBUL
SEBAT MATBAASI
1935

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