



From Padua to Istanbul: *Peregrinatio Medica* of Joseph Solomon Del Medigo (1591-1655) and Tobias Cohen (1652-1729)

Padua'dan İstanbul'a *Peregrinatio Medica*: Joseph Solomon Del Medigo (1591-1655) ve Tobias Cohen (1652-1729)

Abdüssamet Yılmaz¹ 



¹İTÜ Lisansüstü Eğitim Enstitüsü Bilim ve Teknoloji Tarihi Programı, İstanbul, Türkiye

ORCID: A.Y. 0000-0001-8460-5258

Corresponding author/Sorumlu yazar:

Abdüssamet Yılmaz,

İTÜ Lisansüstü Eğitim Enstitüsü Bilim ve Teknoloji

Tarihi Programı, İstanbul, Türkiye

E-mail/E-posta: yilmz.abdussamet@gmail.com

Submitted/Başvuru: 13.09.2022

Revision Requested/Revizyon Talebi:

02.10.2022

Last Revision Received/Son Revizyon:

15.11.2022

Accepted/Kabul: 25.11.2022

Published online/Online yayın: 06.01.2022

Citation/Atf: Yılmaz, Abdüssamet. "From Padua to Istanbul: *Peregrinatio Medica* of Joseph Solomon Del Medigo (1591-1655) and Tobias Cohen (1652-1729)." *Osmanlı Bilimi Arařtırmaları* 24, 1 (2023): 199-215.
<https://doi.org/10.26650/oba.1174793>

ABSTRACT

This paper examines the stories and works of two Padua-trained Jewish physicians, Joseph Solomon Del Medigo (d.1655) and Tobias Cohen (d.1729) who traveled between major urban centers of the Eastern Mediterranean. In the early modern Mediterranean, Jewish physicians served as the vectors of knowledge between different geographies. The paper will start by rendering the learning and practicing medicine in 16th and 17th century Padua and then move on to the experiences of the abovementioned physicians in the Ottoman Empire with a particular focus on their biographies. The final section of the article will focus on the reasons and consequences of their sojourn in the Ottoman Empire. In addition to scientific quests, the paper argues that Del Medigo and Cohen headed towards the East with religious motives, the realization of which could only be made possible by the career opportunities offered by the Ottomans. This paper will conclude that the stories of Del Medigo and Cohen pose an episode of the coalescent nature of European and Eastern Mediterranean science.

Keywords: Solomon Del Medigo, Tobias Cohen, Early Modern Mediterranean, Ottoman History of Science

Öz

Bu çalışma, Padua'da tıp eğitimi almış ve bir müddet Osmanlı İmparatorluğunda mesleğini icra etmiş olan Yahudi doktorlardan Joseph Solomon Del Medigo'nun (ö.1655) ve Tobias Cohen'in (ö.1729) biyografilerini ve eserlerini inceleyecektir. Erken modern dönemde, bu iki ismin örnek teşkil ettiği üzere Yahudi doktorlar Akdeniz'in farklı köşeleri arasında bilgi vektörleri olarak hizmet ediyorlardı. Bu makale öncelikle 16. ve 17. yüzyıllarda Padua'da tıp eğitimi ve uygulamalarını ele alıp ardından bu iki hekimin Osmanlı İmparatorluğu'ndaki deneyimlerine odaklanacaktır. Bu çalışmanın temel iddiası bu hekimlerin Osmanlı İmparatorluğu'na göç etmelerinin sebebi olarak mesleki ve bilimsel faktörlerin yanında dini saiklerin de oldukça etkili olduğudur. Del Medigo ve Cohen'in zihinlerindeki dini tekamülün gerçekleşmesi ancak Osmanlıların kendilerine sunduğu kariyer fırsatlarıyla mümkün olmuştur. Bu iki hekimin hikayesinin, erken modern biliminin esnek ve bütüncül doğasının bilim tarihi alanındaki yansımaları olduğunu iddia eden bu çalışma, dini ve bireysel amillerin Osmanlı bilimlerinin dönüşümündeki rolünü anlama çabasıdır.

Anahtar Sözcükler: Erken Modern Akdeniz Tarihi, Osmanlı Bilim Tarihi, Solomon Del Medigo, Tobias Cohen



Introduction

Jewish physicians were important actors in the Ottoman medical landscape in the early modern period. Their initial popularity of them started with the flow of expelled from Iberia in the 15th and early 16th centuries. By the 17th century, one observes a second flow in the number of Jewish physicians some of whom were educated in different parts of the Ottoman Empire whereas a considerable amount came from European states. Journey to the East was common among the European Jewry because the Ottoman world lacked the limitations one would observe in contemporary Europe.¹ For this reason, the Ottoman territories were the destination for Jews from all walks of life and different skills. Among these skills, medicine was naturally the most sought-after. Those with an educational background often obtained their degrees in the medical school of Padua.

Padua was a major center of science in the 16th and 17th centuries. After the city became a part of the Republic of Venice, the university found great support from the Republic. Its relative freedom from the Papal authority and proximity to the city of Venice provided the university with significant opportunities. They were able to grant education to Jews and protestants. The university, certainly, was benefitting from the most productive printing presses of the time in Venice. As a result, it became an attractive center for higher education.² Between the 14th and 17th centuries, and the five chairs of the school were structured around theoretical medicine, practical medicine, anatomy and surgery, botany, and semeiotic.³ The university's motto was '*Universa universis patavina libertas*' meaning 'Paduan freedom is universal for everyone'. Among its most renowned graduates were Nicolaus Copernicus (1473–1543), Andreas Vesalius (1514–1564), Gabriele Falloppio (1523–1562), and William Harvey (1578–1657); some of whom later became a professor in the same university.

George Newman emphasizes four Paduan teachers as the pioneers: the anatomist Vesalius who revealed morphology as the bedrock of systematic medicine; the physician Fracastorius (d. 1553) who was the first of the moderns mention infection and epidemiology; Fabricius (d. 1619), who practiced as a surgeon, was one of the greatest of the early exponents of the

1 For an overview of the history of Jews in the Ottoman Empire, see Stanford J. Shaw, *The Jews of the Ottoman Empire and the Turkish Republic* (New York: New York University Press, 1991); Yaron Ben-Noeh, *Jews in the Realm of the Sultans: Ottoman Jewish Society in the Seventeenth Century*, (Tübingen: Mohr Siebeck, 2008); Dina Danon, *The Jews of Ottoman Izmir: A Modern History* (Stanford: Stanford University Press, 2020).

2 On the University of Padua see Jerome J. Bylebyl, "The School of Padua: Humanistic Medicine in the 16th Century," in *Health, Medicine and Mortality in the Sixteenth Century* (1979), ed. Charles Webster (Cambridge: Cambridge University Press, 1979), 335-370; David B. Rudermann, "Padua and the Formation of a Jewish Medical Community in Italy," in *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven and London: Yale University Press, 1995), 100-118; Michael Stolberg, "Learning Anatomy in Late Sixteenth-Century Padua," *History of Science* 56, 4 (2018): 381–402.

3 F. Zampieri, A. Zanatta, M. Elmaghawry, M. R. Bonati, and G. Thiene, "Origin and Development of Modern Medicine at the University of Padua and the Role of the "Serenissima" Republic of Venice," *Global Cardiology Science and Practice* 21 (2013): 151.

elements of physiology and embryology who practiced as a surgeon; and Galileo Galilei (d. 1642), the discoverer of the true laws of motion and initiator of the physical measurement of physiological processes.⁴ These professors were some of the many scientists contributing to the advanced medical study in Padua. Giovanni Battista de Monte (d.1551) and Antonio Fracanzani (d. 1567) made use of systematic bedside teaching, focusing on hands-on treatment which was not a common practice at that time.⁵

Early Modern medicine intertwined with novelties and traditions. In the initial phases of the Renaissance, the translations of Latin and Greek sources and the encounters with works compiled in Arabic, and the examples of Islamic institutions such as hospitals transformed medicine. In the later phases of the Renaissance, studying the body brought about complete novelties. After the structure of the brain and internal organs were better understood by disclosing the shortcomings of Galenic teachings, anatomy theatres became an important part of early modern Europe. Vesalius transformed the approach to the human body by uncovering mistakes in Galenic teachings. After Vesalius, William Harvey, educated in Padua, discovered the circulatory system which was also an extremely important achievement for the study of the human body.

While all these novelties were emerging, on the one hand, there continued a co-existence of traditional and mystical thoughts. The latter became an element of dialogue through engaging with the novelties.⁶ Paracelsus, for example, rejected Galen and many of the textual teachings; he suggested that the human body could be cured by chemical methods in which alchemy, mysticism, and magic were intertwined. This episode was a period dominated by the views that man was a microcosm of the universe (i.e., the macrocosm) and that this harmony could be preserved by the harmony of substances in nature. Also, there were no clear lines between disciplines trying to understand nature and people.⁷ Therefore, astronomy, alchemy, medicine, and mysticism overlapped at many points.

Jewish physicians, on the other hand, were neither completely inside nor outside the scientific revolution that was happening in Europe.⁸ They could only study at universities

4 Herbert R. Spencer, "A Century of Medicine at Padua," *The British Medical Journal* 1, 3196 (1922): 543.

5 Michael Stolberg, "Bedside Teaching and the Acquisition of Practical Skills in Mid-Sixteenth-Century Padua," *Journal of the History of Medicine and Allied Sciences* 69, 4 (2014): 633–664.

6 On the origins of Early Modern Science, see Steven Shapin, *The Scientific Revolution* (Chicago: The University of Chicago Press, 1996).

7 For an overview of the Early Modern Science, see Laura Gowing, "Knowledge and Experience, C. 1500–1750," in *The Routledge History of Sex and the Body: 1500 to the Present* (1st ed.), eds. S. Toulalan and K. Fisher (London: Routledge, 2016), 239–256; Nancy G. Siraisi, "Medicine, 1450–1620, and the History of Science," *Isis* 103, 3 (2012): 491–514.

8 For Jews and the Scientific Revolution, see Adam Shear, "Science, Medicine, and Jewish Philosophy," in *The Cambridge History of Judaism*, vol.7, ed. Jonathan Karp and Adam Sutcliffe (Cambridge: Cambridge University Press, 2017), 522–549. Alex G. Keller, "Science in the Early 'Haskalah'," *European Judaism: A Journal for the New Europe* 24, 2 (1991): 8–13; and Noah J. Efron, "Jewish Thought and Scientific Discovery

with special permission or by conversion, except Padua, and they were not allowed to treat non-Jews. For this reason, many Jews either converted or went to Padua. Although Jews were dominating medicine in this period, their opportunities were insufficient in comparison to gentiles. The fact that being a physician has become a family profession should be an important factor in the emergence of Jewish predominance. After completing their education, Jewish doctors could practice their profession in their community or enter the service of non-Jewish nobles through patronage relations or they could travel to the Ottoman lands where they could pursue both.⁹

In this study, I examine the stories of two Padua-trained Jewish physicians, Joseph Solomon Del Medigo (d. 1655) and Tobias Cohen (d.1729). I aim to start by picturing the learning and practicing medicine in 16th and 17th century Padua. Then I move on to the experiences of the two physicians in Ottoman Empire with a particular focus on their biographies. The last section of the study focuses on the reasons and consequences of their sojourn in the Ottoman Empire. I argue that Del Medigo and Tobias Cohen headed toward the east with religious motives the realization of which could only be made possible by the opportunities offered by the Ottoman Empire. Consequently, their stories render an episode of the coalescent nature of European and Eastern Mediterranean's early modernity which is characterized by cross-cultural scientific exchanges.

I. Jewish Medical Students of Padua

Among all the other universities Padua played the most crucial role for the Jews who aimed to study medicine in the early modern period. The popularity of the university among Jews did not merely draw from its scientific superiority and the opportunities that the Republic of Venice offered. They were rather compelled to choose Padua for their medical training. Because in the 16th and 17th centuries, Jews were only admitted to European universities either by exemption or conversion. Padua, on the other hand, had a different story. While most medieval universities were founded by Papal decree in Europe, Padua was established by professors and teachers of Bologna which give greater room for freedom to Paduans in their university's institutionalization. Also, Venice had a considerable Jewish population. It was the first Italian city to create a compulsory area (ghetto) for Jews which had expanded with the influx of Jews in search of a haven after Pope Paul IV (1476-1559) initiated strict religious policies in 1555.¹⁰

in Early Modern Europe," *Journal of the History of Ideas* 58, 4 (1997): 719–32.

9 For the distribution of Jewish physicians in the Ottoman Empire, see Abraham Galante (Avram Galanti), *Médecins juifs au Service de la Turquie* (İstanbul: Babok, 1938).

10 Cristiana Facchini, "The City, the Ghetto and Two Books. Venice and Jewish Early Modernity," in *Modernity and the cities of the Jews*, ed. Cristiana Facchini, *Quest. Issues in Contemporary Jewish History* 2 (2011): 15-16; David B. Rudermann, "Medicine and Scientific Thought in the Ghetto: The Cultural World of Tobias Cohen," in *The Jews of Venice: A Unique Renaissance Community*, eds. Robert C. Davis and Benjamin Ravid

Although Venice and Padua were tolerant towards its Jewry, Papal decrees continued to emphasize drawing strict lines between Jews and Christians. Especially, the growing presence of Jewish physicians did not go unnoticed. Pope Gregory XIII (1502-1585) issued a papal bull in 1581 about the treatment of Christians by Jews or other infidels:

...shall have dared to act in opposition to them, let the sacraments of the church in no wise be administered to him, not even by those regularly exempt: and if he should die thus, let him not have Christian burial; and let them not neglect to notify the sick men of the parish of these things at an appropriate time, especially when they shall have known that a Jewish or other infidel physician has been admitted by them, and furthermore, let the ordinaries themselves of places take due measures of punishment against the violators of this command: and as for the Jews themselves, let them none the less be punished in proportion to their transgressions according to the letters of the aforesaid Pontiffs Paul and Pius issued against them.¹¹

As it is clearly stated here, treatment by a Jewish physician would be severely punished in case the patient succumbs. Should the patient survive, the punishment for both the physician and the one who called him was 25 scudi.¹² It is important to note that Gregory XIII did not establish a new rule, he rather reminded and emphasized the rules of his predecessors. The question to be asked here is why did he feel compelled to remark on his predecessors' rules?

Firstly, the number of medical students was on the rise. Rudermann believes between 1520-1605, the recorded number of Jewish students in Padua was 29 which dramatically rose to 320 in the following two centuries.¹³ Friedenwald puts forth a different number. He suggests that between 1517-1619 some 80 Jewish students obtained medicine degrees from Padua.¹⁴ Leaving the exact numbers aside, both data attest that from the late 16th to early 17th centuries Padua started to attract more Jews for medical training. Hence, Pope Gregory XIII needed to remind the public of the possible outcomes of the rising Jewish physicians.

Secondly, rather than warning people of a possible case, the Pope might have stimulated by actual cases due to teaching being a popular way of practical teaching in 16th-century Padua. Two prominent professors Giovanna Battista da Monte (1498-1551) and Antonio Fracanzani (1506-1567) made systematic use of the teaching opportunities which the hospital of San Francisco offered.¹⁵ This method intended to give students hands-on training, but

(Baltimore: Johns Hopkins University Press, 2001), 191-210.

11 Gregory XIII, "Letter," (1581), quoted in Harry Friedenwald, "Jewish Physicians in Italy: Their Relation to the Papal and Italian States," in *Publications of the American Jewish Historical Society*, no. 28, eds. R.C. Davis and B. Ravid (Baltimore: American Jewish Historical Society, 1922), 175.

12 *Ibid.*, 181.

13 David B. Rudermann, "Padua and the Formation of a Jewish Medical Community in Italy," in *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven and London: Yale University Press, 1995), 109.

14 Friedenwald, "Jewish Physicians," 201.

15 Michael Stolberg, "Bedside Teaching and the Acquisition of Practical Skills in Mid-Sixteenth-Century Padua,"

as a necessity of the method students came into direct contact with patients. In this case, Jewish students who ideally should be only in training had a chance to create a network with people of the city. Therefore, in reality, the sharp line between Christian patients and ‘infidel’ physicians that Gregory XIII was trying to remind could be blurred at some points.

The line between Christian and Jewish students was more definite, however. The financial burden of training was heavier for Jews if not at all unbearable. They paid higher tuition than Christians and they had additional taxes on various occasions. For example, before graduation Jews had to give 170 pounds of sweetmeat to be delivered to Christian students.¹⁶ In addition to the financial load, there must be a burden of conscience. The tolerance was made only for their training, the essence of the university was still Catholic and hence the institutional setting did not allow religious teaching for Jewry. Padua graduate Solomon Del Medigo voiced his concerns as first the light of Torah and then philosophizing in Padua.¹⁷ Similarly, another Padua graduate Tobias Cohen stated that no Jews “should consider studying medicine without first filling the belly with the written and oral Torah”.¹⁸ Probably, upon feeling the unrest rose from being surrounded by non-Jews, the two prominent graduates of Padua underlined the importance of religious teaching as a prerequisite for their training in Padua.

As the university consisted of student bodies according to their nation, Jewish students like Del Medigo and Tobias Cohen belonged to a body of the nation; although some historians suggest that the Jewish students formed a religious body of their own irrespective of the country of origin.¹⁹ The latter claim has not been widely accepted as Rudermann showed that “most of the non-Italian Jewish students belonged either to the German or Polish nations.”²⁰ Together with Iberians and Ottomans, Jews from approximately five different backgrounds shared a common-place in Padua thanks to their medical training. This makes Padua a perfect cultural milieu for Jewry. The university provides them with a unique opportunity for cultural, religious, and scientific exchange. From this perspective, it is possible to argue that Padua served its Jewry as an early example of early modern scientific societies. There were scientists from different backgrounds, the leading publishing center Venice was nearby, and most importantly Jews trained in Padua established a network of their own.

These networks created fruitful opportunities for them. In praising his teacher Solomon Conegliano (d. 1719), Tobias Cohen (d.1729) notes the following about Conegliano’s

Journal of the History of Medicine and Allied Sciences 69, 4 (2014): 633–664.

16 Rudermann, “Padua,” 110.

17 Joseph Del Medigo, *Sefer Elim* (Odesa: M. Grinshpan, M.E. Belinson, 1864-67), 63, quoted in Rudermann, “Padua,” 111.

18 Tobias Cohen, *Ma’aseh Tuviyyah* (Cracow, 1908). Reprint New York, 1974), 82, quoted in Rudermann, “Padua,” 111.

19 Jacob Shatzky, “On Jewish Medical Students of Padua,” *Journal of the History of Medicine and Allied Sciences* 5, 4 (1950): 446.

20 Rudermann, “Padua,” 108.

students: “some of whom become rabbis and some of whom become physicians to kings and important princes; for I am the least notable among them all.”²¹ Although he is being modest himself; Tobias Cohen was also a renowned physician. He served the Ottoman sultans in Edirne and Istanbul. These two cities were maybe the most popular destinations for Padua-trained Jewish physicians. Among the various examples of physicians who headed towards the East to sojourn in this popular destination, a couple of names offer interesting stories. Two of them who have already been mentioned so far i.e., Joseph Solomon Del Medigo and Tobias Cohen, will be the focus of the following chapters.

II. Heading Towards the East

Joseph Solomon Del Medigo (1591-1655)

In January 1619, a little yet shiny celestial body swept away the cold and darkness of the winter night with the amazement it resonated among the people of Istanbul. The ones who were able to restrain their amazement sought for wisdom of people. As luck would have it, there was a visiting scholar at the Jewish community of Istanbul at that time who had the privilege of being a student of the great astronomer Galileo Galilei. People rushed into his room, unable to explain their astonishment, and told him to just look up. Joseph Solomon Del Medigo followed their call, then recorded that night as follows:

...they took me out and said, “Look at the heavens.” I raised my eyes and saw a wide and long-tailed star [comet] burning and shining in the sky. I had never seen such a comet, and I had not read others’ works on something as big as this. Some of the crowd gathered around me, expecting to hear my teaching. Since they were terrified of this great novelty [the comet], they said: “Not for nothing has God sent this star, but instead to be a sign and precursor for a forthcoming event.” But I denied their requests [to make an astrological prediction] and told some of them that it [the comet] is a natural thing.²²

This passage belongs to the article on a comet that constitutes a small instance of Del Medigo’s *Sefer Elim* (Book of Palms) which was published in Amsterdam (1629) by the famous Menasheh ben Israel (d. 1657) who is the founder of the first Hebrew printing press. *Sefer Elim* covers Del Medigo’s responses to the scientific and religious questions that were sent to him. Besides *Sefer Elim* the other source for Del Medigo’s life is his short biography by one of his pupils Moshe Metz.

Joseph Solomon Del Medigo also known as Yashar of Candia was born in Crete (1591). He is a descendant of physician Elijah Del Medigo (d.1493). Solomon had an adventurous

21 Cohen, “*Ma’aseh Tuviyyah*,” quoted in Rudermann, “Padua,” 112.

22 Joseph Solomon Del Medigo, Maamar ‘al kochav shavit [An Article on a Comet], Jerusalem, Institute of Hebrew Manuscripts, Hebrew National Library (MS F 64619), quoted in Avner Ben-Zaken, “Transcending Time in the Scribal East,” in *Cross-Cultural Scientific Exchanges in the Eastern Mediterranean, 1560-1660* (Baltimore: Johns Hopkins University Press, 2010), 79.

career that had begun with his education at Padua and ended in Prague (1655). He practiced medicine only to make a living. Del Medigo's interests lie in various aspects of new natural philosophy, especially astronomy. Of course, Galileo Galilei must have played a crucial role in his interests. Del Medigo refers to Galileo as "rabbi Galileo" which, according to Brazilay, should be interpreted as a sign of respect, meaning my master.²³ Their intimacy is often attributed to the fact that he was one of the few who used and mentioned Galileo's telescope. In the ensuing parts of the passage above, Del Medigo notes that "The images of the stars change as much as they are close to [i.e., the closer they are to] the sun, as I observed several times through the glass of Galileo."²⁴ He rejected the Aristotelian explanation that the comets are dry exhalations of Earth which caught fire in the atmosphere. Instead, he put forth an alchemical explanation by calculating the amounts of the earth's water needed to create such a gaseous body, which he believes should be a thousand times bigger than earth; then he culminates that the comet could not be a gaseous body which belongs to the sub-lunar world.²⁵

After spending a couple of years among the Karaite communities of Alexandria and Constantinople, Del Medigo continued his travels in Eastern Europe until he arrived in Amsterdam. Together with experience and maturity;²⁶ Del Medigo acquired valuable manuscripts from the East. He was in search of the pure knowledge that Jewry possessed in ancient times. Although he aimed to publish those manuscripts, the publisher Mannesah ben Israel thought Del Medigo needed to write something about the new natural philosophy in Hebrew. Following this advice, Del Medigo then compiled the *Sefer Elim* in which he suggested his readers give the priority to the first Torah and then to philosophy.²⁷ By the time, the manuscripts he collected circulated among the Jews of Amsterdam and London contributing to the Messianic thought of the time.

Tobias Cohen (1652-1729)

A half-century later, Tobias Cohen picked up the suggestion of Del Medigo where he left off. He advised his reader that their aim should be "first filling the belly with the Torah then medicine."²⁸ Like Del Medigo, Cohen was also a Padua-trained physician who sojourned in Istanbul. Again, like Del Medigo he comes from a family of physicians. Tobias was born in Metz (1652) and started his medical training at the University of Frankfurt an der Oder. He and his friend Gabriel Felix were among the first Jews to be admitted to that university with an exceptional status granted by the Great Elector of Brandenburg however, their presence

23 Isaac Barzilay, *Yoseph Shlomo Delmedigo (Yashar of Candia)* (Leiden: Brill, 1974): 151.

24 Del Medigo, "An Article on Comet," quoted in Ben-Zaker, "Transcending Time," 81.

25 Ibid.

26 Del Medigo often refers to himself as "I was a boy in Constantinople", see Ben-Zaker, "Transcending Time", 82.

27 Del Medigo, *Sefer Elim*, 63, quoted in Rudermann, "Padua," 111.

28 Ibid.

at the university was not welcomed.²⁹ The two then moved to a more tolerant institution, University of Padua, where they found the support of Solomon Conegliano (1642-1719) and they received their medical doctor degrees in 1683.

Upon becoming a Doctor of Medicine, Cohen went to Poland to practice medicine. A couple of years later, Cohen moved to Adrianople where he became the court physician to five Ottoman sultans -from Mehmed IV (r. 1648-1687) to Ahmed III (r. 1703-1730). He composed his renowned book *Ma'aseh Toviyyah* (Work of Tobias) during his stay in Ottoman Empire and published it in Venice (1707). The book is an encyclopedic work those devoted sections to theology, and science, and is also famous for its illustrations of the human body with a house metaphor.³⁰ Apart from science and religion, the book's utmost importance is its discussion of the false messiah Shabbetai Zevi (d. 1676). Many Jews in the 17th century, including Solomon Del Medigo, expected and hoped to see the emergence of the Messiah. On the ground of this hope, the rise of Shabbetai aroused excitement among many Jews, but it was a great scandal that Shabbetai converted to Islam after he was captured by the Ottomans. The tone dominating Tobias Cohen's writings underlines this scandal. He observed and noted Shabbetai as a fool who did queer things and believed that because of his coreligionists' pathetic obsession with this false messiah, the image of Jewry among the Gentile world degraded.³¹ While the hope of catching up with Gentiles with science dominated Del Medigo's works in the early 17th century, the predominant tone of Tobias' works in the late 17th century was the feeling of cultural inferiority and embarrassment caused by the false Messiah.

III. Motives and Encounters

Solomon Del Medigo, Tobias Cohen, and many more Jewish physicians of the Early Modern period were attracted to Ottoman cities like Constantinople, Adrianople, Smyrna, and Alexandria. Henceforth, the reason for this popularity needs scrutiny. I think two reasons emerge as main motivations emerging out of enmeshed origins. First, the religious enthusiasm originated from a) the search for pure ancient knowledge, b) millenarian expectations, and c) living up to the new natural philosophy or catching up with the gentiles. Second, the career opportunities offered by the Ottoman Empire³² were made possible by a) Ottoman

29 David B. Rudermann, "On the Diffusion of Scientific Knowledge within the Jewish Community: The Medical Textbook of Tobias Cohen," in *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven and London: Yale University Press, 1995), 239.

30 Etienne Lepicard, "An Alternative to the Cosmic and Mechanic Metaphors for the Human Body? The House Illustration in *Ma'aseh Tuviyah* (1708)," *Medical History* 52, 1 (2008): 93-105.

31 Rudermann, "Tobias Cohen," 242.

32 How important was the medical doctor degree from Padua for Ottomans is a significant question. An elaborate discussion on this topic needs further scrutiny yet one major reason of the value given to the Padua degree might be attributed to Paduan commitment to Aristotelianism and Galenic humoralism; hence, their arrival at the Ottoman medical marketplace dovetailed with familiar humoralist ideas and theories. See Harun Küçük, "Natural Philosophy and Expertise: Convert Physicians and the Conversion of Ottoman Medicine," in "The

tolerance, b) practical medicine, and c) local and regional networks. In this chapter, I will first examine these factors and then briefly touch upon the other side of the coin to see what Jewish physicians offered to Ottomans.

The Religious Enthusiasm

In the early modern period, the search for pure ancient wisdom (*prisca sapientia*) was a common quest. Many believed that God bestowed the perfect knowledge to the ancients which had been tainted through time. Through diligent examination of the ancient sources, it was aimed to recover the perfect knowledge of nature. The Jewish community was no exception. In this vein, Del Medigo adventured in the Near East to discover the ancient's wisdom about the universe. He started collecting manuscripts from Alexandria and continued in Constantinople, and by the time he reached Europe, he had enormous amounts of books obtained from his journeys. His student Moshe Metz described him as someone who “swallowed in his stomach many books and never spared either his money or possible burden and far distance to collect books from whatever [place] he saw, heard of, or even was aware of. His treasure amounted to 7,000 books, with a price of 10,000 gold coins.”³³ In *Sefer Elim*, he makes his Jewish-hermetic ideas obvious which stresses that the pure ancient knowledge was given to Jews including the recent discoveries of Copernicus and Galileo as he believes “the wisdom was given to Moses in Sinai.”³⁴ The ceaseless efforts of collecting books that his student Moshe underlines above must have been driven by this idea.

Another common theme of the early modern period was the millenarian expectations. Jews and many Christians believed that the end of time will begin when the Jews return to Jerusalem. But before returning to Jerusalem, there were a series of events that were expected to happen. Among those events, some hold that the Karaite Jewish community - who were living in the Near East generally in the Ottoman Empire, would lead the return to Jerusalem. Because the Protestant theologians emphasized their exclusive faith in Scripture that rejected the Jewish tradition, Karaites were regarded as the true Jews or “Protestant Jews”.³⁵ That is probably why Del Medigo started his journey among the Karaite communities of Egypt and Constantinople. For Del Medigo, Karaites might have possessed manuscripts showing the pure knowledge of nature that was given to Jews in ancient times which might also prove the possible millenarian role that the community will play. Therefore, following these possibilities Del Medigo started collecting manuscripts from Karaites.

Although we do not certainly know whether Del Medigo believed in the role of Karaites communities in the eminent Jewish return to the Holy Lands, we know that he most certainly

Case for the Ottoman Enlightenment: Natural Philosophy and Cosmopolitanism in Eighteenth-Century Istanbul” (PhD diss., University of California, San Diego, 2012), 103-127.

33 Moshe Metz, “Introduction to Delmedigo,” *Sefer Elim*, viii, ix, quoted in Ben-Zaker, “Transcending Time,” 85.

34 Del Medigo, *Sefer Elim*, quoted in Ben-Zaker, “Transcending Time,” 90.

35 Ibid., 77.

believed that Karaites possessed ancient knowledge. Together with the books, he collected in the Near East, Del Medigo went to one of the centers of millenarian theologians. In Amsterdam (1623) he met with Mennaseh ben Israel who was the owner of the first Hebrew printing press and a prominent thinker of millenarianism. Upon his arrival to the city, Ben-Zaker argues that “Del Medigo suggested publishing some Karaite manuscripts that showed how some of the astronomical technicalities associated with the new post-Copernican astronomy were already known in the ancient past”³⁶ but Ben Israel directed him to write on the new natural philosophy. Therefore, the manuscripts he collected were not published. However, Del Medigo’s impact reached beyond his published book *Sefer Elim* (1629). According to Jacob Adler, Del Medigo was a major source for many thinkers of that time including Spinoza and Ben Israel³⁷ whereby his interpretation of the Karaite manuscripts circulated in the intellectual sphere.

Delegating the creation of a book on natural philosophy to Del Medigo, Menasseh Ben Israel himself delves into theological publishing. He compiles several books focusing on Talmud and classical texts mainly in Spanish aiming at Marrano readers; and he reaches the climax in 1650 with his renowned work *The Hope of Israel* (*Esperanca de Israel* in Spanish, *Spes Israelis* in Latin). After it was published, the book became the bible of millenarians. It discussed various prophetic events like the discovery of the lost tribes in Latin America. The book was soon published in 7 languages quickly reaching different parts of the world. Jacob Barnai argues that among the most avid readers of *The Hope of Israel* were the Marranos of Smyrna (Izmir).³⁸ Smyrna at that time was a multicultural center of the Eastern Mediterranean. The city enjoyed overseas trade by English and Dutch merchants where lived a significant Jewish community one individual of whom was Shabbetai Zevi. 6 years before the Shabbetai’s appearance as the Messiah, Mannesah’s *Esperance de Israel* was published in Smyrna (1659) by Rabbi Abraham Gabbai in the printing press that was set up by the Gabbai family.³⁹ Therefore, there emerges a chain of events starting with Del Medigo’s story, he became an indirect but significant participator of the Sabbetai’s Messianism which was an interesting episode of the greater story of early modern millenarianism. While Del Medigo did not have the chance to see this episode, Tobias Cohen was its direct witness who felt despised by the consequences of Sabbetai’s false messianism.

As for the third origin of religious enthusiasm, both Del Medigo’s and Tobias Cohen’s stories highlight the desire to catch up with Gentiles in the sciences. Both scholars were

36 Ibid.

37 Jacob Adler, “Joseph Solomon Del Medigo: Student of Galileo, Teacher of Spinoza,” *Intellectual History Review* 23 (2013): 141-157.

38 Jacob Barnai, “Christian Messianism and the Portuguese Marranos: The Emergence of Sabbateanism in Smyrna,” *Jewish History* 7, 2 (1993): 121.

39 Brandon Marriott, “The Lost Tribes in the Americas: Judeo-Christian Reciprocity across the Atlantic World (1648–1666)” in *Transnational Networks and Cross-Religious Exchange in the Seventeenth-Century Mediterranean and Atlantic Worlds: Sabbatai Sevi and the Lost Tribes of Israel* (London: Routledge 2015): 34.

educated at one of the great centers of scientific advancements and hence were well aware of the recent progress Gentiles made in natural philosophy. Del Medigo considered new scientific discoveries as a race. Further, noted his aim as “to show them [the Gentiles] our strength, and they should know that the Children of Israel are not the lightest in this race on the difficult issues of natural philosophy.”⁴⁰ In the same vein, Tobias contended that his purpose was to compile “a general text including several sciences and fields of knowledge to respond to those abusers (Gentiles) and to demonstrate to them that they were not the only beneficiaries of these sciences.”⁴¹

Although they were on the same page regarding the necessity of living up to the new natural philosophy, they differed in tone. Because there occurred a sharp line dividing the two stories. Del Medigo’s quest was only to catch up with Gentiles in sciences. Tobias’ endeavors, on the other hand, included reclaiming his communities’ honor that was devastated by the false messiah. Tobias voices his resentment as the disgrace of this false messiah “allow our enemies an opportunity to make fun of us and to defame us, almost providing a sword in the hands of the Gentiles to kill us”.⁴² Therefore, while both Del Medigo and Tobias aimed to enhance Jews’ prestige among the Gentiles, they differed in tone. Tobias was driven by the cultural inferiority that the false messiah caused. In other words, Tobias became a victim of the messianic episode which Del Medigo indirectly contributed 50 years before him.

The Career Opportunities

Apart from their religious motives for heading toward the East, there were also practical reasons. The latter must have been a facilitating factor for the realization of their religious quest if not all a necessity. Because to be able to wander, collect manuscripts, and compile a book in foreign lands; Del Medigo and Tobias needed income. Since they were physicians, they could easily make money by treating patients. However, this was only possible thanks to Ottoman tolerance. Although they were allowed to enrol in Padua, they were prohibited from treating non-Jews. Ottoman Empire, on the other hand, offered them freedom of treating non-Jewish patients. The empire at that time, Istanbul and Adrianople in particular were cosmopolitan centers of different communities including Jews and Venetians with whom Jewish physicians could foster a career. Most importantly, let alone being relieved of constant accusations of heresy and conspiracies in the West, Jews in the Ottoman Empire were held in a relatively privileged position considering their status of *zimmi*, they were rarely referred to as *kafirs* and had greater freedom than their *zimmi* counterparts Christians.⁴³ On the ground of Ottoman tolerance, the classical boundaries of the *zimmi* status were blurred for Jews and

40 Del Medigo, *Sefer Elim*, quoted in Ben-Zaker, “Transcending Time,” 80.

41 Cohen, *Ma’aseh Tuviyyah*, quoted in Rudermann, “Tobias Cohen,” 236.

42 *Ibid.*, 243.

43 Shaw, *The Jews*, 77-78, 86.

hence they were able to take part in the society as they did by utilizing their Paduan and Jewish networks.

For instance, Israel Conegliano (1650-1717) was a Padua-trained physician who made himself a career by becoming the personal physician of Merzifonlu Kara Mustafa Pasha (1634-1683), later acting as a diplomat between Ottomans and Venetians. By the time Israel Conegliano was a physician of the Ottoman pasha, Tobias Cohen was educated at the University of Padua whose closest professor was Israel Conegliano's elder brother Solomon Conegliano.⁴⁴ Upon graduation, Tobias went to the Ottoman Empire where he started his career under the patronage of Rami Pasha (1654-1704). At this point, it should be reasonable to think of that career as a result of networking, made possible through the Conegliano brothers. For the ones who were yet to obtain patronage, other lucrative opportunities were also possible in the market. Harun Küçük believes "Istanbul was a sick city that was struck every few years with lethal epidemics that claimed many lives".⁴⁵ Therefore, physicians especially ones who were adept at practical medicine were also needed outside the administrative and urban elite circles. The practical hands-on training⁴⁶ and hence the experience that Jews attained in Padua might have opened up new spaces for their career.

On the other side of the story, Ottomans acquired significant know-how about the medical practices of Europe. Since Galenism was maybe the most important component of Ottoman medicine, Jewish knowledge of Galenic medicine uneventfully found a ground for interaction. Initial encounters emerged by Jews expelled from Iberia, then accelerated through the flow of people in the Eastern Mediterranean; 16th century onwards Ottoman sultans and the ruling elite attached greater importance to the religious and national background of their physicians which again was another factor facilitating the transfer of medical knowledge via Jewish physicians.⁴⁷ In the 17th century there appeared an increase of translations from Western texts among which an example is the anatomy book of the Spanish anatomist Juan Valverde de Hamusco (1520–88). Feza Günergun argues that Shemseddin İtaqi's *Risale-i Tesrih-i Ebdan* (1632) was inspired by the Valverde's *Anatomia del Corpo Humano* that was likely brought to Ottoman Empire by the Padua-trained Jewish physicians.⁴⁸

The 17th century also marked the introduction of Paracelsian medicine in the Ottoman Empire. The most important pioneer of this new medicine was Salih bin Nasrullah (d. 1669)

44 For Conegliano and Cohen, see the section above: Peregrinato Medica.

45 Harun Küçük, "Introduction," in *Science without Leisure: Practical Naturalism in Istanbul, 1660–1732* (Pittsburgh, PA: University of Pittsburgh Press, 2019), 21.

46 Stolberg, "Bedside Teaching and the Acquisition of Practical Skills," 633–664.

47 Ebru Boyar, "Medicine in Practice: European Influences on the Ottoman Medical Habitat," *Turkish Historical Review* 9, 3 (2018): 226–229.

48 Feza Günergun, "Ottoman Encounters with European Science: Sixteenth- and Seventeenth-Century Translations into Turkish," in *Cultural Translation in Early Modern Europe*, eds. Peter Burke and R. Po-chia Hsia (Cambridge: Cambridge University Press 2007), 192–211.

the chief physician of Mehmed IV. He compiled his works on Paracelsian methods in his book *Tıbb 'ül-cedid el-kimya'i* approximately 25 years before Cohen became one of the court physicians of Mehmed IV. In the following years of Salih bin Nasrullah's *Tıbb 'ül-cedid el-kimya'i*, chemical medicine reached a wide area in the medical landscape of Constantinople. Tobias Cohen's arrival to Ottoman Empire overlapped with the increasing popularity of chemical medicine. Cohen was also an admirer of the chemical philosophy, as he noted that the iatrochemistry "thorough investigation by cooking, boiling, and the fermentation of wine and other liquids, and through the acidification of all acidy substances" made discoveries, "established the correct way and enlightened our eyes, and in our generation, they discovered the straight and easiest path for doing medicine".⁴⁹ Since Cohen nearly spent his whole career in the Ottoman Empire, these observations must have relied on the treatments he witnessed there. Hence, a cross-cultural scientific exchange probably dominated the period in Ottoman Empire.

Conclusions

So far, I have tried to demonstrate an episode of Early Modern History from the lenses of two Jewish physicians. The period is characterized by the new natural philosophy, millenarian expectations, and rising print culture in Western Europe. In close contact with the Western world, the Eastern Mediterranean was marked by a cosmopolitan, pluralist nature where Jewish physicians were one of the vectors of knowledge between the two sides. One origin behind the development of these stories was religious quests that were marked by the causes and effects of the millenarian thoughts. As an episode of Early Modern History, the stories I have attempted to narrate in this paper started and developed in the Eastern Mediterranean when Del Medigo went to Padua to learn medicine followed by his search for evidence of pure scientific knowledge in the Ottoman Empire. His story reached the conclusion in Amsterdam influencing the major millenarian thinkers whose ideas reached different parts of the world. Less than half a century later, Tobias Cohen's story followed the same path in its start and development. However, unlike Del Medigo, Cohen chose to stay in Ottoman Empire rather than go to the West. One reason for that might be keeping his distance from gentiles as he believed the false messiah humiliated his religion against them.

As the second origin of Del Medigo's and Cohen's journeys toward the East, I discussed how Ottomans offered Jewish physicians career opportunities. Their transmission to the medical landscape of the Ottoman Empire was facilitated by Jewish physicians' commitment to Galenic humoralism which also Ottoman medicine was part of. Besides, they could practice medicine among non-Jewish subjects, and gain the patronage of the urban elite and European diplomats as well. Even a fair amount of these physicians became dragomans acting as

49 Cohen, *Ma'aseh Tuvivyah*, quoted in Rudermann, "Tobias Cohen," 251.

agents of diplomacy. The Jewish physicians, in return, paved the way for the transmission of new sciences to the Ottomans. The introduction of new books and translations of medical texts was among the contributions they offered to the connected world of Early Modern history.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author has no conflict of interest to declare.

Grant Support: The author declared that this study has received no financial support.

Hakem Değerlendirmesi: Dış bağımsız.

Çıkar Çatışması: Yazar çıkar çatışması bildirmemiştir.

Finansal Destek: Yazar bu çalışma için finansal destek almadığını beyan etmiştir.

BIBLIOGRAPHY / KAYNAKÇA

Manuscripts / Yazma Kaynaklar

Del Medigo, Joseph Solomon. *Maamar 'al kochav shavit* [An Article on a Comet], Jerusalem: Institute of Hebrew Manuscripts, Hebrew National Library, MS F 64619.

Printed Sources / Basılı Kaynaklar

Adler, Jacob. "Joseph Solomon Del Medigo: Student of Galileo, Teacher of Spinoza." *Intellectual History Review* 23 (2013): 141-157.

Barnai, Jacob. "Christian Messianism and the Portuguese Marranos: The Emergence of Sabbateanism in Smyrna." *Jewish History* 7, 2 (1993): 119-126.

Barzilay, Isaac. *Yoseph Shlomo Delmedigo (Yashar of Candia)*. Leiden: Brill, 1974.

Ben-Noeh, Yaron. *Jews in the Realm of the Sultans: Ottoman Jewish Society in the Seventeenth Century*. Tübingen: Mohr Siebeck, 2008.

Ben-Zaken, Avner. "Transcending Time in the Scribal East." In *Cross-Cultural Scientific Exchanges in the Eastern Mediterranean, 1560-1660*, 76-104. Baltimore: Johns Hopkins University Press, 2010.

Boyar, Ebru. "Medicine in Practice: European Influences on the Ottoman Medical Habitat." *Turkish Historical Review* 9, 3 (2018): 213-241.

Bylebyl, Jerome J. "The School of Padua: Humanistic Medicine in the 16th Century." In *Health, Medicine and Mortality in the Sixteenth Century*. Edited by Charles Webster, 335-370. Cambridge: Cambridge University Press, 1979.

Cohen, Tobias. *Ma'aseh Tuviyyah*, Cracow, 1908. Reprint New York, 1974.

Danon, Dina. *The Jews of Ottoman Izmir: A Modern History*. Stanford: Stanford University Press, 2020.

Del Medigo, Joseph Solomon. *Sefer Elim*. Amsterdam, 1628. Reprint Odesa: M. Grinshpan, M. E. Belinson, 1864-67.

Efron, Noah J. "Jewish Thought and Scientific Discovery in Early Modern Europe." *Journal of the History of Ideas* 58, 4 (1997): 719-32.

Facchini, Christina. "The City, the Ghetto and Two Books. Venice and Jewish Early Modernity." In *Modernity and the cities of the Jews*. Edited by Cristiana Facchini, *Quest. Issues in Contemporary Jewish History* 2 (2011): 11-44.

- Friedenwald, Harry. "Jewish Physicians in Italy: Their Relation to the Papal and Italian States." In *Publications of the American Jewish Historical Society* no. 28. Edited by R.C. Davis and B. Ravid, 133-211. Baltimore: American Jewish Historical Society, 1922.
- Galante, Abraham (Avram Galanti). *Médecins juifs au Service de la Turquie*. Istanbul: Babok, 1938.
- Gunergun, Feza. "Ottoman Encounters with European Science: Sixteenth- and Seventeenth-Century Translations into Turkish." In *Cultural Translation in Early Modern Europe*. Edited by Peter Burke and R. Po-chia Hsia, 192–211. Cambridge: Cambridge University Press 2007.
- Gowing, Laura. "Knowledge and Experience, C. 1500–1750." In *The Routledge History of Sex and the Body: 1500 to the Present* (1st ed.). Edited by Sarah Toulalan and Kate Fisher. London: Routledge, 2016.
- Keller, Alex. "Science in the Early 'Haskalah.'" *European Judaism: A Journal for the New Europe* 24, 2 (1991): 8–13.
- Küçük, Harun. *Science without Leisure: Practical Naturalism in Istanbul, 1660–1732*. Pittsburgh, PA: University of Pittsburgh Press, 2019.
- Lepicard, Etienne. "An Alternative to the Cosmic and Mechanic Metaphors for the Human Body? The House Illustration in Ma'aseh Tuviyah (1708)." *Medical History* 52, 1 (2008): 93-105.
- Marriott, Brandon. "The Lost Tribes in the Americas: Judeo-Christian Reciprocity across the Atlantic World (1648–1666)." In *Transnational Networks and Cross-Religious Exchange in the Seventeenth-Century Mediterranean and Atlantic Worlds: Sabbatai Sevi and the Lost Tribes of Israel*. London: Routledge, 2015.
- Rudermann, David B. "Padua and the Formation of a Jewish Medical Community in Italy." In *Jewish Thought and Scientific Discovery in Early Modern Europe*. New Haven and London, Yale University Press, 1995.
- _____. "Medicine and Scientific Thought in the Ghetto: The Cultural World of Tobias Cohen." In *The Jews of Venice: A Unique Renaissance Community*. Edited by Robert C. Davis and Benjamin Ravid, 191-210. Baltimore: Johns Hopkins University Press, 2001.
- _____. "On the Diffusion of Scientific Knowledge within the Jewish Community: The Medical Textbook of Tobias Cohen." In *Jewish Thought and Scientific Discovery in Early Modern Europe*, 229-255. New Haven and London: Yale University Press, 1995.
- Siraisi, Nancy G. "Medicine, 1450–1620, and the History of Science." *Isis* 103, 3 (2012): 491–514.
- Shatzky, Jacob. "On Jewish Medical Students of Padua." *Journal of the History of Medicine and Allied Sciences* 5, 4 (1950): 444-447.
- Steven Shapin. *The Scientific Revolution*. Chicago: The Chicago University Press, 1996.
- Shaw, Stanford J. *The Jews of the Ottoman Empire and the Turkish Republic*. New York: New York University Press, 1991.
- Shear, Adam. "Science, Medicine, and Jewish Philosophy." In *The Cambridge History of Judaism*, vol.7. Edited by Jonathan Karp and Adam Sutcliffe, 522–49. Cambridge: Cambridge University Press, 2017.
- Stolberg, Michael. "Bedside Teaching and the Acquisition of Practical Skills in Mid-Sixteenth Century Padua." *Journal of the History of Medicine and Allied Sciences* 69, 4 (2014): 633–664.
- Stolberg, Michael. "Learning Anatomy in Late Sixteenth-Century Padua." *History of Science* 56, 4 (2018): 381–402.
- Spencer, Herbert R. "A Century of Medicine at Padua." *The British Medical Journal* 1, 3196 (1922): 543.

Zampieri, Fabio, Alberto Zanatta, Mohamed Elmaghawry, Maurizio Ripa Bonati, and Geatano Thiene. "Origin and Development of Modern Medicine at the University of Padua and the Role of the "Serenissima" Republic of Venice," *Global Cardiology Science and Practice* 2, 2 (2013): 1-14.

Dissertations / Tezler

Küçük, Harun. "The Case for the Ottoman Enlightenment: Natural Philosophy and Cosmopolitanism in Eighteenth-Century Istanbul." PhD dissertation University of California, San Diego, 2012.

