Cosmic Histories: Chronology as a Basis for Ottoman Astrology

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"At all events, Scaliger knew perfectly well, and expected his readers to know, that astrology and chronology had lain, like twins, in the same ancient cradle." 1

In the historiography of the early modern European scholarly tradition, the links between the *ars historica* and astrology have been relatively well defined. Two main lines of argumentation have emerged: one perspective has highlighted the incredible expansion in astrological views of history in the 16th century as coinciding with the emergence of professional chronology in part because of the extraordinary outburst of new astronomical ideas, techniques, and data. For these historians, astronomical data offered a kind of conclusive record of phenomena that could be used to date ancient events with newfound precision. Others have shown that even early modern trailblazers like Joseph Scaliger (d. 1609) were, in true humanist fashion, merely reviving what they believed was an

¹ A. Grafton, "Some Uses of Eclipses in Early Modern Chronology," *Journal of the History of Ideas*, 64/2 (2003), 213–229.

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ancient practice.² Whichever intellectual tradition one subscribes to, it is clear that astronomy and history as disciplines were intertwined for centuries.

This paper is not about the European historical tradition, but because of the Islamic world's shared inheritance of Hellenistic astronomy and astrology, similar debates surrounding the utility of astrology and the role of historians in forming official chronologies also flourished east of the Mediterranean. As Antoine Borrut and Dimitri Gutas have demonstrated, the Abbasids employed astrologers to demonstrate that their power was written in the heavens. Astrology thus became a legitimating tool, and the astrological histories written during this period also illustrate how astrology served as a driving force for historical thinking. Scholars have yet to explore these astrological histories fully as sources for Islamic historiography. Still, I wish to consider this idea that astrology could affirm historical developments in the context of the Ottomans, except in the opposite direction. Namely, I am interested in how the historical record could offer evidence for astrologers to cast future predictions, not merely provide retroactive proof of the value of astrological pursuits.

To explore the use of chronologies for astrological purposes, I focus, in particular, on an early genre of Turkish historical texts that listed major events from creation to the present and which usually appeared in the first few folios of astrological almanacs. Over a dozen of these 'historical almanacs'—my preferred translation of their common title *takvīm-i tevārib*—survive from the 15th and 16th centuries.⁴ This finite but valuable collection of manuscripts offers us a new way of understanding the relevance of chronology for astrologers. These

A. Grafton and N. Swerdlow, "Technical Chronology and Astrological History in Varro, Censorinus and Others," *The Classical Quarterly*, 35/2 (1985), 454–65.

³ D. Gutas, Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbāsid Society (2nd-4th/8th-10th Centuries) (London 1998); A. Borrut, "Court Astrologers and Historical Writing in Early 'Abbāsid Baghdād: An Appraisal," in J. Scheiner and J. Damien (eds), The Place to Go: Contexts of Learning in Baghdad, 750-1000 C.E (Gerlach Press, 2021), 455-502.

⁴ The current number of these medieval historical almanacs appears to be fourteen, based on the thirteen that appear in the appendix in A. Tunç Şen's dissertation, to which we can add the manuscript from Chester Beatty that I highlight in this disussion. More are likely to be uncovered, and quite a few of them are incomplete, likely due to the unfortunate fact that dealers can fetch higher prices selling individual sheets from calendars. See A. T. Şen, "Astrology in the Service of the Empire: Knowledge, Prognostication, and Politics at the Ottoman Court, 1450s–1550s", unpublished Ph.D. dissertation, University of Chicago, 2016, 353–363.

historical almanacs also happen to contain some of the oldest examples of Ottoman chronological writing, so they are also essential sources for studying the emergence of Ottoman historiography.⁵

While the influence and importance of astrology for the Ottomans is a growing field, the connection between history and astrology with which I prefaced this discussion is somewhat nascent amongst Ottomanists. This is despite many references among highly significant Ottoman historians, such as Ibrahim Peçevi (d. 1649)⁷ and Naima (d. 1716), who peppered observations of astrologically meaningful moments throughout their works. Naima went so far as to lay out a philosophy for how historians should act: the historian should be honest, not gossip, evaluate people fairly, abstain from undeserved praise, and write clearly. The seventh item in his list of advice was that the historian, if he is skilled in 'ilm-i ahkām' (the science of prognostications), ought to provide information about future affairs and record their signs to make their significance apparent. Naima heeded his own advice and included references to

⁵ For more on the links between historical writing as a genre and the dating of events (the original meaning of the root 'ta'rīkh'), see F.C. De Blois, B. Van Dalen, R.S. Humphreys, et al., "Ta'rīkh," in *Encyclopaedia of Islam Second Edition Online* (Leiden 2012). See also N. Sigalas, "Des histoires des sultans a l'histoire de l'État. Une enquête sur le temps du pouvoir ottoman (XVIe–XVIIIe siècles)," in *Les Ottomans et le temps* (Leiden 2012), 99–127.

⁶ A. Tunç Şen is also making important advances on the relationship between chronology and astrology among the Ottomans.

Ibrahim Peçevi (d. 1649), for example, dedicates a paragraph in his history to justify the efforts of the astrologers on the grounds that, so long as they don't argue it is the stars that cause the effects rather than God's will, then there is no harm. He then explains that the reason he brings this up is because of a strange coincidence where, on the day Hafiz Paşa became grand vizier the astrologers "according to their experience" suggested the moon indicated complete misfortune. This misfortune showed itself before long. Hafiz Paşa was killed on the 100th day of his tenure. The day he died, the moon showed no change in its unlucky signs. The same day, Recep Paşa became grand vizier and Hüseyin Efendi became şeyhülislam. Recep Paşa was killed 97 days later, and Ahizade Hüseyin Paşa too died by drowning 2-3 months later. After Recep Paşa was drowned, the moon entered a lucky sign and Recep Paşa's replacement Mehmet Paşa served for over five years. See Ibrahim Peçevi, Peçevi Tarihi, ed. B. S. Baykal, vol. 2 (Ankara 1999), 429.

^{8 &}quot;İlm-i ahkāma vākıf ise, ķıranan, tahvīl-i sinīn (seneler) ve küsuflar vesair tavaliin usul-i fen üzere ahkāmını zaptedip, ecsām-ı süfliye üzerine olan tesirlerini ve devlet bünyesi üzerindeki hallerini arayıp bularak beliren delilleri vekayiin arasında kaydedebilirse, ehliyetini meydana çıkarmış olur. Bu tārihin yazarı, bazı yerlerde buna riāyet etmiştir." *Naimā Tārihi*, vol 1. (Istanbul 1967), 31–32.

such astrological signs throughout his work. A final, notable example might be Müneccimbaşı Ahmed Dede (d. 1702), who was better known for his universal history, *Cāmiʿal-Düvel*, than he was for his efforts as chief astrologer (*müneccimbaşı*) for the sultan. Even those scholars known for critiquing astrology, such as Kātip Çelebi (d. 1657), acknowledged the debates between astrologers and historians over chronological matters such as the fall of Adam:

"when it comes to how much time has passed between the fall of Adam PBUH and the hijra of the Prophet, the historians and astrologers (lit. people of history and the stars) differ greatly on this matter." ¹⁰

This paper concerns the relationship between astrology and history for Ottoman scholars in the 15th and 16th centuries but in the reverse direction. Namely, I consider the presence and utility of the historical chronicles within the earliest Ottoman astrological texts and wish to suggest that the Ottoman chronological discipline emerged hand in hand with astrology. These historical almanacs reveal the value chronology held for astrologers and expand the context for situating the development of Ottoman historical writing overall.

Although scholars such as Osman Turan and Nihal Atsız have shed important light on these texts, even producing modern Turkish editions, they completely disregarded their astrological contents.¹¹ They brought attention to them as texts that have been neglected as historical sources of early Ottoman history, only to neglect, somewhat ironically, what constituted the bulk of the

⁹ It is telling that Müneccimbaşı Ahmed Dede has no entry in the astrology volume of the biobibliographical series of Ottoman scientific literature edited by E. İhsanoğlu. See Osmanlı astroloji literatürü tarihi ve Osmanlı astronomi literatürü tarihi zeyli = History of Ottoman astrology literature and supplement to the history of Ottoman astronomy literature (İstanbul 2011).

^{10 &}quot;hübût-ı Âdem Aleyhi's-selâm'dan hicret-i Nebeviyye'ye gelince ne mikdâr zemân geçmişdir andan bahs olunup ehl-i târîh ü nücûm bu müddette dahı azîm-i ihtilâf idüp" from Kātip Çelebi's *Takvîmü't-Tevârîh*, quoted from this transcription by O. S. Başar, "Kâtip Çelebi'nin Takvîmü't-Tevârîh'i (Metin-inceleme)", unpublished MA thesis, Istanbul University, 2021, 77. Kātip Çelebi's *Takvîmü't-Tevârîh* is a fascinating work in its own right given that its style and format is inspired by the historical almanacs under discussion here, but it was written in the mid-17th century, long after these historical almanacs went out of fashion.

¹¹ N. Atsız, Osmanlı tarihine ait takvimler (Istanbul 1961); O. Turan, İstanbul'un fethinden önce yazılmış tarihî takvimler (Ankara 1954).

manuscript.¹² Even the attention they paid to the explicitly historical sections was marked by a blatant positivist attitude toward the factuality of the provided calendrical dates. Turan, for example, noted, "the chronological lists that the almanac gives about the old dynasties have no historical significance."¹³ I should specify again that for the purposes of this discussion, I am not referring to the genre of astrological almanacs as a whole, of which there are copious surviving manuscripts, but the specific corpus of almanacs that contained historical chronologies, i.e., historical almanacs.¹⁴

For the remainder of this discussion, I will focus on just one of these manuscripts: Chester Beatty MS Turk 402, which escaped the attention of both Turan and Atsiz. MS Turk 402 is a beautifully presented manuscript featuring elegant calligraphy, colored inks including gold, ample ornamentation, tables, and diagrams throughout, as well as a world map, which Karen Pinto suggests may be the oldest Ottoman depiction of the world. The manuscript is dedicat-

¹² This was likely simply a reflection of the longstanding disdain for the occult sciences within both the history of science and the historical discipline more generally, a disdain that has begun to wane only in the last twenty years.

^{13 &}quot;takvimin eski sülāleler hakkında verdiği kronolojik listelerin tarihī hiçbir ehemmiyeti yoktur," Turan, ibid., p. 6.

¹⁴ The current number of these medieval historical almanacs appears to be fourteen, based on the thirteen that appear in the appendix in Tunç Şen's dissertation, to which we can add the manuscript from Chester Beatty that I highlight in this disussion. More are likely to be uncovered, and quite a few of them are incomplete, likely due to the unfortunate fact that dealers can fetch higher prices or selling individual sheets from calendars. See A. T. Şen, "Astrology in the Service of the Empire: Knowledge, Prognostication, and Politics at the Ottoman Court, 1450s–1550s", unpublished Ph.D. dissertation, University of Chicago, 2016, 353–363.

^{15 &}quot;Historical Calendar (Taqwim-i Tarikhi), with Astrological Advice and a World Map." n.d., MS T 402, Chester Beatty Library, Dublin. Turan highlighted two other similar manuscripts from the Bodleian Library in Oxford, and the Bibliothèque Nationale in Paris (BNF Turcs 180, MS Huntington Donat. 16) which were dedicated to Murad II and thus presumed to be written in the 1440s. I have studied all three and observed discrepancies between the dates given for certain events, like the fall of mankind, which complicate the picture and highlights how chronology was not at all straightforward in this era. One interesting aspect of the Chester Beatty MS, however, is the total absence of the solar month calendar pages with the annual prognostications, something that was extremely common in later astrological almanacs into the 18th century (but which lacked the historical chronologies at the beginning).

¹⁶ K. C. Pinto, Medieval Islamic Maps: An Exploration (Chicago 2016), 249.





Left: fol 1r, the dedication. Right: fol. 1v, the start of the chronological section. Red headings denote the first word of a new chronological entry. CC BY-NC. Chester Beatty, Dublin.

ed to an unnamed figure, referred to only by the title "ḥusām al-milla wa al-dunya wa al-dīn = the sword edge of the [Muslim] community and the [earthly] world and the faith."¹⁷

The text proper begins straightaway with two folios (four pages) of historical information presented as brief statements that express the number of years that have passed since the event in question, starting with Adam's fall from paradise, $hub\bar{u}t$. Not surprisingly, the main events of interest from this period are the births and deaths of the Abrahamic prophets. The chronological appearance of astrology is noteworthy:

O ye mankind!18

¹⁷ It seems extremely likely however that it was intended for Murad II (d. 1451), like the other two manuscripts from the BNF and the Bodleian, given the dating of the concluding line of the historical section, which I discuss further below.

^{18 &}quot;Eyu al-başar: ādem peygamber 'aleyhi al-salam hubuṭ itdi altı biñ tokuz yuz otuz dört (6934)

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6934 years since the Prophet Adam fell
6697 years since the Great Kaaba was built
6037 years since the Prophet Seth was born
5627 years since the science of the stars was taught to the Prophet Idris (Enoch)
5520 years since the Prophet Idris ascended to the highest level of heaven...
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This "ancient" section occupies a quarter or one of the four pages. It concludes with the lives of other notable sages and wise figures, though with some dates that might have modern readers scratching their heads, like the timing of Aristotle's life, which may be a scribal error given the vastly greater magnitude of time. The fact that some of the dates do not adhere to a strict chronological order is also curious:

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1370 years since the Prophet Jesus ascended to the sky<sup>19</sup>
3433 years since the philosopher Aristotle
306 years since the philosopher Jamasp
1995 years since the philosopher Luqman
1722 years since the philosopher Eflatun (Plato)
896 years since the philosopher Batlamyus (Ptolemy) and the people of the elephant came to Mecca and were destroyed<sup>20</sup>
890 years since Khosrow I (Nowshirvan), and God knows best. [end of this section]
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kaʻbe-i muʻazzama şerrefe allahu bunyād oldı alti bin altı yüz toksan yedi (6697) şişt peygamber ʻaleyhi al-salam toğdi altı bin otuz yedi (6037) idris [note above: muʾaḥḫer] peygamber ʻaleyhi al-salam nakl itdi firdevs aʻlāya beş bin beş yuz yiğirmi (5520) ʻilm-i nücūm [note above: mukaddem, these two events are out of order] idris peygambere indi ʻaleyhi al-salam beş bin altı yüz yiğirmi yedi 5627 'isā peygamber ʻaleyhi al-salam göğe çıkdı bin üç yüz yetmis (1370) aristo ḥakīm üç bin dört yüz otuz üç (3433) [sic: 1343?] cāmāsp ḥakīm üç yüz altı (306) lokmān ḥakīm bin tokuz yüz toksan beş (1995) eflātūn ḥakīm bin yedi yüz yiğirmi iki (1722) batlamyus ḥakīm ve ashabi filuñ geldiği mekkeye şerrefe allahu ve helāk oldılar sekiz yuz toksan altı (896) padişahlıkı nevşirravan ʻādil al-kisiri ḥaffafa allahu ʻanhu al-ʻadhāb sekiz yüz toksan (890) ve allahu ʻalem b'il-sevāb"
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20 The reference to the people of the elephant is likely the story of the Companions of the Elephant often said to have occurred in the same year the Prophet Muhammad was born (thus his being born in the year of the Elephant). This manuscript reports the birth of the prophet as occurring ten years later (fol 2a: "Viladet-i seyyid al-murselin... sekiz yüz seksen

The somewhat questionable dating in some of these affairs, such as the supposed 400-year distance between Aristotle and Plato, may be to blame for the general disdain with which some scholars have treated these chronological tables, especially in the later sections that deal with events of more immediate consequence for Ottoman history.²¹ The plain and straightforward style continues even into the contemporary era when our anonymous author would presumably have had access to more details:

- 9 years since the cities of Aydın and Menteşe were conquered by order of the king of kings 22
- 7 years since Ya kub Çelebi of Germiyan died
- 5 years since the city of Lās was conquered by the aforementioned sultan [0 years since] the city of Selnun and Yevan were conquered, and the Sultan of the Gazis and the Mujahidin, the fortress conqueror and exhauster, Sultan Murad Han, son of Sultan Mehmed Han, son of Bayezid Han, may God make his sultanate perpetual and apparent/clear over the two worlds. Finished. On the 5th of Rajab in the year 833²³ of our prophet, and God knows best. [end of this section and the chronology]

altı," or 544 CE rather than the accepted 570 CE. The dating for Ptolemy (d. 170 CE) in the 6th century is also odd, but so are all the dates given for the other philosophers.

- 21 Turan for example, when discussing the Oxford and BNF manuscripts, notes "While examining a roughly contemporary chronicle, Ménage noted with no twinge of remorse: 'and all but one (829) of these dates are patently wrong." I suspect it was more likely that there was something different about the way that this chronicler was measuring time, than that he was wrong about every single date. See V. L. Ménage, "The 'Annals of Murād II," BSOAS, 39/3 (1976), 570–84 for the original quote cited by Turan.
- 22 "bi-hukmi malik al-muluk [previous entry makes clear this is Sultan Murad] Aydın vilayeti ve Menteşe vilayeti fath itdi tokuz (9) merhum megfur sa'id şehid ya'kūb çelebi germiyan oğli vefat buldi yedi (7) fath oldu lās vilayeti sultāni mezkur elinde izz naṣrahu beş (5) selnun şehri ve yevān vilayeti fath oldi hem sultan al-ǧazza ve al-mücahidin kala'a guşayi
 - selnun şehri ve yevan vilayeti fath oldi hem sultan al-ğazza ve al-mücahidin kala'a guşayi fersayi sultan murad han bin sultan muhammed bin bayezid han hallada allahu sultane ve evzah? 'ala 'ālamīn temmet receb ayının beşinde peygamberimiz tarihinin ? 833 yılında ve allahu 'alem."
- 23 This concluding sentence and date corresponds to the 30th of March 1430 (Julian year) which was near the vernal equinox that year on March 12th (Julian). The vernal equinox marked the start of the new solar year and eventually became the time when the Ottoman chief astrologer (müneccimbaşı) would present the annual almanac with his prognostications to the sultan. See S. Aydüz, "Osmanlı Devleti'nde Müneccimbaşılık Müessesesi," *Belleten* 70, no. 257 (2006): 167–264.

The plain, chronological style is not the most exciting way of presenting history and invites the least analysis from historians regarding narrative devices, analogies, etc. But I wish to remind readers that, two hundred years later, Kātip Çelebi wrote his own version of a historical almanac (*Takvim-üt Tevarih*), which clearly imitated this plain chronological format, tables and all.²⁴ His historical almanac was one of the first Ottoman texts to be translated and printed in Europe around the same time as his more famous *Kashf-i Zunūn*, and Nabil Al-Tikriti theorized that this objective style devoid of literary flair was one reason why it appealed to Enlightment-era readers.²⁵

To return to our astrologer historian, the other key detail besides the plain style is, of course, the dating in terms of years that have passed since an event. Atsız suggested that this method, which also appears in the other historical almanacs from this era, is explained by the prevalence of dates from the era before the Hijri calendar's epoch (622 AD).²⁶ There was no Hijri calendar equivalent for dating events before 'year 1', like BC (before Christ) or ACN (ante Christum natum) for the Gregorian calendar.²⁷ If it were not for the abundant astrological content that populates the rest of the manuscript, which relied on all manner of calendrical computation and concordances between the Egyptian, Alexandrine, and Yazdigerdi eras, there might be something to Atsız's claim. But rather than explaining this dating in terms of absence, I propose some reasons for its possible utility.

For one, this form of backdating necessitates a recalculation every year. While inconvenient, one might be inclined to view this practice in terms of its need for courtly patronage for a scholar and a sign of the efforts and calculations that went into preparing such a document. Second, and arguably far more significant, is that this kind of dating implies an apparent teleology leading ineluctably to the era in which the text was written. That is to say, the author's

²⁴ See footnote 11.

²⁵ N. Al-Tikriti, "An Ottoman View of World History: Kātip Çelebi's Takvīmü't-tevārīh," in T. Gökçe, M. Acıpınar, İ. Kokdaş and Ö. Küpeli (eds), International Kātip Çelebi Research Symposium Proceedings / Uluslararası Kātip Çelebi Araştırmaları Sempozyumu Bildirileri (Izmir 2017), 127-149. For the Venetian edition, Katip Çelebi, Cronologia historica scritta in lingua Turca, Persiana, & Araba, da Hazi Halifé Mustafá, e tradotta nell'idioma Italiano da Gio. Rinaldo Carli (Venice 1697).

²⁶ Atsız, Osmanlı tarihine ait takvimler, 11.

²⁷ I find it curious that we use the Latin phrase 'Anno Domini' for AD years, but the English expression 'Before Christ' for BC years.

'present day' is placed in an inevitable chronology where the spacing of the events in the past is meaningful precisely because it bears a numerical relation with the present. Had these events been dated according to a calendar instead, then their specific *relationship* with the present day would have lost temporal significance. This relative, or perhaps *relational*, method for dating the time when events occurred takes on even greater significance when viewed in light of the astrological content of the work as a whole. This relational method for dating these events vis-à-vis how many years have passed ought to be understood, I believe, in light of conjunction theory, which pervaded the remainder of the astrological sections of the manuscript.

Conjunction theory argued that whenever certain planets visually coincided along the ecliptic, significant historical events unfolded. For example, some form of conjunction between Saturn and Jupiter occurs every 20 years. The more symbolically charged conjunctions occurred even more infrequently, such as every 240 or 960 years when a full cycle shifted through the triplicities. What is important to note about conjunction theory is the emphasis on the repetitive cycles and patterns that reappear throughout history according to fixed chronological intervals. This is where I believe there may be more to the reverse chronological dating in these historical almanacs than meets the eye if we understand them in relation to patterns of years that have passed and not as attempts to date events according to a socially constructed calendar. In addition to using astrological signs as a source of cosmological legitimation or as a helpful dating mechanism for the historian, these historical chronologies offered the kind of raw data that astrologers could draw on to lend credence or historical evidence to their prognostications. 29 For an astrologer, what mattered was less the arbitrary numerical value of the specific calendar year and more the length of time between events. I believe conjunction theory, which endows cosmological significance to events based on their temporal coincidence with

²⁸ For more regarding conjunction theory, see E.S. Kennedy and D. Pingree, *The Astrological History of Māshā' allāh* (Harvard 1971); K. Yamamoto and C. Burnett (eds), *The Great Introduction to Astrology by Abū Ma'šar*, 2 vols. (Leiden 2019).

²⁹ Şen presented a similar argument during the conference in which this paper first appeared, entitled "The Role of Experience in Astrology and an 18th-Century Ottoman Court Astrologer's Take on Experiential Knowledge." For the chapter he published soon after, see A. Tunç Şen, "The Science and Politics of Chronology in Late Medieval and Early Modern Ottoman Almanacs," in *Osmanli'da İlm-i Tarih* (Istanbul 2023), 47–71.





Left: fol. 3v: 1st page of the tables of caliphal rules, each row contains two entries. Right: fol.5v: 1st page of the table of conjunctions. CC BY-NC. Chester Beatty, Dublin.

celestial conjunctions, helps to explain the method of chronologizing found in this and the other historical almanacs that dated events in measures of years passed. To give further credence to the explanatory value of the conjunctionist view of history in these almanacs, let us briefly examine the remainder of this manuscript.

The subsequent two folios, 3v and 4r, also contain primarily historical information and include neat tables that list the durations of the lives and regnal years of the caliphs in a double-column format. The right column lists the name of each caliph, while the middle column contains the lengths of their lives, and the left column lists regnal years. A similar table appears on the following folios for the ancient kings of Iran up to Yazdigerd I (r. 399–420), but only for their regnal years. Some of the information on the duration of reigns is precise to the level of the day. Like the backdated events in the initial chronology, these regnal and life periods are given without reference to a calendrical date, rendering them more meaningful in relation to each other than to any external

chronological ordering. What follows after these tables of rulers are multiple tables of auguries for the moon and its conjunction with each of the planets. The rightmost column on folio 5v lists the twelve zodiac signs (one for each solar month), and the four column headings to the left are organized according to the different astrological aspects, measured as the angular distance between the selected celestial bodies:

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al-muqārana: conjunction (0 degrees, conjunction as a term is sometimes used as a general category for the Ptolemaic aspects)
tathlīth wa tasdīs: trine and sextile (120 and 60 degrees)
al-tarbī': square (90 degrees)
al-muqābala: opposition (180 degrees)
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The entries in this table then offer suitable auguries like "good to hunt," "good to travel," etc. These tables of conjunctions, a standard feature of astrological manuals, represented a view of the cosmos that was not tied to calendar dates but operated according to the repeated patterns of conjunctions and planetary arrangements. Like the backdated chronologies in the first few folios, the moon's (or any of the other planets') location in these augury tables draws its meaning from its position relative to the other planets. Altogether, this information represented an internal system of relations that repeated indefinitely and in which the relational positioning of events was more valuable than the specific calendar date.

I would also like to draw attention to the original meaning of the word taqwim/takvīm as another clue towards the significance of conceiving of the events presented in the chronicles in terms of spatial relations. Although today taqwim is almost synonymous with "calendar," its original meaning denoted a tabular presentation of information, and its Arabic root had more of a spatial meaning related to the idea of standing up, erecting, or raising. I suspect the tabular emphasis on the information contained in taqwims, including the one under discussion, might still be appreciated in a spatial sense if we understand the day on which the calendar was prepared (30 March 1430) as establishing the terminus toward which all the events in the historical chronology led. Otherwise, the temporal significance of the years that have passed since that specific point in time is lost.

³⁰ Şen, "Astrology in the Service of Empire," 241-242.

As a final symbolic illustration of the idea that these historical almanacs viewed time and space in a similar relational setting, I would like to conclude by showcasing another feature of this manuscript from Chester Beatty that sets it apart from all the other historical almanacs that survive. About two-thirds through the manuscript is a full-page spread of a world map. Karen Pinto suggests this is the first "Ottoman" world depiction; it is accompanied by the standard description of the seven climes according to the Ptolemaic tradition. There is much more that ought to be written about this world map. For now, I can focus solely on the idea that including a world map such as this one in an astrological and historical almanac further suggests that our author viewed himself as situating historical events in both time *and* space by situating events relative to the present moment. Though such a map is unique compared with the remaining manuscripts among the corpus of historical almanacs, it offers a lovely metaphor for the unity of time and space in the premodern Ottoman worldview.

The Chester Beatty MS is a wonderfully illustrative example of a genre of historical almanacs that we find in the 15th and occasionally in the 16th centuries.³² The chronicles that appeared at the beginnings of such almanacs have so far been dismissed as useless for any historiographical purposes. However, I think focusing on their role in the astrological text as a whole allows us to revisit the value that history and chronology offer an astrologer tasked with predicting the future. Far from being relegated to the annals of history, these chronological records, though dry compared to the detailed narrative histories that eventually replaced them, offered another source of experience for the Ottoman astrologer to draw upon for his prognostications. This could be especially useful given the prevailing notion that astrology was a conservative discipline with limited room with which to invent prognostications. The Ottoman müneccim had to be an expert chronologer who kept track of the dates and heavenly configurations of past rulers, battles, and notable events. He resembled the historian as a repositor of knowledge and for his belief that past events could inform one's understanding of the present and the future. The method of backdating,

³¹ Pinto, Medieval Islamic Maps.

³² Şen suggests that the disappearence of the chronological lists from astrological almanacs by the middle of the 16th century can be explained by shifting preferences at the Ottoman court and elite circles toward more analytical and linguistically elegant histories. See Şen, "Astrology in the Service of Empire", 281–293.



World map on fols. 12v-13r. CC BY-NC. Chester Beatty, Dublin.

where events were listed in terms of how many years ago they happened, or the practice of organizing rulers and kings according to the duration of their regnal years, illustrated the underlying reliance on conjunction theory and a relational or spatial view of the how historical events were linked. It also added another dimension to what constituted a 'calendar' for the Ottomans.

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