

Horoscopes and Public Spheres



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Gustavo Benavides and Kocku von Stuckrad

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Horoscopes and Public Spheres

Essays on the History of Astrology

Edited by
Günther Oestmann, H. Darrel Rutkin, and
Kocku von Stuckrad

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Introduction: Horoscopes and History

GÜNTHER OESTMANN, H. DARREL RUTKIN, and KOCKU VON STUCKRAD

1. “The Study of Wretched Subjects”

“A savoir, qu’on ne perd pas son temps en recherchant à quoi d’autres ont perdu le leur”—with these words Auguste Bouché-Leclercq (1842–1924) justified his pioneering monograph on the history of Greek astrology (Bouché-Leclercq 1899, ix). For a classical scholar of his time, astrological sources were obviously somewhat offensive. In the nineteenth century only a very few scholars called for an unprejudiced assessment, such as the mathematician and historian of science, Siegmund Günther (1848–1923). He argued for thorough research into the history of astrology and astronomy as part of a general cultural history already in 1876 (Günther 1876a, 124 and 128; 1876b, 306). Astrology, left behind by modern astronomy and astrophysics, was generally looked upon condescendingly as a curious aberration of the human mind undeserving of serious consideration. But only a short time later, at the beginning of the twentieth century, there was notable progress. Aby Warburg’s (1866–1929) legendary 1912 lecture on the fresco cycle in the Palazzo Schifanoia and the pictorial tradition of its astrological motifs was a milestone (Warburg 1998ff.; see Bertozzi 1985). With his study *Heidnisch-antike Weissagung in Wort und Bild zu Luthers Zeiten* (1920, see Warburg 1999), Aby Warburg broke new ground for a serious assessment of the role of astrological iconography in the Renaissance, which he interpreted as a conscious revival of ancient paganism. Subsequently other Warburg scholars, notably Ernst Cassirer and Eugenio Garin, paved the way for a fuller understanding of astrology in Renaissance culture (Cassirer 1964 [1927]; Garin 1983 [1976]).

Ancient astrology saw similar progress. Franz Cumont (1868–1947) and Franz Boll (1867–1923) systematically edited the corpus of Greek astrological texts (*Corpus codicum astrologorum Graecorum*) during the first half of the twentieth century (Cumont et al. 1898–1953). A classical philologist, Boll devoted his research activities almost exclusively to the history of astrology. The same is true for Wilhelm Gundel and his son, Hans Georg (see particularly Gundel and Gundel 1966). And for the history of science, Lynn

Thorndike (1882–1965) laid new textual and bibliographic foundations with his encyclopedic *History of Magic and Experimental Science* (1923–1958), which surveyed no less than seventeen centuries. Thorndike unearthed a great wealth of original sources—mainly in manuscripts—that were hitherto neglected or completely unknown. Nevertheless, historians of science (including Thorndike) often had trouble accurately interpreting and assessing astrological evidence, which, in 1951, George Sarton (1884–1956) universally dismissed as “superstitious flotsam of the Near East.” This remark provoked Otto Neugebauer’s (1889–1990) famous reply, “The Study of Wretched Subjects,” in which he emphasized the importance of astrological concepts for Hellenistic and Arabic astronomy, and the fact that astrological sources provided crucial evidence for reconstructing (inter alia) the transmission of ancient astronomy to India (Neugebauer 1951).

We should no longer need excuses or apologies. The history of astrology as an important element of western science and culture has received much scholarly attention in recent decades, some of the highest quality. Nevertheless, scholars writing on astrology today still encounter numerous problems and prejudices. The reasons are manifold, but two elements stand out as particularly important from an analytical point of view: problems of *ontology* (concerning astrology’s ontological status) and strategies of ‘othering.’ As far as ontological issues are concerned, historians of astrology are asked time and again, “do you believe in these things?,” a question with which historians of alchemy, mathematics, or Christianity are not usually confronted. Although the personal opinions of historians of astrology are not unimportant—as they might influence historical interpretations—the ontological status of the planets and their presumed influence and meaning, as well as whether astrology actually ‘works,’ are not directly addressed in historiographical research.¹ Historically meaningful and interesting are questions such as: Why and how have people used astrological methods and assumptions to interpret the past, present, and future? How and why do normative views about astrology change over time?

On a deeper level of analysis, the question of astrology’s ontological status reveals a strategy of ‘othering’ and a discourse of inclusion and exclusion that has had significant impact on the academic study of astrology. While astronomy and astrology had both been part of the canon of legitimate bodies of knowledge (*artes liberales*) for centuries, epistemological and disciplinary transformations (reconfigurations) associated with the eighteenth- and nineteenth-century Enlightenment encouraged a dismissive attitude that distinguished legitimate from illegitimate knowledge in different ways than they had previously been distinguished, framing the debate polemically in

1 This misunderstanding is a characteristic of battles between ‘believers’ and ‘non-believers’ of astrology that are fought out on the fields of social scientific research in particular; see von Stuckrad 2003b, 357–368.

terms of (e.g.) ‘science’ vs. ‘pseudo-science’ and ‘rationality’ vs. ‘superstition.’ These terms, which became instruments of analysis in subsequent academic disciplines, reflect the socio-professional identities and conceptual perspectives of ‘modern’ people who view themselves as progressive, rational, and enlightened, against which the ‘other’ was constructed as a necessary counterpart. In the wake of the ‘cultural turn’ in the humanities, however, scholars have turned their critical attentions toward analyzing and articulating the strategies of distancing that underlie these processes of identity formation. For example, Charles Zika argues that, with the help of such scholarly models of interpretation, Europe exorcised her demons to the margins of power, subsequently endeavoring to ensure their distance: “We exorcise them [the demons] to the geographical, cultural and chronological margins—to the underdeveloped, the poor, the disadvantaged, the colonized; to the primitive, the savage, the uncivilised; to the medieval imaginary of magic and mysticism and dark age barbarism” (Zika 2003, 4). Martin Pott analyzes the construction of ‘superstition’ with reference to the Enlightenment movement that was at the same time a “battle community” (*Kampfge-meinschaft*).²

When approached from contemporary critical perspectives, the impact of these processes becomes visible: the discourses of inclusion and exclusion that fostered identities of ‘modernity’ and ‘science’ during the last two centuries have contributed to distorting the scholarly understanding of astrology and other ‘wretched subjects’ (see also von Stuckrad 2000, 55-68). In a discourse of power, not only the themes but the scholars engaged with them have been marginalized and ‘distanced,’ tinged, as it were, with their subject’s lunacy. The production of scholarly historical knowledge is by no means an innocent or neutral endeavor.³ Consequently, every serious academic study of astrology has to include in its historical analysis an element of reflection that is aware of the precarious—often polemical—status of its instruments of analysis. Instead of fixating on underlying ontological commitments in favor of or against astrological truth claims, discourse analysis

2 “Stärker als andere Bewegungen der Kulturgeschichte ist die Aufklärung zugleich auch eine Kampfgemeinschaft, die ihre Geschlossenheit nicht zuletzt durch bestimmte Feindbilder gewinnt” (Pott 1992, 2).

3 This was noted by Paul Feyerabend in his critique of the “Statement of 186 Leading Scientists” against astrology (1975), including eighteen Nobel Prize winners. “The learned gentlemen have strong convictions, they use their authority to spread these convictions (why 186 signatures if one has arguments?), they know a few phrases which sound like arguments, but they certainly do not know what they are talking about” (Feyerabend 1978, 91). To be sure, Feyerabend did not intend his critique as a defense of modern astrology (nor do we thus intend these essays, although individual authors personally may): “It is interesting to see how closely both parties approach each other in ignorance, conceit and the wish for easy power over minds” (ibid., 96).

addresses the negotiation of identities that these competing statements reflect.⁴

2. The Status of Astrology in European Culture

The discourses of inclusion and exclusion that accompany processes of modern identity formation have also affected the way scholars describe the status of astrology in western cultural history. Besides labels such as ‘pseudo-science’ or ‘superstition,’ astrology has often been called an ‘occult science.’ This term seems to have originated in the sixteenth century (Secret 1988, 7), along with notions of *occulta philosophia*. ‘Occult,’ in this context, refers to hidden or secret powers that inform a substantial part of the disciplines lumped together under the rubric ‘occult sciences’—notably astrology, alchemy, and (natural) magic.⁵ Twentieth-century scholars turned this rubric from an emic (an “insider’s”) into an etic (an “outsider’s”) category, indicating a ‘unity’ of these various disciplines. While Keith Thomas (1971, 631f.) believed that astrology formed the basis of the occult sciences—and that consequently the ‘decline’ of astrology would inevitably lead to the decline of magic and alchemy—Brian Vickers (1988, 286) encouraged this tendency by arguing that all ‘occult sciences’ share a common “mentality” that is clearly distinguished from a rational ‘scientific’ mentality (see also Vickers 1984).

Such a distinction is problematic for several reasons. First, although these disciplines overlap in varied and complex ways, all of them have distinct histories with quite different and complex, multiply branching and mutually interacting trajectories. “Even during the heyday of Renaissance neoplatonism, astrology and alchemy lived independent lives, despite the vast inkwells devoted to the rhetorical embellishment of occult philosophy” (Newman and Grafton 2001, 26; see the whole passage pp. 18-27). Second, there are other disciplines and practices that had direct and longstanding links to astrology, notably, mathematics, philosophy (natural and moral), medicine, historiography, theology, and politics. Configuring astrology with the other so-called ‘occult sciences’ as a first interpretive move (consciously or unconsciously) tends strongly to distort our understanding of its relationship with these other (and to many scholars more legitimate) areas of knowledge. Third, the analytical notion of ‘hidden powers’ continues to remain important within the ‘legitimate sciences’ from the ‘scientific revolution’ to the present. One could even argue that contemporary science, from quantum mechanics to

4 On the discursive implications of self-reflection, which has to be applied recursively, see von Stuckrad 2003a.

5 In an influential work, Wayne Shumaker (1972) also adds witchcraft to this mélange.

string theory, is still trying to understand invisible powers that are difficult or impossible to apprehend and/or demonstrate directly.⁶

As Wouter J. Hanegraaff notes:

[I]n a context that insisted on science as a public and demonstrable rather than secret and mysterious knowledge, the very notion of “science” came to be seen as incompatible *ex principio* with anything called “occult”. As a result, any usage of the term “occult science(s)” henceforth implied a conscious and intentional polemic against mainstream or establishment science. Such polemics are typical of occultism in all its forms. (Hanegraaff 2005, 887)

Hence, relating astrology closely to magic or other ‘occult sciences’ is a quite modern configuration, reflecting again a discourse of identity formation through strategies of distancing. Against this, some scholars have recently pointed out that astrology is more accurately configured with mathematics, natural philosophy, and medicine (Rutkin 2002; see also Monica Azzolini’s contribution to the present volume), and that ‘esoteric discourse’ transgresses the boundaries between science, theology, and other cultural systems of knowledge (von Stuckrad 2004, 100-159).

3. Horoscopes and Public Spheres

Despite these difficulties, the scholarly study of the history of astrology has taken enormous strides during the last century. Scholars have become increasingly aware that “[t]rying to understand the society and culture of early modern Europe without taking astrology into account is exactly as plausible as trying to understand modern society without examining the influence of economics and psychoanalysis” (Newman and Grafton 2001, 14). A similar case can be made for the ancient, medieval, and modern eras. Perhaps surprisingly, however, the particular role of horoscopes in public and private discourse has only rarely been explicitly addressed by historians.⁷ The present volume intends to cast new light on this issue, combining historical case studies and methodological reflections. Although every author of this volume shares the opinion that astrology is a significant feature of western cultural history, the fourteen chapters reflect a variety of approaches and perspectives,

6 We do not mean, of course, to equate quantum mechanics and astrology, as Landscheidt 1994 tried to do. Scientific knowledge in physics is demonstrable and open to falsification, which is not the case in any obvious way with astrological knowledge, efforts to the contrary from John Goad to Michel Gauquelin notwithstanding. We refer here only to the fact that modern physics operates with ‘hidden powers’ such as quarks or “strings” that are necessary assumptions of theory, but are invisible and only indirectly demonstrable.

7 Notable exceptions are North 1986 and Holden 1996; see also various essays in Nauta and Vanderjagt 1999.

ranging from in-depth philological analysis to cultural criticism. Indeed, the editors themselves represent three different but complementary approaches. We believe that a multidisciplinary approach is more beneficial than problematic, however, revealing as it does both the richness of the topics addressed and the range of roles astrology played in western culture. In this light, some preliminary remarks will be useful to help orient the reader.

As the title *Horoscopes and Public Spheres* indicates, this volume approaches astrology as a key element of public discourse. Such an approach is not as self-evident as it might seem. It responds to recent developments in the academic study of religion that abandon older concepts of 'religion' as 'belief' and 'inner states of mind' in favor of 'religion' as a communicational, public, and processual positioning (see Kippenberg and von Stuckrad 2003). With regard to astrology in general, and horoscopes in particular, this leads to new questions: Although the analysis of concrete astrological sources in precise historical contexts remains fundamental, these analyses are carried out not only for their own sake, but also to gain accurate access to the *functions* and *roles* astrology played in a given cultural context. The communicative aspect of horoscopes, their public presentation, and the discourses of identity that attach to them are given greater emphasis.

On a theoretical level, the general topic "Horoscopes and Public Spheres" has at least four different and overlapping dimensions: *Horoscopes as historical sources* addresses the question of how the study of nativities can enrich historical research. Horoscopes can be regarded as a highly specialized genre of historical narrative that needs to be applied by historians in different ways than other source material (see Oestmann 2004, 16-29). How can horoscopes be scrutinized in order to understand and reconstruct historical events? In addition, the importance of horoscopes for the history of mathematics, medicine, and other modes of natural knowledge is at issue here. Moreover, *horoscopes as astronomical sources* refers (inter alia) to the astronomical parameters which underlie nativities. Any astrological interpretation relies on astronomical data, from which certain techniques for predicting (e.g.) the development of the native and future events have been derived. How are these parameters deduced and interpreted, and how are they employed in specific astrological techniques and calculations? *Horoscopes as rhetorical devices* considers the role of horoscopes in political and public discourse. Publishing imperial nativities and publically debating the horoscopes of religious leaders were two ways representatives of social elites used horoscopes to claim superiority over political and religious opponents. Likewise, annual prognostications published in almanacs were often used on both sides of political power struggles (see, e.g., Curry 1989). Finally, *horoscopes and biographical narrative* is closely related to the other approaches but stresses the role of horoscopes for constructing coherent and meaningful individual biographies. From the fifteenth through the twentieth century, nativities have been

used as powerful means for biographical (and medical) ‘emplotment’ and identity formation.

The present volume aims to explore the role of horoscopes in historical research and to apply these considerations to concrete case studies in different cultural contexts. The contributions cover a broad period of time—from classical antiquity through the nineteenth century. *Part I* engages astrology’s eminence in Roman antiquity. Nativities of high-ranking individuals—particularly the emperor—played a crucial role in political and religious discourses. In their respective contributions, W. Hübner, J.-H. Abry, and St. Heilen focus on the rhetorics involved in interpreting imperial nativities. At the same time, they demonstrate how important astrological sources can be for gaining new insights into significant episodes in ancient history. N. Campion then casts an interesting (perhaps controversial) light on Babylonian astrology’s influence on Christianity’s quarrel with paganism. Taking the coronation horoscopes of the rebel pagan emperors Basiliscus and Leontius as his point of departure, Campion argues for a surviving tradition of Babylonian astrological practice, linked to astral religion, that flourished within a Neoplatonic philosophical context in the fifth century CE.

In *part II*, four chapters address the influence of astrological interpretive techniques in medieval Islamic and Jewish discourses. While D. Pingree outlines the importance of *Māshā’allāh* as a link connecting eastern and western astrological traditions, E. Orthmann and A. Caiozzo break new ground for understanding the dynamics of astrological argumentation in medieval Muslim public spheres, as well as the cosmological visions that astrology inspired and enhanced. J. Rodríguez-Arribas then demonstrates that important Jewish authors of the Middle Ages interpreted biblical chronology in terms of mundane astrology, thus indicating that biblical narrative and scientific exploration were seen as mutually informative and complementary means of constructing a coherent Jewish identity.

Part III investigates various aspects of horoscopic astrology in early modern Europe. Focusing on Johannes Kepler, Galileo Galilei, and Francis Bacon, H. D. Rutkin provides an integrated portrait of various uses horoscopes had in Renaissance culture, indicating both technical aspects and socio-political contexts. M. Azzolini explores the strong bonds between astrology and medicine in the Renaissance and, in particular, the political dimensions of courtly medical practice. St. vanden Broecke analyzes the place of evidence and conjecture in Girolamo Cardano’s horoscope collection, and thus offers a fresh approach to practical and social aspects of early modern astrological interpretation. Both he and Azzolini insightfully discuss the medical theory of critical days. K. von Stuckrad also takes Cardano as his point of departure, but now examines literary and rhetorical functions of horoscope interpretation in autobiographical narrative from the sixteenth through the nineteenth centuries. Finally, G. Oestmann describes J. W. A.

Pfaff's remarkable career in German Romanticism and the changing attitudes toward astrology in nineteenth-century scholarly debate.

The volume concludes with P. Curry's theoretical reflections on the historiography of astrology. Even if some of his positions—particularly the claim that experiencing “the truth of astrology in action” is a precondition of good historiography—will perhaps provoke controversy, Curry's considerations remind us once again of the many complex discursive problems that challenge and inspire the academic study of astrology.

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Sulla's Horoscope?

(Firm. math. 6,31,1)

WOLFGANG HÜBNER

Among the numerous horoscopes transmitted from antiquity, only a few tell us the proper name of the intended person. It was forbidden, of course, to publish the nativity of an emperor,¹ but voluntary self-restraint protected the privacy of individuals as well. If we disregard the horoscope cast for Antiochos of Commagene, which was probably not a birth horoscope, but a coronation chart,² there remain only a few individuals whose horoscopes were published with their proper name, as that of Manetho in the *sphragis* of his didactic poem,³ that of the orator Aelius Aristides in a dream of the fourth sacred speech,⁴ that of Hephaestio as an example in his astrological manual,⁵ and that of Proclus published in the *Vita* by his pupil Marinus.⁶

Because most horoscopes in the astrological manuals have been transmitted anonymously, modern *curiositas* often tried to find out which individual might be hidden under the anonymous data. In earlier times the tables established by Paul Victor Neugebauer (Neugebauer 1912) or Bryant Tuckerman (Tuckerman 1964) rendered possible the dating of horoscopes. In

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- 1 Firm. math. 2,30,4: *cave ne quando de statu rei publicae vel de vita Romani imperatoris aliquid interroganti respondeas* eqs.
 - 2 Neugebauer and van Hoesen 1959, 14-16. Dörner and Goell 1963, 65-68 defend the old date. Dörrie 1964, 202-207 assumes an apotheosis without precise dating. See also Radke 1972, 259f. It was ultimately dated to 14 July 109 BCE by Crijns 2002, 97-99, but see Heilen, to be published.
 - 3 Maneth. 6(3),738-750 = Horosc. L 80 in Neugebauer and van Hoesen 1959, 92 (L signifies: transmitted in literature; the following number indicates the year of birth as far as is known).
 - 4 Ael. Arist. 50,57f. = Horosc. L 117,X in Neugebauer and van Hoesen 1959, 113f., the date calculated by Neugebauer (8 October) has been corrected to 26 November 117 by Behr 1981, 438; cf. the detailed discussion in Id. 1994, 1141-1151.
 - 5 Heph. 2,1,32-34, 2,2,22-27, 2,11,6-6, especially 2,2,23 ἐγὼ ἐτέχθην; on this see Pingree 1973 I, V and Horosc. L 380 in Neugebauer and van Hoesen 1959, 131-135.
 - 6 Marinus, Πρώτος ἢ περὶ εὐδαιμονίας = Horosc. L 412 in Neugebauer and van Hoesen 1959, 135f.; a new calculation has been proposed by Jones 1999; see also Saffrey and Segonds 2001, appendix 185-201: "L'horoscope de Proclus."

1894, Theodor Mommsen identified the owner of the horoscope transmitted in Latin by Firmicus Maternus as an example of *antiscia* with the Roman senator Ceionius Rufius Albinus; despite other proposals, this identification still prevails.⁷ Then, the first volume of the *Catalogus codicum astrologorum Graecorum* (CCAG) perpetuated another example that Wilhelm Kroll and Paul Stroobant in 1903 tried to attribute to Iulianus of Laodicaea⁸ (but this remains doubtful.⁹ The same Wilhelm Kroll acknowledged that the first of the three horoscopes cast by Antigonos of Nicaea and published in the same year in volume VI of the *Catalogus* must belong to the emperor Hadrian.¹⁰ Armand Delatte and Paul Stroobant in 1923 attributed a horoscope given by Rhetorius for 440 CE and published in volume VIII 4 (1922) of the *Catalogus* to the grammarian and politician Pamphilius.¹¹

In recent years, this task has been facilitated enormously by computer programs like “Galiastro,” and a new kind of horoscope-hunting arose (as comet-hunting in former years). At least four scholars conjectured independently that the horoscope transmitted by Vettius Valens for the year 37 CE must concern Nero;¹² James Herschel Holden combined two horoscopes given by Paulus Alexandrinus and related them to Kronamon, the addressee of the work (Holden 1989).

7 Firm. math. 2,29,10-20: Mommsen 1894; Neugebauer 1953, 418-420; Barnes 1975, 40-49 (against Giovanni Polara); Bakhouché 2002, 76f. Claimed by Jones et al. 1971 and then by Polara 1973 (II 1-3 [test. 3], cf. also the comments on 1,13-18. 2,32. et al.); Id. 1978 for the poet Publius Optatianus Porphyrius. See also Koch 1931, 183: “Sein Horoskop ist nach unserer bisherigen Kenntnis das einzige literarisch überlieferte und als richtig erkannte einer historischen Persönlichkeit des römischen Altertums.” Koch dates the horoscope to the night 13–15 March 303.

8 CCAG I (1898), p. 171,2-14. IV (1903), p. 106-109; Cumont and Stroobant 1903.

9 Horosc. L. 497 in Neugebauer and van Hoesen 1959, 152-157.

10 CCAG VI (1903), p. 67-71, variae lectiones CCAG VIII 2 (1911), p. 82-84 = Antigonos von Nikaia in Heph. 2,18 = Horosc. L 76 in Neugebauer and van Hoesen 1959, 90f. The Editio princeps of the whole work written by Hephaestio was published only in 1973–1974 by Pingree. The extended horoscope will be treated in detail by Stephan Heilen.

11 Horosc. L 440 in Neugebauer and van Hoesen 1959, 140f.; Delatte and Stroobant 1923, 58-76. New edition by Pingree 1976, 144-146. Cf. Id. 2001, 9f.

12 Vett. Valens 5,11 = Horosc. L 37 in Neugebauer and van Hoesen 1959, 78f. Reece 1969; Barnes 1976, 76 note 2; Holden 1996, 53-55; Peter 2001, 120 note 128 (cf. 149). From the beginning, Nero’s horoscope was exposed to speculation: Suet. Nero 6,1 *multa et formidulosa multis coniectantibus*. Cardano took it into consideration: Grafton 1999, 161; see also Knappich 1967, 88.

1. The Horoscope

In 1996 James Herschel Holden tried to identify two other nativities transmitted by Firmicus Maternus in his *Mathesis*. The first one opens the final chapter of book 6. Here is the text in his fairly stilted language:¹³

si Saturnus in Libra fuerit constitutus, in finibus scilicet Iovis et in altitudine sua, et in eadem parte horoscopus fuerit inventus, in Ariete vero Venus constituta horoscopum ex occasu diametra radiatione respiciat, Mars vero et Luna aequata partium societate coniuncti in MC [Medio Caelo] sint partiliter collocati, Sol vero et Mercurius in Geminis constituti nonum ab horoscopo locum teneant, Iupiter vero in Aquario positus et stationem faciens quintum geniturae possederit locum, haec genitura potentissimum regni decernit imperium, vel potentis dignitatis decernit insignia.

If Saturn has come into Libra, that is, in the region of Jupiter and in its exaltation, and if the ascendant has been found in the same degree, (if) Venus in Aries aspects the ascendant with her opposite rays (shining) from the setting house, (if) Mars and the moon, conjoined by an equal partnership of degrees, are located in a partile conjunction in the midheaven, (if) the sun and Mercury, dwelling in Gemini, hold the ninth house from the ascendant, (if) Jupiter, situated in Aquarius and being stationary occupies the fifth house of the geniture—this nativity determines an omnipotent dominion of kingship, or determines decorations of mighty honor. (All translations are mine unless otherwise noted.)

The astronomical data are fairly precise.¹⁴ First of all, one must check to see if Mercury and Venus are not too far from the sun. This does not happen, since Mercury is in conjunction with the sun (and thus invisible), and Venus forms a sextile aspect, which distance is possible. Let us bring the astronomical data together into the following list:

- Saturn is in Libra in Jupiter's district, which, according to the most current system (named 'Egyptian') extended from Libra 15° to 22°. It is in it's exaltation, that is, Libra 21°, which is the ascending degree as well.
- Jupiter is stationary in Aquarius, in the fifth house, the ἐπαναφορά of the lower culmination.
- Mars, together with the moon, occupies the midheaven precisely, which must be Cancer.

13 Firm. math. 6,31,1 See Holden 1996, 73. On p. 74 follows a calculation of the data given by Firm. math. 6,31,54 with dating to 27–28 September 96 BCE and an assumed identification with "Ptolemy XI. Auletes," born c. 95 BCE. The surname Auletes, however, belongs to the furtherer of the cult of Dionysus, Ptolemy XII. (XIII.) Philopator II., born c. 111/108 BCE; Ptolemy XI. (according to the numbering of Bouché-Leclercq 1903–1907) had the surname Alexandros I. Philometor and was born c. 108 BCE. The next two ruling Lagides, the sons of Ptolemy XII., Ptolemy XIII. Philopator Philadelphos and Ptolemy XIV. Philopator, were born later, i.e. in 61/59 BCE respectively. Hence, a Lagide should be excluded.

14 I am grateful to Stephan Heilen for extensive discussion and valuable suggestions.

- The sun, together with Mercury in Gemini, occupies the ninth house.
- The descending Venus occupies Aries in opposition to the ascending Saturn.

James Herschel Holden has calculated these data for 23 May 139 BCE,¹⁵ taking three rulers into consideration: Ptolemy IX (X) Philometor Soter II (born in 143/2 BCE), Antiochus VIII Epiphanes Philometor Kallinikus Grypus (born in 141 BCE), and finally Sulla (born in 138 BCE). In this article, I want to show that not only the date but many other references make a case for Sulla.

As Otto Neugebauer pointed out, the astrologers generally presupposed an equinox at Aries 10°, ¹⁶ which was approaching, because of the precession of the equinoxes, to Aries 0°, covering one degree in about 72 years. In 140 BCE one has to add some eight degrees in order to arrive at the actual positions.¹⁷ Taking this into consideration, all the data fit for 139 BCE, except Saturn, the farthest and slowest of the planets, which at that time was retrogressing in the final part of Virgo, which leads, after an addition of eight degrees, only to Libra 5°. On the morning of 20 May, however, Jupiter actually became stationary (until 16 September) and just began to go retrograde: see ill. 1, which has been calculated for the latitude of Rome.

15 Holden 1996, 73f. He corrected his initial error “138 BCE” later in a list of errata, disseminated via the internet: “for 23 May 138 B.C. read 23 May 139 B.C.” For the numbering of years, see Ginzler 1914, 182. It seems to be only a strange coincidence that the first expulsion of astrologers from Rome happened in the year 139 BCE: Cramer 1951; id. 1954, 232-248.

16 Neugebauer 1975, II 593-600. One has to include also the positions of the paranatellonta in Manilius, located sometimes at the cardinal points of the year (8°): Hübner 1975, 401-403; id. 1984, 148 note 83 and 182-193.

17 According to the rule dressed by Theo Alexandrinus in his commentary on Ptolemy’s Πράξεις καὶ κανόνες 12 (p. 236f. Tihon), cf. Jones 1999, 343:
 $\lambda_s = \lambda_m + 6^\circ 15' - x/60^\circ$, this is in our horoscope: $\lambda_s = \lambda_m + 6^\circ 15' - -108/60^\circ = \lambda_m + 6^\circ 15' + 1^\circ 48' = \lambda_m + 8^\circ 03'$.

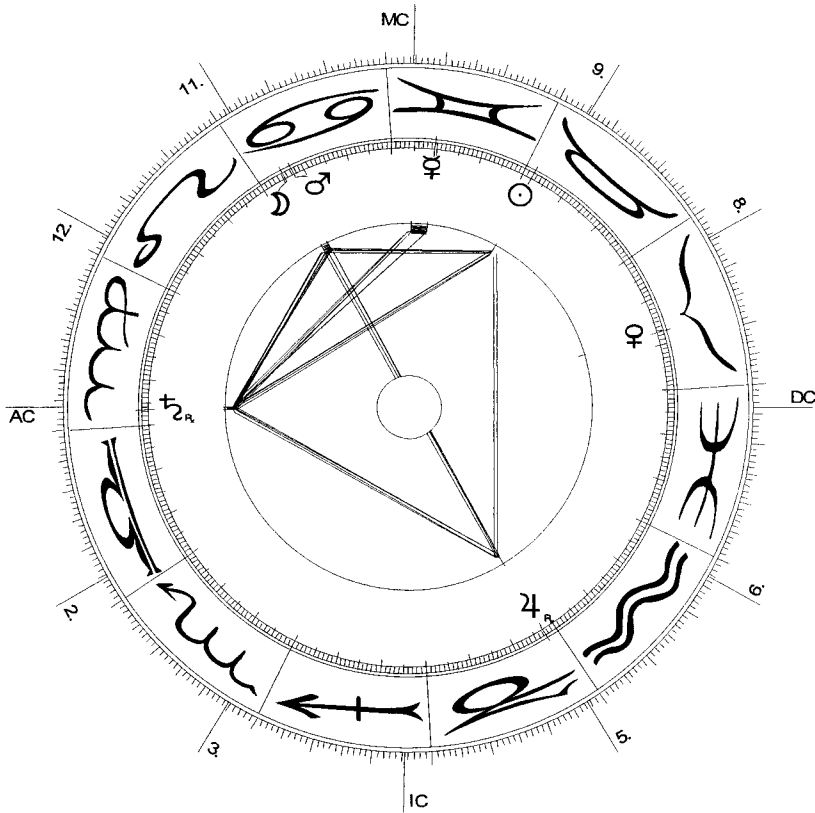


Illustration 1: Constellation for 23 May 139 BCE at 14:00 h

But how should we explain the inconsistency with Saturn, which indeed stayed in Libra, but only at Libra 5° and not in its exaltation at Libra 21°? A discrepancy of 16 degrees remains. A calculation for the following year 138 BCE, however, when Sulla actually was born, in the same period at the beginning of summer (the sun being in Gemini), leads to Libra 9°, that is, after adding eight degrees, to Libra 17°, which is within the district of Jupiter (Libra 15° - 22°) and only a little before Libra 21°, Saturn's exaltation (see ill. 2).

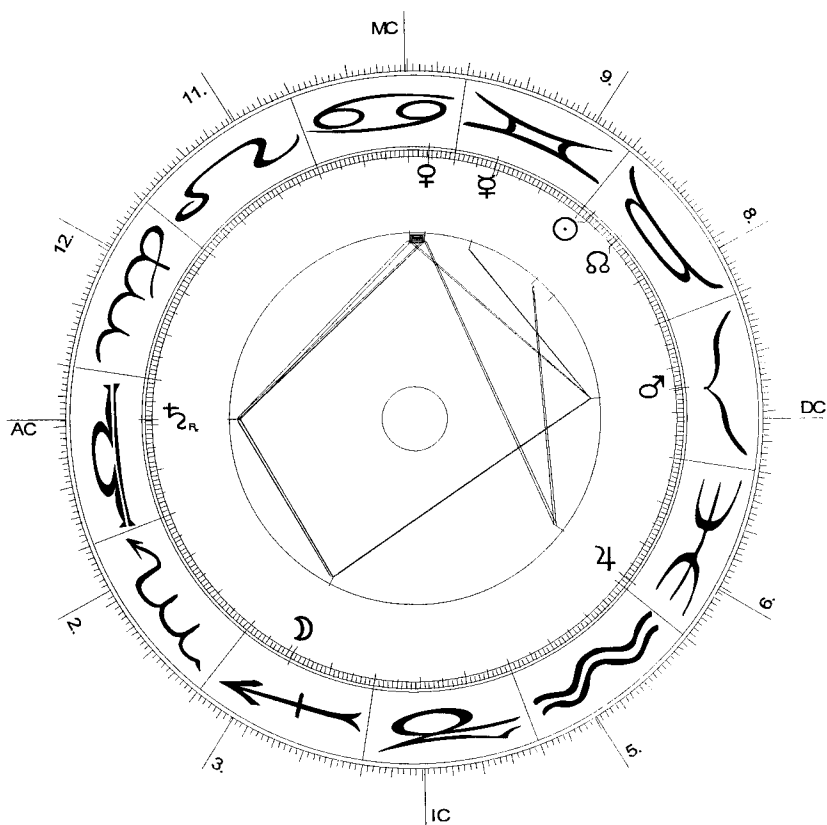


Illustration 2: Constellation for 23 May 138 BCE at 15:06 h

Thus Saturn's position fits with Sulla's year of birth, whereas all the other positions belong to the previous year. Following an appealing suggestion by Stephan Heilen, the astrologer who cast this horoscope could have found Saturn's position for 138 BCE in the ephemerides and conflated it with the positions of the preceding year 139 BCE, either accidentally confusing two columns, or doing so in order to obtain an ideal configuration. Likewise, one must assume a similar confusion of two consecutive years if the horoscope for the year 51 CE is really that for the birth of Domitian,¹⁸ and in a nativity transmitted on papyrus for the year 242 CE.¹⁹

¹⁸ Peter 2001, 134 and Suet. Dom. 1,1.

¹⁹ P. Oxy. XLVI 2398 col. II,9-12; see Baccani 1992, 153: Saturn's position, indicated for the beginning of Virgo, should be at Libra 10°.

Hitherto, Sulla's horoscope has been taken into consideration at least once.²⁰ We know of two glass gems showing Aries, Capricorn, and Libra,²¹ that seem to hint not at Augustus (for whose birth sign Capricorn and Libra are rivals), but at Sulla. I quote Joséphe Henriette Abry:²² "[...] il semblerait que Sylla ait diffusé le Bélier comme signe de sa naissance, accompagné peut-être du Capricorne. Cela supposerait que l'on avait déjà établi pour Sylla une nativité faisant intervenir au moins deux des quatre signes tropiques." Indeed, the tropical signs are decisive in our horoscope, for they occupy the cardinal houses.

2. The Context in Firmicus

Let us now look at the chapter's context. After having systematically considered from books 2 through 6 (chapter 27) all possible planetary positions in the zodiacal signs or houses, Firmicus proceeds to individual nativities that combine manifold different parameters, beginning (in chapter 6,29) with the lowest social class—slaves. Then he considers mythological and historical examples, and exceptionally he quotes some proper names here: Oedipus (§1), Paris Alexander (§11f.), Demosthenes (§22), Homer (§23), Plato (§24), Pindar or Archilochus (§25) and finally Archimedes (§26). These names seem to signify typical characters rather than individuals. This is confirmed by the fact that, in the case of poets, the author leaves the choice between Pindar and Archilochus to the reader. These strange ideal horoscopes deserve their own interpretation.

Chapter 31 begins a new series without any name:²³ *sed sufficienter tibi [...] illustrium virorum decreta narravimus. nunc ad incepti operis ordinem revertamur*. We should note an obvious but implicit opposition between the first example of chapter 29, the slave, and the first example of chapter 31, the greatest ruler: Firmicus begins the first series with the lowest, and the second with the highest social position.

The last example of horoscopes with proper names in chapter 30, that of Archimedes, differs from the others in three respects: first, Archimedes is neither a mythical figure nor a rhetorician or poet, but a mathematician and

20 It may be mentioned that under the rule of Caligula lived an astrologer named Sulla: Suet. Calig. 57,2; see Gundel 1966, 177.

21 Fossing 1929, no. 1596 and Zwierlein-Diehl 1979, no. 811. The fact that the represented Ram is looking back, confirms the zodiacal interpretation: see Hübner 1982, 118 no. 2.242.1.

22 Abry 1988, 110f. with note 28, on suggestion by Ernst Badian.

23 Firm. math. 6,31 pr. In 31,37 he adds another mythical name: the odd anti-hero Thersites, just for fun: *decretum ioculare monstrabo*.

engineer; second, he is the most recent of all (more than a hundred years before the next most recent, Demosthenes); and third, living at Syracuse, he is Firmicus's compatriot, as the author emphasizes (Firm. math. 6,30,26): *hic est Syracusanus Archimedes civis meus*. It cannot be excluded that a horoscope of Archimedes actually existed at that time. Indeed, he lived at Alexandria for some time, which was not only the center of scholarship in general, but of astronomy and astrology as well. Firmicus mentions his famous model of the universe, the armillary sphere (σφαῖρα κικλωτή).²⁴ The last example thus approaches the author in three regards: locally, temporally, and as to his subject matter, cosmologically. We have to wait only one and a half centuries to reach Sulla. For this reason, the opposition between chapters 30 and 31 is weaker than the author declares. The introductory sentence seems rather to announce a matter of greater importance.

This observation will be strengthened if we look at Archimedes's astrological data. The structure of Archimedes's horoscope corresponds in certain details with that of Sulla:

Ascendant, Mars, Venus, Mercury: Aries, in the district of Jupiter
(Aries 1° - 6°)

Jupiter: Libra (house VII)

Sol: Taurus (house II)

Luna: Leo (house V)

Saturn: Sagittarius (house IX)

Likewise, the cardinal houses are equally occupied by tropical signs. The data begin with the axis Aries – Libra that is inverted. In our horoscope Saturn (in Libra) is in opposition to Venus (in Aries); in Archimedes's horoscope Venus (likewise in Aries) is in opposition to Jupiter (in Libra). The ascendant likewise falls in a district of Jupiter, and finally the fifth and ninth houses are emphasized, the latter being governed not by the sun, but by Saturn, qualified sometimes as 'anti-sun'.²⁵

Supposing that the following horoscope belongs to Sulla, the destiny of both men form an impressive contrast: Archimedes, who is designated as a

24 Firm. math. 6,30,26: *cuius ingenio fabricata sphaera lapsum caeli et omnium siderum cursus exemplo divinae imitationis ostendit*. Archimedes also constructed a solid sphere (σφαῖρα στερεά), which the victorious M. Claudius Marcellus captured and set up at Rome in the temple of *Virtus*: Cic. rep. 1,21f.

25 Their exaltations and depressions are opposites, respectively, see Boll 1903, 313f.; id. 1918/19, 342-346; Cumont 1935, 14; Olivieri 1936, 25; Hübner 2002, 40 with note 68. The two stars also have been identified: Diod. 2,30,3; Hyg. astr. 2,42 l. 1323 Viré. 4,18 l. 628 Viré; Ptol. apotel. 2,3,23.

“divine man,”²⁶ was killed by a Roman soldier and was even lamented by the victorious Marcellus during his triumph at Rome.²⁷ Sulla, however, had a cruel character, but nevertheless lived a splendid life even after his abdication.

The contrast between the two men leads us to Firmicus's introduction in the first book, where he quotes Sulla in a long moralistic passage (such διατριβαί are not extraneous to astrological literature, as we can see in Manilius or Vettius Valens) as an example of the sharp opposition between virtue and disappointment, between moral perversity and success. The force of destiny seems to extinguish every kind of morality, which at first is demonstrated by the fortunes of two Greek politicians, Miltiades and Themistocles, who, despite their performances, earned from their citizens nothing but hatred (Firm. math. 1,7,23f.). To these two short Greek examples Firmicus contrasts one long Roman specimen, inverting the relationship: Despite his extraordinary cruelty, Sulla was extremely successful, endowed with the proverbial *felicitas*. This paradox had already acquired a considerable tradition by Firmicus's time.²⁸ Filling no less than fourteen paragraphs with his moralism (Firm. math. 1,7, 25-38), Firmicus seems to follow Sallust's *Historiae*.²⁹ But since he became so prolix, he begged his reader's pardon (Firm. math. 1,7,29): *permitte mihi longiore oratione Syllanorum scelerum replicare discrimina*, and felt the need to excuse himself:³⁰ *nimis longa oratione vim necessitatis fati [...] deflevimus*.

26 Firm. math. 6,30,26: *haec genitura divinum facit artis mechanicae repertorem*. It may be noted that according to Teucrus of Babylon (first century BCE) the beginning of Aries (Aries 3°-5°)—here distinguished by the ascendant, Mars, Venus, and Mercury—is qualified by the technical goddess *Pallas*, in opposition to *Vulcan* with Libra 24°-25°; see Anon. *De stellis fixis*, ed. Hübner 1995, I 1,2 (I 108f. and commentary II 2f.): ἕως μοίρας ε' Ἀθηνᾶ [...] μηχανικούς, Latin translation: *a tertio usque ad quintum oritur dea Pallas: locus iste facit [...] mechanicos*, and I 7,8 (I 118 and commentary II 59); only in Latin: *a vicesimo tertio [sc. gradu Librae] usque ad vicesimum quartum gradum oritur Vulcanus: facit fabros*.

27 Firm. math. 6,30,26: *hunc Marcellus in triumpho victoriae constitutus, inter ovantes militum strepitus et triumphales laureas collocatus, lugubri maerore deflevit*.

28 Cf. also, at the end of a chapter concerning Sulla's extreme cruelty, Val. Max. 9,2,1: *en quibus actis Felicitatis nomen asserendum putavit!* Plin. nat. 7,137: *quibus felicitatis inductus argumentis? [...] O prava interpretatio et futuro tempore infelix!* Paneg. 12(11),20,4; *Sulla Felix [...], felicior, si se parcius vindicasset*; Auson. 419,38 (p. 363 Peiper); *Sulla Felix, qui felicior ante quam vocaretur*. In Greek literature, Appian. civ. 1,492: εὐτυχέστατος δ' ἀνδρῶν ἔς τε τὸ τέλος αὐτὸ καὶ ἔς τὰλλα πάντα, ὥσπερ καὶ ὀνομάζετο. See Erkell 1952, 71-107: “Sulla Felix,” especially 91: “Die Benennung Felix ist unvereinbar mit der Grausamkeit; man stellt moralische Ansprüche an ihren Träger.” On the complexity of Sulla's personality see Gabba 1972. On the *felicitas* in general see below.

29 See “Useneri munusculum” in Maurenbrecher 1893 II, XV-XXI.

30 Firm. math. 1,7,39; cf. § 34: *quia in Syllanicis temporibus immoramur*.

3. Astrological Interpretation

In general, our horoscope is distinguished by the fact that three of the four cardinal houses, occupied by the tropical signs, are visited by a planet—the ascendant by Saturn, the midheaven by Mars and the moon, the descendant by Venus. The tropical signs generally are regarded as ‘political’ signs.³¹ The three remaining planets are in houses that form a favorable triangle to the ascendant, Jupiter being in the fifth and the sun and Mercury in the favorable ninth house, so that every sign of the ideal third triplicity, which consists only of human signs,³² lodges a planet: Gemini, the sun and Mercury (in house IX); Libra, the ascending Saturn; and Aquarius, the stationary Jupiter (in house V).

Let us now examine whether the stellar positions of the horoscope confirm the astrological lore presented by Firmicus in his *Mathesis*, while also paying attention to other astrological writings. The enormous mass of different prognostications with their numerous specifications and modifications increases the chance of finding elsewhere something that fits with Sulla; thus the following observations are far from decisive. Nevertheless, they may provide subsidiary arguments.

3.1. The Generally Favorable Prognostication

If Saturn, escorted by Jupiter (as here in a trine aspect from Aquarius) stays within Libra, this signifies good fortune:³³ *quicumque in genitura Saturnum habuerint in Libra benivolarum stellarum testimoniis adornatum, habebunt maxima subsidia facultatum*. The trine aspect of these two mighty planets farthest from the earth is generally evaluated as favorable. In our horoscope, their cooperation is enhanced by the fact that, on the one hand, Saturn resides in a district of Jupiter, and, on the other, that Jupiter dwells in the night-house of Saturn.³⁴ Firmicus evaluates the trine aspect of Saturn and Jupiter as positive if either both reside in a kindred zodiacal sign or one of them dwells in it’s own house. The first condition is given here by Saturn in it’s exaltation. Since at least this condition is fulfilled, the following prognostication may also be taken into consideration: *si itaque Saturnus Iovi fuerit trigonica radiatione coniunctus, [...] sint et ambo in his in quibus gaudent signis, vel unus eorum in domo sua constitutus alium trigonica radiatione respiciat, sintque horoscopo partili radiatione sociati, infinitas copias cum magna feli-*

31 See Hübner 1982, 212-213 no. 4.231 and 4.232.

32 See Hübner 1982, 130-135 no. 3.12.

33 Firm. math. 5,3,29. Cf. Dorotheos 2,14,1 p. 212 Pingree.

34 In the text of Firmicus, a general prognostication for this case has fallen out at the end of chapter 5,4.

citare decernunt (6,3,2). Then follows a further specification according to the typical Greek μάλιστα: *praesertim si unus de duobus* [...] *lumen Lunae crescentis exceperit*. The additional reinforcement is actually at play here because the crescent moon is moving from Cancer toward Saturn in Libra. Concerning Jupiter's stationary position, Firmicus does not say anything, but according to other authors, the first turning enhances all planetary effects. Consider Vettius Valens:³⁵ ἂν δὲ τὸν πρῶτον στηριγμὸν ἐπέχῃσι καὶ ἀναποδιστικοὶ εὐρεθῶσιν, τὰ τε προσδοκώμενα καὶ τὰ πράγματα καὶ τὰς ὥφελείας καὶ τὰς ἐγχειρήσεις ἐν ὑπερθέσει ποιοῦσιν.

3.2. The Success of Actions and the Surname *Felix*

The recently quoted word *felicitas* leads to successful actions warranted by the conjunction of the moon and Mars in the midheaven: *faciet ista coniunctio homines* [...], *et quos in omnibus prospere frequenter sequatur eventus, praesertim si in aliquo geniturae cardine fuerint collocati* (Firm. math. 6,24, 9). The favorable effect, Firmicus says, is enhanced by the cardinal houses which we encounter here. Then the author invites the astrologer to look for the governor of the zodiacal sign. The ruler of Cancer is the moon, which, by residing in its own house, enhances the influence. The cardinal house in question here is the midheaven, rival of the ascendant for priority;³⁶ it is responsible for glory, honor, and success in all actions.³⁷ To this could be related the *dignitatis* [...] *insignia* at the end of our horoscope. For Sulla's unmerited success we may compare Firmicus's introduction: *totiens prospere duxit exercitum* (1,7,25), and we find also the *insignia: perpetuae dictaturae cumulatur insignibus* (1,7,36).

3.3. Dominating, Judging, and Legislating

Most important, of course, are the manifold prognostications for rulership. When Libra rises, the native will be, among other things, victorious everywhere and famous: *si horoscopus in Libra fuerit inventus* [...], *in omnibus invictus erit et talis ut in nulla re videatur esse posterior, gloriosus. [...] in senectute maxima illi gloriae conferuntur insignia, ita ut novissimum vitae tempus nobilitatis splendoribus adornetur* (5,1,19f.). Once more, the word *insignia* from our horoscope and from the introductory book recurs. Already

35 Vett. Val. 4,14,4. For the retrogradation of Jupiter see above.

36 Hübner 2004, 17-19. See also Firm. math. 8,2,1 speaking about the midheaven: *ex istis enim partibus exitus vitae mors infortunia pericula felicitates, et tota substantia geniturae colligitur*.

37 Hübner 2004, 79-81 with table and 91-109 no. 12.

in Manilius's *Astronomica* we read that Libra rising produces severe rulers and judges:³⁸

*sed cum autumnales coeperunt surgere Chelae,
felix aequato genitus sub pondere Librae,
iudex examen sistet vitaeque necisque
imponetque iugum terris legesque rogabit.*

But when the autumnal Claws have begun to rise,
lucky is the man born under the equilibrium of the Balance.
As judge he will set up the scales for weighing life and death
and he will impose the yoke upon the world and introduce new laws.

The mention of a yoke relates to a part of the Balance. Many scholars believe that this points to the emperor Augustus³⁹ in combination with the nativity of the city of Rome,⁴⁰ but Manilius means rulers in general, although it would have been easy for him to insert a panegyric here as he does elsewhere.⁴¹ Perhaps the poet combined characteristics of several rulers. At any rate, the opening word *felix* fits with Sulla just as deciding about life and death fits with his proscriptions and issuing laws with his legislation.

An equal *felicitas* is given when Jupiter resides in the fifth house.⁴² To this position Firmicus devotes a rather long paragraph:⁴³ *in quinto loco Iupiter ab horoscopo constitutus magna felicitatum augmenta decernit, facit eum, qui natus fuerit, in maximis <rebus> publicis honoratum*. If there is an additional positive aspect from Mars (as here from the midheaven), the native will have the power over life and death (as in Manilius): *quodsi sic posito Iove Mars se bona radiatione coniunxerit, faciet duces, dabit etiam vitae et necis potestatem*. And then once more: *nam sicut superius diximus, si cum Marte sic fuerit constitutus, is qui sic eum habuerit, regali erit semper potestate perspicuus et sententiae eius sic erunt, tamquam ab eo cunctis hominibus*

38 Manil. 4,547-550. Perhaps the comma after *Librae* should be deleted.

39 Concerning Augustus's birth or conception, related in Libra or Capricorn, at least nine different theories have been proposed; see the dissertation by Terio, to be published. It was not yet possible to use Alfred Schmid's new study (2005).

40 As Tarutius Firmanus calculated, when Rome was founded, the moon dwelled in the Balance; cf. Gundel 1966, 126 note 10.

41 See the concluding verse of the first book, Manil. 1,926: *cumque deum caelo dederit, non quaerat in orbe*, and, once more in combination with the word *felix*, speaking about Capricorn, 2,508f.: *quid enim mirabitur ille / maius in Augusti felix cum fulserit ortum?* On this see Hübner 2000, 253-265.

42 A similar prognostication is given for Jupiter residing not in house V, but in the preceding lower culmination (Firm. math. 3,3,6): *in quarto loco Iupiter ab horoscopo partiliter constitutus [...] maximos facit viros iuridicos vel legum latores vel legum interpretes et iuris peritos*.

43 Firm. math. 3,3,8-14. The citation is from §8.

divina documenta proferantur. The exact degree (Libra 21°), however, misses a ruler-prognostication by two degrees; only Libra 23° makes kings or queens: in *parte XXIII. Librae quicumque habuerit horoscopum, erit aut rex aut regina* (8,25,8).

In other ruler-prognostications, the cardinal houses are likewise extremely important. At the birth of Alexander, Saturn is said to have risen in the tropical sign Cancer.⁴⁴ For the moon in the midheaven, Firmicus predicts rulers, but only if the sun resides within the ascending house, either in its own house or exaltation, or in the house of Jupiter, which is not the case here. Nevertheless, another condition is fulfilled throughout, namely, that one of the luminaries has to aspect Jupiter positively, for the sun in Gemini trines Jupiter in Aquarius. In Firmicus we read: <si> *sic Luna et Sole constitutis (Sole scilicet in horoscopo in his quibus diximus signis, Luna vero in MC) pariter ambos vel unum de duobus Iupiter prospera radiatione protexerit, imperatores faciet felicitate ac iustitia praepotentes et quos omnes cum terroris trepidatione suspiciant* (3,13,10). Like Manilius, Firmicus combines *felicitas*, rulership, and extremely bad judgment.

The cardinal houses are equally crucial in the ruler-prognostications of Antiochus⁴⁵ and of Ptolemy⁴⁶ in his chapter περὶ τύχης ἀξιωματικῆς, which were also known to Firmicus, as we will see. Both luminaries should be in a masculine sign,⁴⁷ and both (or at least one of them) in a cardinal house:⁴⁸ ἐν ἀρρενικοῖς μὲν γὰρ ζῳδίοις ὄντων ἀμφοτέρων τῶν φώτων καὶ ἐπικέντρων ἤτοι ἀμφοτέρων πάλιν ἢ καὶ τοῦ ἐτέρου [...]. The first condition is fulfilled by the sun being in Gemini,⁴⁹ the second by the moon in the midheaven.⁵⁰ In contrast to Ptolemy, Firmicus specifies the cardinal houses

44 Ps.Callist. *Historia Alexandri* 1,12; see the detailed interpretation by Boll 1922.

45 Antiochos, ed. Boll, CCAG I (1898), p. 164,17f.

46 Ptol. apotel. 4,3, followed, in a long chapter, by Heph. 2,18.

47 On this see Hübner 1982, 152-156 no. 3.31.

48 Ptol. apotel. 4,3,1, followed by Firm. math. 7,22,1: *si Sol et Luna in masculinis signis constituti in primis sint cardinibus collocati*, cp. § 4 *si [...] aut certe unus ipsorum sic sicut diximus collocatus in primis cardinibus fuerit inventus*. For the importance of the cardinal houses in ruler-prognostications, see also Maneth. 1(5),26. 277. 281; later on Apom. myst. 1,143, ed. Pingree 1976, 190,28. Note the contrary in Anon., ed. Cumont, CCAG I (1898), p. 165,14-16: μὴ ὄντας κεκεντρωμένους ἢ δορυφορούμενους.

49 Cf. Firm. math. 7,22,3: *si Sol in MC aut in horoscopo partiliter fuerit inventus, et sit in masculino signo*, [...] The masculine zodiacal signs are likewise mentioned by Maneth. 1(5),27 and 279.

50 In our horoscope only the moon occupies a cardinal house, i.e. the midheaven. If we add 8°, it reaches the masculine and royal Leo, but dwells no more in the midheaven. The sun occupies a feminine sign (Taurus), but after adding 8° it reaches the Twins, a male sign, but not the midheaven. Nevertheless, it dwells explicitly in the ninth house, the apoclima of the midheaven.

as the “first ones,” i.e. the ascendant and midheaven:⁵¹ *in primis sint cardinibus*. Indeed, the moon resides in the midheaven here. Let us notice that in the apodosis Firmicus enhances Ptolemy’s simple βασιλεῖς by *reges terribiles potentes*; he says: *reges facient terribiles potentes, regiones vel civitates maximas subiugantes*, which may point again to Sulla.

The sun and Mercury are not actually in a cardinal, but in the ninth house, the ἀπόκλιμα of the midheaven. According to Firmicus, a conjunction of these two planets in the neighboring tenth house produces rulers. If they reside at exactly the same degree and in their own houses (which is the case here with Mercury in his night-house, Gemini), they will produce particularly great rulers: *in decimo loco ab horoscopo, idest in MC Mercurius cum Sole partiliter constitutus in his, quibus gaudet signis vel in quibus exaltatur, per diem totius orbis dominos faciet* etc. (3,8,10). This will be enhanced if Jupiter aspects them: *praesertim si bonum eis Iuppiter testimonium commodarit*, and this actually happens here, for Jupiter looks to the Twins from Aquarius in a favorable trine aspect.

This prognostication is all the more valid because Firmicus also predicts rulers from Mercury being alone in the ninth house, especially if it is aspected by favorable planets (as here by Venus from Aries in a sextile and by Jupiter from Aquarius in a trine aspect): *si vero in hoc loco [IX] matutinus fuerit inventus [sc. Mercurius], faciet [...]. sed haec fortiora erunt, si benivolae stellae fuerit radiatione protectus; faciet enim felices beatos magnos potentes, et quibus omnia felicitatis insignia conferantur* (3,7,19). Once more, the formulation *omnia felicitatis insignia* reminds one of Sulla. But this prognostication is only valid if Mercury is *matutinus*, that is, if the planet precedes the sun, whereas according to our calculation it follows the sun.

3.4. Corporeal and Mental Characteristics

We know that Sulla was haughty, tall in stature, and had blond hair. These qualities are foretold by Firmicus, if we apply the lore of the planetary ruler (*dominus geniturae*, οἰκοδεσπότης).⁵² After mentioning several different methods, the author follows with his own, which proceeds from the second house reached by the moon following the house it was in at the time of birth. In our horoscope, the moon moves from Cancer to Leo, the latter ruled by the sun. Since this method eliminates the luminaries, one has to proceed to the next sign, namely Virgo, which is ruled by Mercury. If Mercury in conjunction with the sun governs the second sign (as here Virgo), among other things it produces haughty men: *si Sol cum domino geniturae hac, qua diximus, ra-*

51 Firm. math. 7,22,1 quoted above. For the ranking of the houses see note 37.

52 On this see Bouché-Leclercq 1899, 187-192.

diatione fuerit coniunctus [...]. facit itaque homines plenos fidei, sed inflato superbiae spiritu sublevatos (4,19,32). The high-minded character fits with Sulla as well as the corporeal qualities that follow: *facit etiam corpore longos decoros, sed quorum caput flavo capillorum crine luceat*. Also the position of Jupiter aspected by Mars in the fifth house mentioned above, will give solid bodies:⁵³ *erit autem [...]. fortis corpore validis ossibus*.

Furthermore, it is known that Sulla repeatedly broke his word. Firmicus makes such a prognostication in the case where a district of Jupiter happens to be rising (as here). In general, this position is favourable, as we might expect: *si in finibus Iovis horoscopus fuerit inventus, <omnia virtutis ac sapientiae ornamenta decernit>* (5,2,5). This fits with Archimedes, whose ascendant, as we have seen, falls within a district of Jupiter. But the additional influence of Saturn given in Sulla's nativity completely inverts the effect into its contrary: *si Saturnus <aut Mars> in ipsas partibus fuerit inventus et sit diurna genitura, faciet perfidos et qui numquam promissorum suorum fidem compleant* etc. Here we note another contrast between Archimedes and Sulla: Saturn's presence corrodes the basically positive effect.

But we should also note positive characteristics, like trusting in the gods. Sulla had a special relationship with Apollo (Christ 2002, 206), bearing his amulet on his breast (Turcan 2003, 424f.), and in the fight at the *Porta Collina* he invoked this god. Prognostications for Libra rising foretell not only victorious (as we have seen), but also religious men:⁵⁴ *religiosus sane erit et cultor deorum*.

3.5. The Sexual Life

Sulla had a special relationship not only with Apollo, but also with Aphrodite (Christ 2002, 206f). In 86 BCE he accepted the surname Ἐπαφροδίτης, and at Rome he convinced the senate to confirm it.⁵⁵ It is unclear whether this was directed against the pretension of king Mithridates VI, celebrated as Νέος Διόνυσος.⁵⁶ Since Latin in that period was unable to form composite nouns, the Roman chose the simple epithet *Felix*. We saw that Firmicus relates this in his first book. Scholars have interpreted this name in a different manner, however: either as "a favorite of Fortuna," as "a favorite of Venus,"

53 Firm. math. 3,3,8. See above note 43.

54 Firm. math. 5,1,19. See above.

55 Plut. Sulla 34,4, cf. Sallust's famous judgment (Iug. 95,4): *illi felicissimo omnium* etc. With some restriction Val. Max. 2,27,5: *Felicitis nomen adsumpsit, quod quidem usurpasset iustissime, si eundem et vincendi et vivendi finem habuisset*. See above and Volkmann 1958, 36-43; Hinard 1985, 237f.; Christ 2002, 205f. We may compare the *felicitas* of the emperor Septimius Severus, who was equally credulous concerning astrology: Maass 1902, 146f.

56 Volkmann 1958, 36-43: "Sullas Gegenideologie: Der Liebling der Aphrodite."

or simply “a charismatic person without any relation to the gods.” The opponents of the Venus-theory only offered weak arguments. Indeed, *Felix* was an epithet of Venus. Sulla had the name “Aphrodite” inscribed on the spoils during the battle of Cheironeia, and he obeyed the oracle at Delphi which asked him to offer a sacrifice to Aphrodite of Aphrodisias. At Rome, he ordered coins showing Venus and *Felicitas*, and he even promised a temple for Venus.⁵⁷ Finally, he named the twins born to his fourth wife, Metella, *Faustus* and *Fausta*; these names point to the same semantic field.

In our horoscope, Venus resides in the descending house occupied by Aries. In general, the descending house concerns the wife.⁵⁸ Among Sulla's five marriages, the fourth one was eminently honorable: that with the aforementioned Metella, the niece of the famous Caecilius Metellus Numidicus (cos. 109 BCE).

In his youth, however, Sulla is said to have lived a life full of debauchery, and to have returned to it in his old age. In Firmicus's first book we read: *ignavus ille vir et omni infamiae maculatione pollutus, Syllam dico* etc. (1,7,25), and again: *quod nunc putas esse iudicium, quem rationis ordinem, ut ille, qui numquam fuit memor sexus sui, qui ultra commendationem gratiae puerilis aetatis senex exoletus in aliena aetate flagitia corporis detinebat, vitiis obsessus Romana gubernaret imperia?* (1,7,28)

A similar attitude is foretold from two further configurations, both of which are relevant here. First, an opposition between Saturn and Venus, which is represented as a strong hostility:⁵⁹ *si Saturnus et Venus diametra se radiatione respexerint, <et> in contrariis constituti locis longa se invicem virium suarum potestate pulsaverint, facient homines lupanaribus deditos promiscua libidinum <cupiditate> scorta sectari, ut ex hoc cum magna nota gravi pulsantur infamia*. We should notice the resonance between *pulsaverint* in the protasis and *pulsantur* in the apodosis, and the fact that bad reputation (*infamia*) resulting from a vicious life fits with Sulla as seen by Firmicus in his introduction. The same word recurs in the other condition, which requires that Venus be in the descending house: *in septimo loco Venus ab horoscopo*

57 See Wissowa ²1912, 291: “Sulla, der sich für einen besonderen Liebling der Aphrodite hielt und seinen Beinamen *felix* griechisch durch Ἐπαφροδίτος wiedergab, verehrte die Venus insbesondere als Glücksgöttin unter dem Namen Venus Felix.”

58 Hübner 2004, 166-169 no. 24.

59 Firm. math. 6,15,14. Cf. the prediction for Venus in Capricorn in opposition to Saturn (6,31,38): *erunt [...] ex venereis libidinibus semper infames* etc., and the horoscope (L 40) in Neugebauer and van Hoesen 1959 transmitted by Hephaestio 2,18,57: Venus in the greedy Ram and Saturn in the Balance engender eager homosexuality; the horoscope of Pamprepios, Horosc. L 440 (see above), CCAG VIII 4 (1922), p. 223,22-24: τὸ διαμετρῆν Κρόνον πρὸς Ἀφροδίτην οἶκῳ Ἄρεως <οὔσαν> καὶ Κρόνος οἶκῳ Ἀφροδίτης τὴν ἀσέλγειαν ἀπεργάσαντο. See Pingree 1976, 146: Saturn in Taurus 25° (the house of Venus) in opposition to Venus in Scorpio 26° (the house of Mars).

constituta [...]. faciet autem de rebus veneriis maximis infamiis laborantes (3,6,14). It is uncertain whether the additional condition formulated before—that Venus has to be in its own sign during a nighttime birth—is still at work here or not. But in what follows Firmicus adds another specification that fits here: If Venus stays in a tropical sign, in opposition or quartile aspect to Mars, this signifies debauchery: *si enim hunc locum [VII] tenuerit in tropicis signis constituta [...], et cum ea Mars fuerit aut se illi per diametrum aut de quadrato forti radiatione coniunxerit, facit inpuros libidinosos infames* (3,6,14). The two conditions are fulfilled here, since Venus, dwelling in the tropical sign Aries, is in a quartile aspect to Mars in Cancer. At the end of the passage, Firmicus concentrates the effect on two particular tropical signs: Capricorn and Aries: *sed haec vitia erunt fortiora, si in Capricorno vel Ariete ha[e]c se stellarum mixtura coniunxerint* (3,6,15). Both signs belong to the greedy signs (ἀσελγῆ),⁶⁰ but most of all Aries creates greediness in many single degrees.⁶¹

At any rate, the text of Kroll and Skutsch has to be corrected here. The modification made by Pierre Monat⁶² is not convincing. The solution proposed here (*ha[e]c*) relates the plural *coniunxerint* to the famous couple just mentioned, Mars and Venus, and presupposes the metaphor of copulation for the conjunction, which is employed in the former paragraph for Mars and elsewhere for the conjunction of Mars and Venus:⁶³ “If they conjoin themselves in this starry mixture.” The two planets neighboring the sun (according to the ancient system) are contrasted in the same way in an interpretation of a famous earlier ruler's life. Iulianus of Laodicaea quotes the life of Alexander as an example of Mars's unexpected good and Venus's likewise unexpected bad influence. Alexander's victories, gained by the support of Mars, would have been troubled by his venereal end:⁶⁴ καὶ τὸ γενναῖον καὶ ἀήττητον τοῦ Μακεδόνοϛ Ἀλεξάνδρου [sc. ἦν] ἀρεϊκόν, ἡ δὲ διὰ τὴν μέθην συμβᾶσα αὐτῷ τελευτὴ ἀφροδισιακόν. Perhaps there already existed a topical planetary interpretation of rulers or tyrants.

60 Hübner 1982, 214–216 no. 4.3. Both signs are mentioned also by Theophilus from Edessa, ed. Zuretti, CCAG XI 1 (1932), p. 262,28: Ἀφροδίτη ἐν Αἰγοκέρῳτι καὶ Κριῶ.

61 Hübner 1995, I 136 and table 20.

62 Monat 1994 prints: *si in Capricorno vel Ariete haec stellarum se mixtura coniunxerit*, and translates: “si c'est dans le Capricorne ou le Bélier que s'est formée cette combinaison.”

63 Firm. math. 3,6,14: *si [...] cum ea* [sc. Venus] *fuerit* [sc. Mars] *aut se illi [...] forti radiatione coniunxerit*. In a poem Maneth. 5(6), 282: ἦν Παφίην εὖρης περιπλεξαμένην τὸν Ἄρηα. For similar metaphors, see Hübner 2004, 146–150.

64 Iulianus of Laodikeia, ed. Cumont, CCAG IV (1903), p. 105,20f. A foregoing example mentions the pernicious role of Venus in the judgment of Paris and the beneficial role of Saturn in the Golden Age.

3.6. The Short Life

With regard to the conjunction of Mars and the moon, Firmicus forecasts, as we saw above, not only a successful, but also a short life:⁶⁵ *sed his aut breve vitae decernitur spatium, aut vitae cursum immaturus exitus mortis inpugnat*. A similar prognostication is given for the degree ascending here (Libra 21°): *in parte XXI. Librae quicumque habuerint horoscopum, erunt [...] oligochronii* (8,25,7).

We know a speculative method for calculating the duration of life. Although not mentioned by Firmicus, it is described at length by Ptolemy in his *Tetrabiblos* in the notorious chapter about the “spender of life” (ἀφάρτης, *prorogator*).⁶⁶ In the case of a daytime birth, if the sun resides in house X, I, XI, VII or IX, it sends forth the ray of life in the direction of the planets (counterclockwise). In a sort of “zodiacal roulette” (Bouché-Leclercq), the ray moves on until it comes to rest at the next planet in a position not to exceed a quarter circle (90 degrees), and the number of zodiacal degrees covered roughly indicates the years of life.

Let us apply this method to our horoscope. As the sun dwells in the ninth house, it is its turn to send forth the ray of life. According to our calculation, the sun resides at Taurus 28°, which leads, by an addition of 8°, to Gemini 6°. The first fatal meeting with a malefic planet happens in Cancer 22° with Mars, which leads, by an addition of 8°, to Cancer 30°, thus the end of Cancer. This position, where the moon is also involved, increases its pernicious power by an unfavorable quartile aspect to the other malefic planet, Saturn, dwelling in Libra. The ascensional values from Gemini 6° to Cancer 30° amount to slightly more than 60 degrees, independently of the geographical latitude, because the sums of the right ascensions of Gemini and Cancer are pretty much the same in the Babylonian systems A and B for all *climata*. This figure corresponds to a life’s duration of roughly 60 years, Sulla’s actual lifetime, and such a result could have been present in Sulla’s mind.

3.7. Sulla’s Abdication and Death

At age 59, Sulla appeared before the public meeting and unexpectedly abdicated after having earlier renounced that year’s consulship.⁶⁷ According to

65 Firm. math. 6,24,9, see above. Cf. the Greek parallel Val. App. I 166: τινὲς ὀλιγοχρόνιοι.

66 Ptol. apotel. 3,11, especially § 3. See Bouché-Leclercq 1899, 404-428; Kunitzsch 1977, 44f. with bibliography in note 92.

67 Gabba 1972, 803 maintains that the internal resignation began already at the end of 81 BCE.

Hans Volkmann,⁶⁸ he did so because the astrologers, as Plutarch relates, foretold a premature death for him. We must not forget that Sulla was extremely superstitious;⁶⁹ he recorded his dreams, and in his voluminous memoirs he must have often spoken about the goddess Fortuna, signs, and wonders (Misch 1945–1950, I 254–256).

But the symptoms of his grave illness could also have caused him to do so. Only a few months later, after having spent less than one year as a private citizen, Sulla died at the age of 60.⁷⁰ According to the sources, he suffered from the φθειρίσσις (*morbus pedicularis*, “illness of lice”),⁷¹ but this may be a later legend, since a similar death by worms passed for a typical death of tyrants (Ehrhardt 1959, 19). It is precisely in relation to this disease that Plutarchus relates: προέγνω τὴν ἑαυτοῦ τελευτὴν (Plut. Sulla 37,1). He continues that Sulla had written in the last book of his *Commentarii* (ὑπομνήματα) that astrologers foretold to him that at the peak of his successful life he would expire:⁷² καὶ φησι τοὺς Χαλδαίους αὐτῷ προειπεῖν, ὥς δέοι βεβιωκότα καλῶς αὐτὸν ἐν ἀκμῇ τῶν εὐτυχημάτων καταστρέψαι. We cannot yet determine when the Chaldeans uttered this prognostication. If it was at the end of his life, as the reference in the last book of Sulla's memoirs suggests, the astrologers could have known about the illness, and therefore made this prognostication. But it cannot be ruled out that they interpreted an already existing horoscope.

4. Conclusion

Five reasons increase the probability that the detailed horoscope given by Firmicus Maternus for a mighty and successful ruler indicates Sulla's nativity: first, the virtually exact date of his birth by a combination of elements from two consecutive years, 139 and 138 BCE; second, the conformity with many general predictions given by the author throughout the work (especially for Saturn in the ascendant in Libra in alliance with Jupiter, and the conjunction of Mars and the crescent moon in the midheaven); third, the contrasting juxtaposition of Firmicus's compatriot Archimedes's nativity; fourth, the prominent position of this horoscope at the beginning of a new series of nativities,

68 Volkmann 1958, 86, approved by Christ 2002, 134f. On the other hand, in his youth a great future was foretold to him: Plut. Sulla 5,11.

69 Christ 2002, 134f. See also Fröhlich 1900.

70 Val. Max. 9,3,8: *nec senio iam prolapsus, utpote sexagesimum ingrediens annum*. Appian. civ. 1,492: ἐτελεύτησεν ἐξήκοντα μὲν ἔτη βιώσας.

71 Plut. Sulla 36,3–4; Plin. nat. 7,138. 11,114. 26,138. For the reliability of these observations see Fröhlich 1900, 1563,11–28.

72 Plut. Sulla 37,2 = *Historicorum Romanorum Reliquiae* I² 204.

which—in contrast to the former series beginning with a slave—starts at the highest echelon of power; and, finally, the extravagant and paradigmatic treatment of Sulla in the introductory book, where Firmicus, in an extremely engaged moralizing διατριβή, treats Sulla's life and personality as a spectacular example of the sharp contrast between a criminal character and tremendous fortune, that is, of the unjust and mysterious omnipotence of destiny.

Hitherto, the horoscope of Ceionius Rufius Albinus was considered the only ancient horoscope transmitted by Firmicus Maternus in Latin. If we are correct, there is another one which would be the oldest of all among the horoscopes of Greco-Roman antiquity whose owners have been identified.

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What Was Agrippina Waiting For?*

(Tacitus, *Ann.* XII, 68-69)

JOSÈPHE-HENRIETTE ABRY

Every reader well acquainted with classical antiquity has heard of that famous night when Agrippina, fearing that her imperial husband, Claudius, might feel some fatherly love again for his children, for Britannicus in particular, and that this could upset the situation of her son, Nero, decided to act and poison the emperor, to speed up her son's accession to power. Did Claudius die earlier than expected? According to the historians, it seems that the end of the night and the following morning were spent buying time to prevent the news from being spread: the body was swathed in blankets; the Senate was convened, waiting for an important piece of news; Agrippina herself, "heart-broken apparently and seeking comfort, held Britannicus to her breast and [...] prevented him and his sisters from leaving their rooms; ever and anon she issued notices that the emperor's indisposition was turning favourably [...] to allow time for the advent of the auspicious moment insisted upon by astrologers," as Tacitus writes. "At last, at midday, on the thirteenth of October [54 CE], the palace gates swung suddenly open [...] and Nero passed to the cohort, was greeted with cheers and finally taken to the camp of the Praetorians who saluted him as Imperator." Such is, in brief, Tacitus's account of what was, in fact, a 'coup d'état'.¹ Although Suetonius gives two different accounts of that night, he corroborates what is most important for this paper: the hour at which the accession took place, and the fact that

* I want to express my deepest thanks to Dr Stephan Heilen (Münster) whose kind help was most precious and valuable for correcting important points in this paper.

1 *Agrippina, velut dolore evicta et solacia conquirens, tenere amplexu Britannicum [...] ne cubiculo egrederetur [...] Cunctos aditus clauserat crebroque vulgabat ire in melius valetudinem principis, quo [...] tempus prosperum ex monitis Chaldaeorum adventaret.* 69 *Tunc medio diei tertium ante Idus Octobris foribus palatii repente diductis [...] Nero egreditur ad cohortem [...] Ibi monente praefecto faustis vocibus exceptus inditur lecticae [...] Inlatusque castris Nero [...] imperator consalutatur* (Tacitus, *Annals* XII, 68-69). All translations are mine if not otherwise noted.

Agrippina was waiting for a definite time, although he makes no express mention of astrologers.²

Although much has been written on the important part astrologers played at the imperial court of the Julio-Claudian dynasty,³ the circumstances of Nero's accession to the throne have aroused less interest than the poison sprinkled on the 'exceptionally fine mushroom' served to Claudius and the many vicissitudes of that night, in spite of the precise information given by both Tacitus and Suetonius. Indeed, the French Canadian P. Brind'Amour is the only scholar who has tried to find out what confirmation astrology could provide to the account of both Latin historians.⁴ Since the answers he gave thirteen years ago do not seem quite satisfactory to me, in this paper I will investigate the matter further.

1. History and Astrology: The Story of a "Coups"!

From many points of view, Nero's accession to the Empire may be regarded as a good example of the interesting but difficult relationship between history and astrology. The main elements of the question are (1) historical circumstances in which (2) astrologers play the most influential part determining the most propitious time for action. Thus, the question to be asked from the perspective of this volume is what astrological value lies in both Tacitus's and Suetonius's accounts; does astrology confirm or explain any details of the situation, does it help us understand what lies behind the historical relation?

The historical circumstances are clear: taking advantage of the absence of Narcissus, the imperial freeman Claudius trusted, Agrippina decided within a very short time (a few days? a few hours?) to murder Claudius. Death had to look natural; this is why the poison was sprinkled on mushrooms, a dish Claudius was extremely fond of, with the hope that he would

2 "When the death of Claudius was made public, Nero, who was seventeen years old, went forth to the watch between the sixth and seventh hour, since no earlier time for the formal beginning of his reign seemed suitable because of bad omens throughout the day [...]" *Septemdecim natus annos, ut de Claudio palam factum est, inter horam sextam septimamque processit ad excubitores, cum ob totius diei diritatem non aliud auspicandi tempus accommodatus videretur* (Suetonius, *Divus Claudius*, XLIV-XLV).

3 Cramer 1954, chapter 3: "Astrologers, the Power behind the Throne from Augustus to Domitian," especially 112-131; Martin 1983.

4 Brind'Amour 1991. After finalizing this paper, Stephan Heilen pointed me to an article by A. M. Lewis (1998), in which Lewis tries to prove that Nigidius's prophecy corresponds to the horoscope of Nero's accession on October 13, 54 CE. Some of the conclusions of her extensive study are close to my own, although Lewis argues in a different direction.

die as if from intoxication. But as the drug seemed ineffective, it was decided in a panic to accelerate the end with a second, swifter and more powerful poison. At what time did Claudius die? In one account, Suetonius writes “just before dawn,”⁵ but we can reasonably assume that it was perhaps a little earlier, during the second half of the night. Clearly Agrippina and her coterie did not have complete control over the time of death. But, on the other hand, ‘Chaldaeans,’ that is astrologers, had advised that Nero had to wait until noon to be hailed as the new Emperor. Hence those eight or nine hours during which it was necessary to maintain absolute silence about the Emperor’s death and to play the farce of ‘things are serious but we still hope....’

The part played by the astrologers in Agrippina’s coterie is not surprising. We know that she requested their advice on many occasions: from Tiberius’s reign, court astrologers had been present as the Emperor’s counsellors and astrology was used either as a weapon—to eliminate enemies, rivals for power or marriage—or as a tool to secure one’s future.⁶ Among these secret counsellors was Ti. Claudius Balbillus, the son or grandson of Tiberius’s famous astrologer, Ti. Claudius Thrasyllus, who was himself a learned man (we still have some excerpts of his works, mostly on the length of life⁷). He had belonged to Agrippina’s coterie for some time, if indeed he prophesied that Nero should reign and slay his mother, and, afterwards, he advised Nero during the main part of his reign. On the night Claudius died was it Balbillus who decided the most propitious time for the beginning of the new reign? This seems quite likely, because one year later, in 55, he became Prefect of Egypt, which may have been the reward for important deeds.

Indicating the most propitious time for an action is part of the astrologer’s job: it is called *electional* or *catarchic astrology*,⁸ and it aims to investigate the influence of a momentary configuration of the heavens upon the outcome of an enterprise. Before undertaking some action, such as embarking on a journey, being bled, marrying, or founding a city, one must know its most auspicious moment. With such knowledge, everyone can reconcile fatalism and free-will: knowing in what condition the heavens will be at a given time, one may decide freely to carry out an enterprise or not. For the most trivial actions as for the most important decisions, the part played by astrological counselors was crucial.

The time chosen for beginning the new reign is identical in both accounts: it was midday, according to Tacitus, and between the sixth and sev-

5 *Defecisse prope lumen* (*Divus Claudius*, XLIV, 3).

6 Brind’Amour (1991, 147) gives many examples; see also Barton 1994, 42-46.

7 On Balbillus’s life and works, see Grzybek 1999, 122 note 16, to which can be added Gagé 1968, chap. 2, 75-124; Pingree 1978, vol. II, 423.

8 *Katarchê*, literally “beginning”; for the definition, see Neugebauer and van Hoesen 1959, 7; Kitson 1989, 170-199; and for the many problems that electional astrology could deal with, Hübner 2003.

enth hour, according to Suetonius, which can mean a short time after noon.⁹ This extreme precision in an astrological context may refer either to the position of the moon, which moves faster than other planets, or to the ascendant, the rising sign, with a change of the ascendant also necessitating a change in all the four *centra*. We may discard the moon: however fast its motion may be, its position does not noticeably vary within an hour; on the other hand, the sign rising on the eastern horizon, the ascendant (ASC), changes constantly, roughly every two hours, sometimes less, sometimes more. It is also the main element on which the whole chart rests: it is certainly one of the points astrologers had in mind when they looked for a precise time.¹⁰

2. Is the 13th of October 54 CE a “Coronation Horoscope”?

Drawing the astrological chart for 13 October 54 midday at Rome is not difficult. Stephan Heilen checked Brind’Amour’s positions; here are the accurate results (see ill. 1 at the end of this article):

Sun Lib 18°	Mars Sco 17°
Moon Cnc nearly 27° (26° 47’)	Venus Lib 18° (exactly 17° 58’)
Saturn Ari 3° (retrograde)	Mercury Lib 0°
Jupiter Ari 15° (retrograde)	ASC Sgr 26° 56’ (nearly 27°)

To these positions we can add the Lot of Fortune at Lib 3°.

But drawing a diagram of the heavens as astrologers did in the first century CE raises several difficulties: First, computer-calculated planetary positions are tropical longitudes c. 5° lower than the sidereal longitudes reckoned by ancient astrologers. On this point, Neugebauer’s commentary (p. 182) is essential. One can assume that Balbillus, for instance, would have given the following positions: sun, Venus and Mercury in Libra (22° or 23° more likely than 18°); moon (in fact at the very last degrees of Cancer) in Leo (1° or 2°); Saturn and Jupiter in Aries; Mars in Scorpio, and ASC at the beginning of Capricorn. The second difficulty concerns the location of the *centra* and the astrological ‘houses’ or *loci*: if it is easy to calculate the axis ASC–Dysis (rising to setting point), it is more difficult to determine the axis midheaven (MC, upper culmination)–lower midheaven (IMC). In normal practice, it seems likely that astrologers used to put the *centra* every 90°

9 *Inter horam sextam septimamque*, Suetonius, *Nero* VIII.

10 Stephan Heilen was kind enough to check the chart for 13 Oct. 54 at 11:46 and at 12:00 (Rome, local time) using Galiastro 4,3 software; the moon moved from Cnc 26° 39’ to Cnc 26° 47’, the ASC moved from Sgr 24° 0’ to 26° 56’, which means a shift of nearly 3 degrees within a quarter of an hour.

(Hübner 2003, 15), without regard for astronomical reality, that is, the zodiac, rising with a more or less oblique angle over the horizon is hardly ever divided into four equal quadrants by the horizon and the meridian. This has an important consequence: if the ASC is located at Sagittarius 27°, it is likely that, for the less precise among the ancient astrologers, the MC fell at Virgo 27°, while in the modern computation, it falls at 18° Libra according to P. Brind'Amour, or, more precisely, at 21° 27' according to Heilen's computations (for 12:00). For the same reason, the intervals allowed for each of the twelve 'places' were, it seems, of a constant length of 30° each, computed either from the ASC, or from 5 or 10 degrees before the cusp. More often, a whole zodiacal sign corresponded to a single mundane house. Only after Ptolemy, in the second century, was the mathematical problem of the exact location of the *centra* and of the uneven *loci* clearly defined and solved (Neugebauer and van Hoesen 1959, 8). However, once it was known that the signs do not rise evenly every two hours in relation to the different latitudes of the earth (Manilius, *Astronomica*, III, 218-246), it was certainly possible, from the first century, to compute with greater precision which sign was culminating at the MC for a given time without being satisfied with the normal 90° method. Using tables of rising times (*anaphorai*) (Manilius, *Astronomica*, III, 385-442), even an ordinary astrologer (not to mention fully qualified astrologers as were Agrippina's advisers) could reckon that the culminating sign was Libra instead of Virgo, and that the sun-Venus conjunction was very close to the MC (upper culmination).

Now the interpretation of the horoscope becomes clearer: according to P. Brind'Amour, the sun-Venus conjunction, which he thought was in the tenth place exactly on the MC (18°), sufficed to explain why this precise time had been chosen.¹¹ His demonstration thus stops there with this prospect of a glorious and auspicious reign. So 13 October could seem a propitious moment for becoming Emperor, a perfect "coronation horoscope"¹² promising glory and happiness. Yet Brind'Amour missed two essential details: the meaning of the ASC, which he computed at Sgr 24°, and Suetonius's statement that it was an ominous day. Let us treat this last point first.

Does the chart drawn for this moment have anything to do with a 'coronation horoscope'? Brind'Amour identified the most salient point, namely, that Venus was very close to the MC. He could also have added the position of the sun in this same place,¹³ and the fact that the sun-Venus con-

11 Firmicus, III, 6, 21: *In decimo loco Venus ab horoscopo si fuerit inventa, id est in MC., faciet claros et coronatos et quibus grandis gloria et fortuna maxima conferatur.*

12 To use Barton's expression (1994, 67), referring to Pingree 1976.

13 Firmicus, III, 5, 34: *in decimo loco Sol ab horoscopo partiliter constitutus in diurna genitura, id est in MC., in domo sua aut in domo Iovis, aut in ea parte in qua exaltatur, faciet reges quibus a patre tradatur imperium aut duces quibus hoc honoris simili modo paternis cum honoribus conferatur [...]* "Although in that special case,

junction is also quite propitious in itself: *Si Sol et Venus pariter collocati in eodem signo constituti aequabili societatis potestate iungantur, facient quidem homines gloriosos, et qui desiderata omnia facillimis rationibus consequantur* (Firmicus, *Mathesis* VI, 25, 1). Moreover, Venus was in Libra, its night house, and the three planets (sun, Venus, and Mercury) being close to the MC in the sign of Libra could appear as a link between the fate of the new emperor and the destiny of Rome, founded, according to a well established tradition, under the sign of Libra.¹⁴ As Augustus had done before, one can imagine the profit imperial propaganda could derive from this kind of coincidence: a ‘coronation horoscope,’ in which the ASC was in Capricorn, the sign which Augustus claimed to be his birth sign, and the MC was in Libra. One may add some other propitious points: the presence of Mars in Scorpio, its day house, and in the 11th place (Manilius calls it *Fortuna Felix*), and Mercury in the 9th place (called *Deus* according to Manilius). All this seemed to portend a new Golden Age.

Yet Suetonius expressly wrote that the day was dire and that “because of bad omens throughout the day,” it had been necessary to choose the less ominous time: *cum ob totius diei diritatem non aliud auspicandi tempus accommodatius videretur*. Is this a retrospective pronouncement from someone who knew how the story ended? Actually, an astrologer can easily spot three oppositions that cast suspicion on the future: Saturn opposite Mercury and Jupiter opposite the sun-Venus conjunction seem to foretell Nero’s wretched end: *si Iuppiter et Sol diametra se radiatione respexerint, et in contrariis constituti locis longa se invicem radiorum suorum potestate pulsaverint, paternas facultates miseris faciunt lacerationibus dissipari; sed et omnem vitam et substantiam et praecedentis dignitatis gradus miseris honorum deiectionibus minuuntur* (Firmicus, *Mathesis* VI, 16,2). So, in spite of the many points which were actually auspicious, 13 October was certainly not the most ideal moment for a ‘coronation.’ Of course, in the panic in which Claudius’s death was decided and realized, astrologers had to choose the ‘less problematic’ time, but why the precise moment of noon?

the sun was not located in its own ‘house’ nor in one of Jupiter’s houses, nor on a degree in which it was ‘exalted’.”

- 14 On the horoscope of Rome, see Manilius, *Astronomica*, 4, 773-775; Abry 1996. Actually it seems that, at the beginning of his reign, the official propaganda aimed at presenting Nero as a new Augustus: Dumont 1986; Arnaud 1987; Le Boeuffe 1989.

3. An Ambiguous Nativity

We have a fairly good idea of how astrologers worked when they were asked for “*katarchai*”: they would need to consider both the future state of the heavens and also the positions of the stars at their client’s birth in making such a recommendation.

Nero’s birth is well known: “(He) was born at Antium nine months after the death of Tiberius, on the eighteenth day before the Calends of January, just as the sun rose, so that he was touched by its rays almost before he could be laid upon the ground,” that is, on 15 December 37 in Latium at sunrise.¹⁵ As one would expect, the birth of a man with such an outrageous reputation has drawn the attention of astrologers from antiquity to modern times.¹⁶ Actually, the ancients had less interest in the monstrosity of the man than in the documentary value of his biography: in his *Anthologiae*, book V, 7,20 (Pingree 1986, 222) Vettius Valens asks the question: knowing the exact nativity of a man and the planet which was the ‘starter’ (*aphetes*), how are we to reckon the date of his death? As an example he takes Nero’s nativity (without giving his name) and explains how the planetary revolutions lead to 11 June 68, which was supposed to be Nero’s death, Saturn having revolved to exactly the same degree as in his nativity. The analysis of this twofold horoscope by O. Neugebauer and H. B. van Hoesen gives the following positions (see ill. 2):

Sun Sgr 22°
Mars Sgr 26°

Saturn Vir 26°
Jupiter Sco 14°

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- 15 Suetonius, *Nero*, VI. The report goes on: “Many people at once made many direful predictions from his horoscope, and a remark of his father Domitius was also regarded as an omen; for while receiving the congratulations of his friends, he said that ‘nothing that was not abominable and a public bane could be born of Agrippina and himself.’” *Nero natus est Anti post VIII. mensem quam Tiberius excessit, XVIII. Kal. Ian. tantum quod exoriente sole, paene ui radiis prius quam terra contingeretur. De genitura eius statim multa et formidulosa multis coniectantibus praesagio fuit etiam Domiti patris vox, inter gratulationes amicorum negantis quicquam ex se et Agrippina nisi detestabile et malo publico nasci potuisse.*
- 16 On the two horoscopes drawn by Cardano, see Grafton 1999, 84-85. Cardano drew two horoscopes for Nero’s geniture, the first one in the *Libelli Duo* (1543, Xv-XI^r) calculated for the 14th of December 36, the second one (*Libelli Quinque*, 1547, in *Opera omnia*, V, 480-481) corresponding to the 14th of June 38, which he declared *haec est vera Neronis genitura*. Although neither has anything to do with the actual *genitura* of Nero and they are quite different from each other, the commentary is the same: *saevitia in fratrem, uxorem, matrem, in omnes denique, urbem incendio, corpus stupris, animum flagitiis, omnia cruenta nece foedavit. Animo trepidus etiam ad ipsa facinora, valetudine firmus, anno 18 imperium orbis matris fraude adeptus, 32 aetatis, scelere proprio cum vita simul amisit, manum timore publicae poenae inferre sibi compulsus.*

Mercury Sgt 1°
Moon Leo 12°

Venus Cap 23°
ASC “about sunrise”¹⁷

The most striking feature of this nativity is that the ASC fell on Sgr 23°, since the baby was born at the very moment the sun rose; it was therefore located very close to the position of the ASC on 13 October 54 (27°). Although there is no indication, the MC too was necessarily in Libra (16°), if we accept the idea that it was computed according to the astronomical reality instead of being put 90° ahead of the ASC. This coincidence between the charts of Nero’s birth and his accession to the Empire is too impressive to be fortuitous, and it is very likely one of the keys to understanding why midday was chosen for the time on 13 October.

If later astrologers were mostly interested in the length of life fated by such a disposition, those who attended the birth foretold a most ominous future: *de genitura eius statim multa et formidulosa multis coniectantibus* [...], writes Suetonius. Although Nero was later to avail himself of a solar nativity, the planetary positions portended a baleful future. Actually the nativity chart shows four squares, Saturn (Vir 27°) aspecting the sun, the ASC (Sgr 23°) and also Mars (Sgr 27°) from quartile, and the moon too (Leo 9°), being 95° ahead of Jupiter (Sco 14°), aspects it from quartile. So this aspect, very ominous in itself, occurs four times! The square moon-Jupiter could, a priori, seem less ominous because of the benign character ascribed to the planet Jupiter, which was, furthermore, in a place judged auspicious (XI); but, whatever the determination of the places was in antiquity, it is obvious that the moon was in the eighth place (death). Does this quartile explain the prophecy that Nero should reign (Jupiter in the 11th house) and slay his mother (moon in the 8th house)?¹⁸ All these ominous aspects, added to the

17 Which means 22° or 23°; see Neugebauer and van Hoesen 1959, 79. Vettius Valens does not give any indication of the birth time; he simply writes that the ASC was located in Sagittarius. Dio gives more details: “At his birth just before dawn a ray not cast by any visible beam of the sun enveloped him” (Epitome of book LXI, 2, 35).

18 We have two accounts of this prophecy: Dio’s chapter on the signs indicating that Nero should one day be sovereign: “A certain astrologer [...] from the motion of the stars at that time and their relation to one another, prophesied two things at once concerning him—that he should rule and that he should murder his mother. Agrippina, on hearing this, became for the moment so bereft of sense as actually to cry out: ‘Let him kill me, only let him rule!’ but later she was to repent bitterly of her prayer” (Epitome of LXI, 1,1); and Tacitus (*Annals*, XIV, 9, 3) who mentions the prophecy ‘*Occidat, dum imperet!*’ after Agrippina’s murder. According to *Annals* VI, 22, Thrasyllus’s son Balbillus had made this forecast. At what moment was this prophecy uttered? At Nero’s birth, although it sounds very ominous in such a circumstance? Or on 13 October, when astrologers were looking for the less ominous time?

fact that Sagittarius was itself a sign lacking in ‘charisma’,¹⁹ may explain why Nero’s nativity was never openly published, nor was it given any political publicity. For Agrippina and for her son, this evil nativity certainly remained a threat on their way to power.

4. Conclusion

From this analysis several conclusions can be drawn: The horoscope cast for 13 October, about noon, shows many auspicious features, the most salient of which is the sun-Venus conjunction very close to the MC (or exactly on the MC, if we take into consideration the fact that planetary positions used to be sideric and therefore higher than modern [tropic] values); it may have looked like a ‘coronation horoscope,’ and perhaps that was told to Agrippina and Nero in order to promote psychological confidence. Actually, although there were propitious elements, one can also see threatening dissonances likely to fuel great apprehensions. Suetonius is the only one to note this, which may indicate the difficulty of finding the ‘less problematic’ time in an emergency situation.

Playing with the only available element, namely time, Agrippina’s astrologers chose a disposition very close to Nero’s nativity, with *centra* located on nearly the same degrees (ASC Sgr 27° v. 23°, MC Lib 21° v. 16°). Was it their main intention to recreate a nearly identical framework, in which new planetary positions would mitigate the dire aspects of the nativity with auspicious elements taking the place of the ominous ones; was it an attempt to rub out what had once been written in the stars? For Nero’s second birth, his birth as an emperor, one can assume that Agrippina’s advisers tried to find a new starting point as similar as possible to the former one in order to cancel it in a definitive manner.

One last detail might have been highly significant and might explain the tiny difference between the two charts. Whatever the uncertainty on the exact locations of the twelve places, the moon in Nero’s nativity was at Leo 12°, i.e. quite certainly in the 8th place (death), hence the prophecy made by Balbillus: “To her inquiries as to the destiny of Nero, the astrologers answered that he should reign, and slay his mother; and ‘Let him slay’ she had said, ‘so that he will reign,’” (Tacitus, *Ann.* XIV, 9, 3). In the chart corresponding to 13 October, it was in the last degrees of Cancer, 27°, a position

19 According to Trimalcio, “Under the Sagittarius (are born) cross-eyed people, lifting the bacon while looking at the vegetables,” in *Sagittario (nascuntur) strabones, qui holera spectant, lardum tollunt* (Petronius, *Satyrica*, 39, 11). Most astrologers insist upon this weakness of the eyes; see Firmicus, *Math.* VIII, 27,1. This was actually the case for Nero; Suetonius, *Nero*, LI.

that meant actually—according to the sidereal definition of the zodiac—the very beginning of Leo (1° or 2°) for ancient astrologers. As the 8th house started from Leo 5° (about 10° sidereal), it seems that, instead of the place of death, the moon was still in the 7th house (marriage), while before noon it would have been once again, as in 37 CE, in the 8th place.

If I am right, the decision to wait until noon may be interpreted as the pathetic hope to avert fate, the last attempt to escape the impending parricide.

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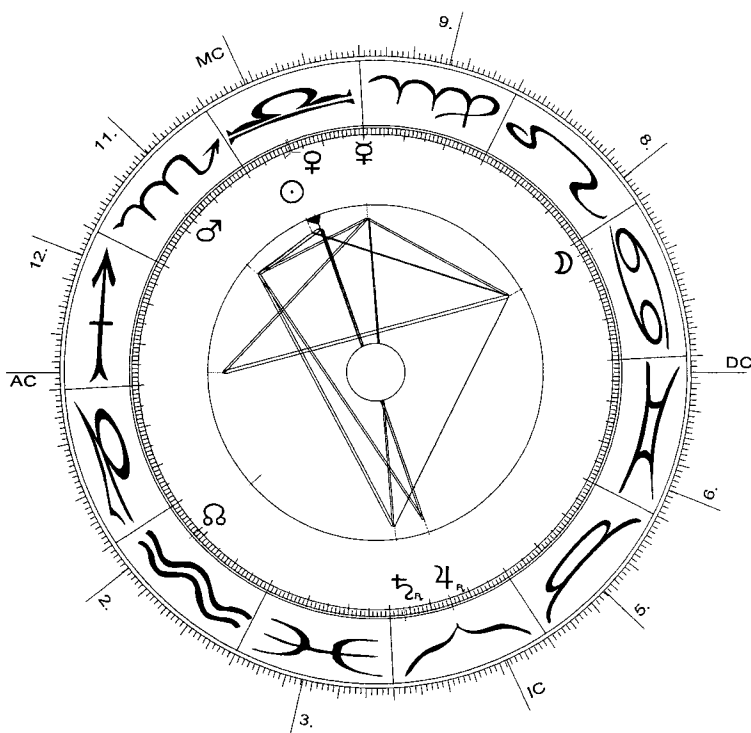


Illustration 1: Nativity for 13 October 54 CE, 12:00 h, Rome

sun Lib. 18°, moon Cnc 27° (26° 47'), Saturn Ari 3° (retrograde), Jupiter Ari 15°, Mars Sco 17°, Venus Lib 18°, Mercury Lib 0°, ASC Sgr 27° (26° 56'), longitudes computed by Stephan Heilen, using Galiastro 4,3 software. It is very likely that in such a case astrologers of the first century CE would have given the following sideric positions: sun-Venus Lib. 22° or 23°, on the MC (21° 28'), the ASC in the beginning of Capricorn and the moon in the first degrees of Leo (see Neugebauer and van Hoesen 1959, 182).

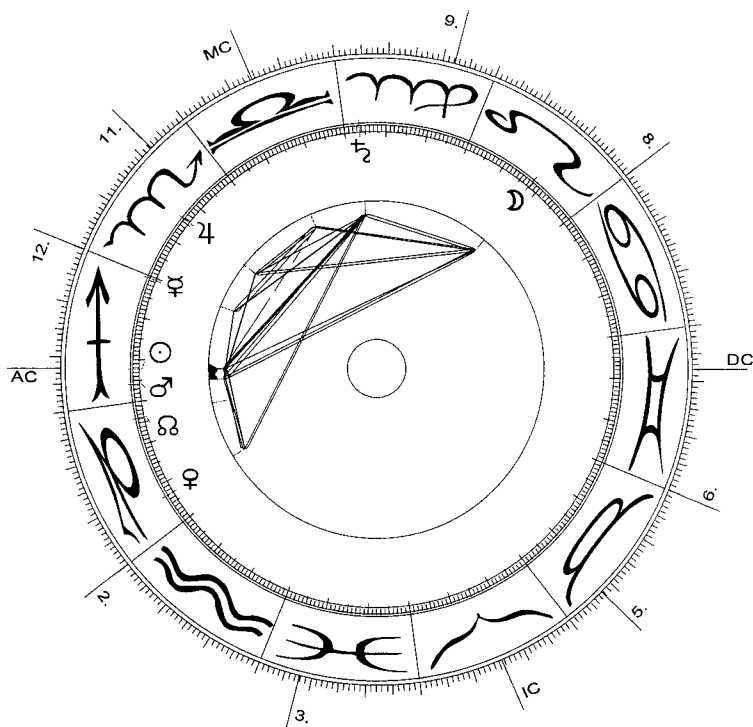


Illustration 2: Nero's Birth: 15 December 37 CE, about sunrise, Antium

Planetary positions: sun Sgr 22°, Mars Sgr 26°, Mercury Sgr 1°, moon Leo 12°, Saturn Vir 26°, Jupiter Sco 14°, Venus Cap 23°, ASC "about sunrise," which means exactly Sgr 22° (see Vettius Valens, *Anthologiae*, V, 7, 20; Neugebauer and van Hoesen 1959, 78f.).

The Emperor Hadrian in the Horoscopes of Antigonus of Nicaea

STEPHAN HEILEN

In the second century CE, Antigonus of Nicaea wrote an astrological compendium of which only fragments survive.¹ We know almost nothing about the author, except for his native town Nicaea and that he might be identical with the physician Antigonus of Nicaea, datable to the same period and author of a medical treatise on antidotes.² Most of the astrological fragments of Antigonus are preserved in chapter 2,18 of the *Apotelesmatika* of Hephaestio of Thebes, written in the early fifth century.³ This chapter is doxographical in nature and deals with the dignity that a native may be expected to occupy in his life.⁴ After quoting from Ptolemy and from Dorotheus of Sidon, Hephaestio gives long excerpts from the manual of Antigonus who is said to represent the tradition that goes back to “Nechepso and Petosiris” (Heph. 2,18,21). Under this pseudonym of an Egyptian king and his high priest, the most influential astrological manual in the Greco-Roman world had been published in the second century BCE (see Riess 1891–1893; Pingree 1974; Pingree 1978, II 436–437; Fournet 2000).

1. The Horoscopes and Their Historical Background

Hephaestio’s excerpts from Antigonus include three horoscopes. The first one (Heph. 2,18,22–52) is five printed pages long, while the other two

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- 1 See Gundel and Gundel 1966, 221–222. Antigonus was unknown to Bouché-Leclercq (1899).
 - 2 It is mentioned in Ps. Ael. Prom. cap. 51; see Ihm 1995, 67,5 (text) and p. 117 note 67 (commentary).
 - 3 See Heph. 2,18,21–76 and Heph. epit. 4,26,11–66, in Pingree 1973–1974. Hephaestio was born in 380 CE (Pingree vol. I, praef. p. V). The present author is preparing an edition with translation and commentary of the fragments of Antigonus of Nicaea.
 - 4 Hence, the title (Heph. 2,18): Περί τύχης αξιωματικῆς.

(2,18,54-61; 2,18,62-66) are comparatively short. As usual in Greek literary horoscopes,⁵ all three natives are anonymously presented as “someone” (τις). Kroll and Cumont realized that the first and longest horoscope refers to the Emperor Hadrian, born in 76 CE.⁶ While the identity of the second native is controversial, the third one has been identified as Hadrian’s grandnephew, Pedanius Fuscus (F. Cumont, CCAG VIII 2 [1911], 85¹). This name reminds us of a gloomy event towards the end of Hadrian’s reign: Shortly before his own death, the emperor had Pedanius Fuscus,⁷ who was only 18 according to Cassius Dio, executed (see Cass. Dio 69,17,1), while Iulius Servianus (PIR² I 631 [see I 569]; Caballos Rufino 1990, 386-388, no. I 30), who was Pedanius’s grandfather and Hadrian’s brother in law, was forced to commit suicide. Since Hadrian was childless, Pedanius must have seemed to be the natural candidate for the imperial succession.⁸ He was the only male relative of suitable age. Although Pedanius had not (or not yet) been officially designated, he must have had the highest expectations for the future. Hadrian seems to have taken the young man with him on journeys to the East, as a member of his closest entourage.⁹

Iulius Servianus, on the other hand, who was already some ninety years old, was highly honoured by Hadrian who, for example, made the old man consul for the third time in 134 CE. But then Hadrian seems to have rather abruptly changed his mind. In 136 CE, the consul of that year, Lucius Ceionius Commodus, was adopted and designated for succession as L. Aelius Caesar.¹⁰ When he died on the first of January 138 CE, Hadrian, who had himself fallen seriously ill and was close to dying, chose a new heir to his throne who actually followed him as Antoninus Pius (138–161 CE). Young Pedanius must have resented and somehow imprudently reacted to either the first or both of these decisions, a fatal mistake that led to his own and his grandfather’s deaths. In July 138, Hadrian died “hated by everyone” (*invisus omnibus*), as the *Historia Augusta* reports (Hist. Aug. Hadr. 25,7), and it took

5 See Neugebauer and van Hoesen 1959, esp. 76-160. The three horoscopes of Antigonos of Nicaea are discussed on pp. 79-80 (no. L 40), 90-91 (no. L 76), and 108-109 (no. L 113,IV).

6 Franz Cumont and Wilhelm Kroll, CCAG VI (1903), pp. 67-71. Hadrian was Roman Emperor from 11 August 117 to 10 July 138 CE. See PIR² A 184; Caballos Rufino 1990, 40-44, no. 7; and esp. Birley 1997.

7 Cn. (or L.) Pedanius Fuscus Salinator (PIR² P 198). See Caballos Rufino 1990, 413-415, no. I 44.

8 See Birley 1997, 215 (speaking of the year 128 CE): “The boy [*sc.* Pedanius] must have been regarded as the heir presumptive”; *ibid.* p. 291: “Hadrian’s grand-nephew [...] undoubtedly felt cheated of his birthright” (*sc.* at the adoption of Aelius Caesar in 136 CE).

9 This is the interpretation of Champlin 1976, 84-89, of an inscription at Ephesus (IKEph 734, 134 CE). While some scholars agree with it, others are not convinced; see Birley 1997, 309: “perhaps identical.”

10 See PIR² C 605, where the relevant sources are collected.

Antoninus Pius a great effort to push through Hadrian's deification against senatorial opposition (see *Hist. Aug. Hadr.* 27,1-2).

Our main historical sources for Hadrian's attempts to secure the successor to his throne are Cassius Dio and the *Historia Augusta*. Dio's account¹¹ is brief and hostile to the emperor.¹² The life of Hadrian in the *Historia Augusta* is written hastily and carelessly, veering from hostility towards Hadrian (derived from Marius Maximus, as is explicit in several places) to a more balanced attitude.¹³ Since both Cassius Dio and Marius Maximus wrote in the early third century and shared the hostile attitude towards Hadrian which had long become typical of the senatorial order, it is interesting to find in the fragments of Antigonos of Nicaea the only preserved earlier version of the same events, a version that takes the opposite point of view: Antigonos praises Hadrian and condemns Pedanius.

The anonymously presented horoscope of Hadrian (*Heph.* 2,18,22-52) falls into three parts:¹⁴ first, a short exposition of the astronomical data; second, an equally short life of the native; and third, a long astrological explanation of the biographical details in the preceding section. The astronomical data are limited to the positions of the luminaries, the planets, the ascendant, and midheaven, all given to the degree. They correspond to the configuration of 24 January 76 CE, which is the birthday of Hadrian as known from inscriptions and from the *Historia Augusta* (*Hist. Aug. Hadr.* 1,3). The biographical information contained in the text is as follows:¹⁵ The native had been adopted by a certain emperor who was of the same family (namely Trajan) and became emperor himself around his 42nd year.¹⁶ He was well-built (εὐμεγέθης), manly (ἀνδρεῖος), gracious (εὐχαρις), prudent (φρόνιμος), educated (πεπαιδευμένος), profound (βαθύς), praiseworthy (δοξαστικός), high minded (μεγαλόφρων), munificent (δωρητικός), effective (ἀνυστικός), and beneficent (εὐεργετικός) (*Heph.* 2,18,23.29.30.33.36); in other words: of excellent physical, mental, and imperial qualities. Antigonos went on to analyze the social environment; first the state, and then the family. We

11 As transmitted through the epitome of Xiphilinus (11th cent.).

12 I follow Champlin 1976, 79; see Millar 1964, 63.

13 I follow Birley 2000, 132¹.

14 Unfortunately, Hephæstio's quotations from Antigonos are badly transmitted, chapter 2,18 being preserved in only one of the three main manuscripts of Hephæstio's *Apotelesmatika*, a *codex Parisinus* full of errors (Paris. gr. 2417, saec. XIII). But the correct readings can often be restored from a valuable epitome and two other short excerpts (for a full discussion of this and related problems see the monograph announced in note 3 above).

15 I partly follow the full English translation of Schmidt (1998). There are also English translations of long excerpts of the text available in Holden 1996, 58-60, and Irby-Massie and Keyser 2002, 109-111.

16 *Heph.* 2,18,23: ὁ τοιοῦτος υἱοθετηθεὶς ὑπὸ τίνος αὐτοκράτορος συγγενοῦς αὐτὸς περὶ τὸ μὲν ἔτος ὁμοίως αὐτοκράτωρ ἐγένετο.

learn that the native had many adversaries and many who plotted against him,¹⁷ but he prevailed over his enemies.¹⁸ He was honored like a god with shrines and sacred precincts,¹⁹ and all people prostrated themselves before him.²⁰ As to his family, he was married to one wife from her childhood (namely Vibia Sabina) and remained childless.²¹ Also, he had one sister (namely Domitia Paulina), but he fell into suspicion towards and discord with his relatives.²² About his 63rd year he died, falling victim to a shortness of breath caused by dropsy.²³

Let us skip the second horoscope and continue immediately with the third one (Heph. 2,18,62-66). This person, Antigonos says, engaged in his own destruction and that of his forefathers around his 25th year.²⁴ He was of most eminent and illustrious birth on both his father's and his mother's side, a most highly esteemed person, but he died a violent death. For, after he had developed great expectations, and when he already seemed to be moving straight to the throne, he was ill-advised around his 25th year and made a deadly mistake. Being denounced to the emperor, he was destroyed along with a certain old man of his family who was accused, too, because of him. Furthermore, all his family members were relegated to humble conditions.²⁵ We further learn about two personal characteristics that make the young man seem unqualified to imperial dignity: he yielded to erotic passions and was fond of gladiators.²⁶

Unlike Hadrian's horoscope, which does not add significant elements to historical knowledge,²⁷ the horoscope of Pedanius enables us to correct

17 Heph. 2,18,34: πολλοὺς ἀντιδίκους καὶ ἐπιβούλους.

18 Heph. 2,18,35: τὸ δὲ περιγενέσθαι τῶν ἐχθρῶν τῶν τοιούτων.

19 Heph. 2,18,23: ὡς θεὸς ἐτιμήθη ναοῖς καὶ τεμένεσιν.

20 Heph. 2,18,36: τὸ δὲ τιμᾶσθαι αὐτὸν καὶ προσκυνεῖσθαι παρὰ πάντων.

21 Heph. 2,18,23: γυναικὶ μιᾷ συζευχθεὶς ἀπὸ παρθενίας ἐγένετο ἄτεκνος.

22 Heph. 2,18,23: καὶ ἀδελφὴν μίαν ἔσχεν, ἐν ὑπονοίᾳ δὲ καὶ στάσει ἐγένετο πρὸς τοὺς ἰδίους.

23 Heph. 2,18,24: περὶ δὲ ἔγ' ἔτη γενόμενος τελευτᾷ ὕδρωπικῇ δυσπνοιᾷ περιπεσών.

24 Heph. 2,18,62: ὃν φησιν ἐπ' ὀλέθρῳ τῷ τε ἰδίῳ καὶ τῶν πατέρων γεγενῆσθαι περὶ τὸ κε' ἔτος.

25 Heph. 2,18,65: ὁ τοιοῦτος ἐκ μεγίστου γένους καὶ προφανοῦς, λέγω δὴ πατρὸς καὶ μητρὸς, ἐνδοξότατος μὲν, βιαιοθανατήσας δέ [conieci, ἐνδοξοτάτων μὲν, βιαιοθανατησάντων δέ codd.]· οὗτος γὰρ ἐλπίδων μεγάλων γενόμενος καὶ δοκῶν ἤδη ἐπὶ βασιλείαν ἐλθεῖν, κακόβουλος γενόμενος περὶ τὸ κε' ἔτος ἐσφάλη καὶ ἐν κατηγορίᾳ πρὸς τὸν βασιλέα γενόμενος ἀνηρέθη μετὰ τινος πρεσβύτου τῶν τοῦ γένους αὐτοῦ (ἐν διαβολῇ καὶ αὐτοῦ γενομένου δι' αὐτόν, πρὸς δ' ἔτι τῶν ἀπὸ τοῦ γένους αὐτοῦ πάντων δι' αὐτὸν ταπεινῶς ἀπὸ ἀλλογενέων). My translation partly follows that of Birley 1997, 291.

26 Heph. 2,18,66: ἐρωτικὸς δὲ ὁ τοιοῦτος ἐγένετο καὶ φιλομονόμ>αχος.

27 It is of interest, however, to note that Hadrian's adoption through Trajan is presented as a matter of fact (Heph. 2,18,23 and 2,18,48), and that Hadrian is explicitly said to have had only one sister (Heph. 2,18,23 and 2,18,41); this further weakens

two chronological details. Following Cassius Dio, scholars long believed that Pedanius died at the age of 18, in 136 CE.²⁸ Antigonus, however, emphasizes that the young man died in his 25th year.²⁹ Since the birth configuration described is that of 5 or 6 April 113 CE, the fatal 25th year extends from April 137 to April 138. As Cramer has pointed out, it is likely that Pedanius made his deadly mistake not after the adoption of Aelius Caesar in 136, as has long been assumed because of Cassius Dio's report, but after the unofficial designation of Antoninus Pius on 24 January 138 CE (made official on 25 February 138 CE).³⁰ Pedanius seems to have been put to death in the following weeks, between the end of February and the beginning of April. Maybe Servianus was not immediately forced to commit suicide, but it was certainly before the tenth of July, when Hadrian himself died.³¹

2. The Literary Form of the Preserved Horoscopes

Since Hadrian was hated by many for the cruel decisions against Pedanius, Servianus, and other senators,³² one wonders at the positive picture of him

the credibility of the late reference to a plurality of sisters in the odd letter allegedly written by Hadrian to his mother and quoted by Ps.-Dositheos. *herm. Leid.* 3,1,14 p. 76 Flammini = p. III 37,44-45 Goetz. Note also the medical diagnosis of the cause of Hadrian's death in *Heph.* 2,18,24 (see n. 23 above) and 2,18,49.

28 Cass. Dio 69,17,1 ὁκτώκαιδέκῃτην (there are no other historical sources on this detail). The context closely links the destruction of Pedanius and Servianus to the adoption of Lucius Commodus (as L. Aelius Caesar) in 136 CE.

29 *Heph.* 2,18,62 περὶ τὸ κε' ἔτος, literally repeated at *Heph.* 2,18,65 and 2,18,66. See (Birley 1997), 291: "Dio evidently made a slip over Fuscus' age."

30 Cramer 1954, 178. Compare the same conclusions of Champlin 1976, 79; Barnes 1978, 45; Michelotto 1987, 186 (the correct dating of the destruction of Pedanius Fuscus and Iulius Servianus to 138 CE is "un dato [...] di importanza fondamentale"; compare Michelotto's arguments *ibid.* 177 in favor of his assumption that the true chronology was purposely confused by the clan of the Anii/Arii in order to have any stigma removed from the adoption of Antoninus Pius).—It is to be stressed that Pedanius made his deadly mistake after the unofficial designation of Antoninus Pius on 24 January 138 CE, not in November 137 CE, as Birley 1997, 291, suggests basing his argument on a late addition to the text in two of the manuscripts of Hadrian's horoscope. This addition will be discussed in the commentary announced in note 3 above.

31 See *Hist. Aug. Hadr.* 25,8: *sub ipso mortis tempore et Servianum nonaginta annos agentem [...] mori coegit*; and Birley 1997, 292: "It may be that Servianus was not forced to take his life in the immediate aftermath of the suppression of Fuscus." The passage quoted above (*sub ipso mortis tempore*) is the main source for the correct chronology of events.

32 See *Hist. Aug. Hadr.* 23,8: *multis aliis interfectis vel aperte vel per insidias*. Birley (1997, 292) thinks of men like Polyaeus and Marcellus.

and of his reign given by Antigonus of Nicaea. Did Antigonus, maybe, write in the very year 138 CE and aim to please either the dying emperor or his successor with an astrological apology? And did he later include this very text in a manual? In order to answer these questions, it is important to determine the literary form of the transmitted text. That we are not dealing with a copy of an analysis presented at court is clear from the following typical features of astrological manuals:

- In Hadrian's horoscope, Antigonus addresses not the emperor or his successor, but a fictitious disciple, reminding him of what he should not forget, guiding him to the correct solution of various problems, and anticipating questions by one who is being introduced to the art.
- On several occasions, Antigonus makes a threefold distinction of possible cases and their different consequences. This is appropriate for a manual with a general purpose of instruction, but superfluous in a text where only one specific set of data is at issue.
- Hadrian's natal configuration is presented in an extremely brief manner, which is typical of exemplary horoscopes in manuals, but totally different from any original deluxe-horoscope that we know.³³
- All personal names are suppressed.³⁴

Since the horoscopes of Hadrian and Pedanius were, at least in their preserved form, written for an astrological manual, let us determine what kind of intertextual relation, if any, exists between them. One might think of a comparative analysis like those five included by Vettius Valens in his *Anthologiae* (around 175 CE). The *terminus technicus* employed by Valens is σύγκρισις (see Val. 5,6,91 and 7,3,17 in the critical edition of Pingree

33 On Hadrian's configuration (Heph. 2,18,22), see above after note 14. Original deluxe-horoscopes on papyrus (some thirty of them are completely or partially preserved) usually give detailed and solemnly arranged additional information on astrological 'houses,' 'exaltations,' 'terms,' 'decans,' bright fixed stars, etc. This information sometimes comprises some 50 or more lines of text. Furthermore, it is important to note that the preserved deluxe-horoscopes were not written for the Roman court but for comparatively unimportant individuals. In fact, most of these texts have been discovered in the ancient rubbish mounds of Oxyrhynchus. Hence, one should expect an analysis written for any member of the Roman court to be even more solemnly arranged.

34 This is typical of Greek literary horoscopes in a didactic context. In original horoscopes for private individuals, the name of the native is often, though not always, mentioned. Officially, of course, any investigation of the emperor's horoscope was strictly forbidden by empire-wide legal restrictions and edicts; see Cramer 1954, 248-281. There must, however, have been special conditions for astrologers in the emperor's (or his successor's) service which—in the absence of any preserved horoscopic text that had been presented to a Roman emperor or members of his court—are simply not known.

1986). He discusses, for instance, the horoscopes of a father and son (Val. 5,6,87-91 = no. L 107 and L 135,X in Neugebauer and van Hoesen 1959), demonstrating that each one's death was indicated in the other's horoscope. On another occasion we learn about a woman who sued her husband concerning inheritance. The husband won the suit, but when the case was appealed two years later, he lost. According to Valens's analysis, the course of events was in every detail predetermined in each of the two natal configurations (Val.7,6,27-44 [= no. L 124 and L 134,VI]). In his most complex σύγκρισις, Valens discusses the horoscopes of six people who almost died together in a storm at sea in 154 CE.³⁵ It is a common feature of all of Valens's συγκρίσεις that horoscopes belonging together are discussed in immediate succession, that the relation between them is made clear, and that the presentation of the astronomical data follows the same pattern.

The case of Antigonus is different. Hephaestio makes it clear that he is presenting the preserved horoscopes in their original order: first Hadrian, second an anonymous one, third Pedanius. A σύγκρισις, if there is any to be detected, would require that the second individual be involved in one and the same event with Hadrian and Pedanius; in other words, that the second individual be Iulius Servianus. The configuration is that of 5 or 6 April 40 CE. If Cassius Dio and the *Historia Augusta* are correct in saying that Servianus was put to death at the age of 90 (Cass. Dio 69,17,1; Hist. Aug. Hadr. 15,8; 23,8; 25,8), this is eight years too early. Let us nevertheless take a closer look at this second nativity (Heph. 2,18,54-61). Antigonus calls it a splendid and very notable horoscope.³⁶ The native is a very distinguished man, one of authority who punishes many. He is very wealthy, and unjust without ever being accused.³⁷ He happens to be disinterested with regard to female intercourse and sordid with regard to male intercourse.³⁸ Antigonus underlines, partly repeating himself, that this man is fortunate and very wealthy, one who provides many votive offerings and gifts to his fatherland.³⁹

35 Val. 7,6,127-160 (= no. L 114,VII. L 118. L 120,II. L 122,I,30. L 127,VII. L 133). See esp. Val. 7,6,159-160: οὗτοι οἱ ἄνθρωποι πλέοντες καὶ ἕτεροι δὲ πολλοὶ βία ἀνέμου περιπεσόντες, ἀποπτερυγωθέντος τοῦ πηδαλίου, ἐκινδύνευσαν ὑποβρύχιοι ἀπελθεῖν τοῦ σκάφους τὸ κύμα ἐκδεξαμένου κτλ.

36 Heph. 2,18,58: λαμπρὸν καὶ ἔνδοξον [...] θέμα.

37 Heph. 2,18,56: ὁ οὕτως ἔχων τοὺς ἀστέρας ἔσται προφανὴς ἐκ προφανῶν, ἐξουσιαστικὸς καὶ πολλοὺς κολάζων, πολυχρήματος, ἀδικος μὴ κατηγορούμενος.

38 Heph. 2,18,57: πρὸς δὲ τὰς θηλείας μίξεις ἀνεπίστροφος τυγχάνει καὶ ῥυπαρὸς πρὸς τὰς ἀρρενικάς.

39 Heph. 2,18,59: ἡ Σελήνη [...] εὐδαίμονα καὶ πολυχρήματον ἀπειργάσατο καὶ τῇ πατρίδι πολλὰ ἀναθήματα καὶ δωρεὰς παρέχοντα.

Some scholars, especially Martin, did think of Iulius Servianus,⁴⁰ but other identifications have also been proposed: Cramer and Neugebauer (Cramer 1954, 162f.; Neugebauer and van Hoesen 1959, 80) thought of P. Aelius Hadrianus Afer,⁴¹ the emperor Hadrian's father; Barnes (1976, 76-79) tried to make Hadrian's friend L. Licinius Sura⁴² plausible, and Caballos Rufino (1986, esp. 124; 1990, 35f.) proposed first M. Cornelius Nigrinus Curiatius Maternus⁴³ and some years later the praetorian prefect P. Acilius Attianus.⁴⁴ None of these identifications is certain, but Birley in his recent biography of Hadrian concludes—rightly, in my view—that Acilius Attianus is the most plausible candidate (Birley 1997, 327⁹ and 355²⁶). Attianus became an enemy of the emperor shortly after Hadrian's accession to power, and he probably was long dead when Pedanius and Servianus were put to death. Taking into consideration two additional details, namely that the text offers no explicit connection between the three horoscopes and that the presentation of the astronomical data is notably different in each case, one can only conclude that what we have is not a σύγκρισις.

This result calls for explanation because even if what we have is not a literarily shaped σύγκρισις, some kind of comparative analysis seems to lie behind the horoscopes, at least in the case of Hadrian and Pedanius. There are three arguments in favor of this assumption:

- Hadrian is alluded to in Pedanius's horoscope and vice versa: in Hadrian's horoscope, Antigonos discusses the discord between Hadrian and his relatives (Heph. 2,18,23; see note 22 above), and in the horoscope of Pedanius he explains why the young man was put to death together with an older relative by the emperor (Heph. 2,18,65; see note 25 above).
- The historical and moral judgments expressed in both texts are consistent: Antigonos praises the emperor and condemns Pedanius.
- The astrological arguments employed in both texts also fit into one consistent view. In Hadrian's horoscope, for example, the identity of those relatives with whom the emperor was at odds is not specified, but it is astrologically explained through the position of Saturn and Mercury in the twelfth place,⁴⁵ that is, by the meeting of the mythic grandfather and his grandson in the place of enmity. This makes sense especially if the emperor's main opponent is a relative two genera-

40 Martin 1982, 295-298. See Cramer 1954, 177 ("it may also perhaps be ascribed to Servianus").

41 PIR² A 185; see Caballos Rufino 1990, 44-45, no. 8.

42 PIR² L 253; see Caballos Rufino 1990, 183-193, no. 103.

43 PIR² C 1604; see Caballos Rufino 1990, 349-350, no. 115.

44 PIR² A 45; see Caballos Rufino 1990, 31-38, no. 5.

45 Heph. 2,18,47: διὰ τί δὲ ἐν προσηκούσει γέγονε πρὸς τοὺς συγγενεῖς; διὰ τὴν τοῦ Ἐρμοῦ μετὰ Κρόνου στάσιν.

tions younger.⁴⁶ On the other hand Pedanius's horoscope states that the young man was killed by a human being⁴⁷ because Mars, who cast the fatal ray, was located in a human sign, namely, in Aquarius.⁴⁸ Since in Hadrian's horoscope Aquarius is ascending with both luminaries and Jupiter in it,⁴⁹ it is safe to affirm that Pedanius is killed by an "Aquarius" *par excellence*.⁵⁰

In other words, there are some astrological 'hooks and eyes' which allow us to connect the two horoscopes; yet, the connection is not explicit. It is likely, therefore, that Antigonos made a σύγκρισις before writing the horoscopes as preserved through Hephæstio. Maybe there even existed a written version of this comparative analysis, either for his personal use or for other purposes, which Antigonos later reworked and separated into two or more single discussions for inclusion in his manual. But this is very uncertain, and we should stick to the first, more likely assumption.

3. Was Antigonos a Court Astrologer?

What strikes us is the unparalleled length and elaboration of Hadrian's horoscope. Among the more than 300 preserved horoscopes from Graeco-Roman antiquity, there are only two similar texts, although they are shorter and dated much later: the horoscope of Ceionius Rufius Albinus (born in 303 CE, consul in 335 CE; see PLRE I 37 s.v. *Albinus* 14), which was cast by the contemporary senator Firmicus Maternus (Firm. math. 2,29,10-20; see Neugebauer 1953, 418-420), and that of Pamprepus of Panopolis (440-484 CE; see PLRE II 825-828), a leading figure in the rebellion against emperor Zeno in 484 (see Delatte and Stroobant 1923; Neugebauer and van Hoesen 1959, 140f., no. L 440; Pingree 1976, 136. 142. 144-147), which was in all probability cast by an astrologer in the service of emperor Zeno. It is important to realize that both these horoscopes were written in close temporal proximity to the political events reported, and that the authors had close relations with the

46 This interpretation does not seem exaggerated because the text presents more instances of the same kind of genealogical reasoning (Heph. 2,18,48; 2,18,66), which will be discussed in the commentary announced in note 3.

47 As opposed to other possible causes like wild beasts or the elements.

48 Heph. 2,18,66: τὸ δὲ καὶ ἐξ ἀνθρώπου εἶναι τὴν βλάβην διὰ τὸ τὸν Ἄρεα εἶναι ἐν ἀνθρωποειδεῖ ζῳδίῳ.

49 Heph. 2,18,22: ἐγένετο, φησί, τις ἔχων τὸν μὲν Ἥλιον Ὑδροχόου μοίρῃ η', τὴν δὲ Σελήνην καὶ τὸν Δία καὶ τὸν ὠροσκόπον ἅμα τοὺς ᾗ ἐπὶ τῆς πρώτης μοίρας τοῦ αὐτοῦ ζῳδίου.

50 And, besides, by the first and most powerful of all 'human beings,' the Roman Emperor.

most powerful imperial circles in Rome and Byzantium respectively. Maybe Antigonus's situation was not much different. We have no evidence when and where exactly he lived during the period from Hadrian's death to the end of the second century CE,⁵¹ but it seems worth examining the possibility that he lived and wrote in the environment of the Roman court during Hadrian's later reign and/or the early part of Antoninus Pius's reign.

From Hephæstio's excerpts one gets the impression that Hadrian's horoscope was the first and most impressive in Antigonus's collection.⁵² Its unusual elaboration points to a date of composition shortly after Hadrian's death, when the deceased emperor was still among the most interesting objects of astrological investigation. Since he was hated by many at the time of his death and the senate did everything in its power to prevent his deification, Hadrian's life would have been an intriguing example of a rise from rather modest origins to the highest splendor, eventually followed by decline and isolation. But Antigonus, instead of investigating this change of fortune, conveys a one-sided, somewhat disappointing message: Hadrian is to be praised in every respect; his enemies were all wrong and failed.⁵³ This message would not be surprising, however, if Antigonus was an astrologer at the Roman court. If the *Historia Augusta* can be trusted (not in each detail, but in its basic characterization of the emperor), Hadrian was seriously interested in astrology,⁵⁴ and it may be assumed that there were professional astrologers at his court, like, for instance, the famous Thrasyllus at the court of Tiberius. If Antigonus was an official court astrologer, he would certainly have praised the emperor and assumed a hostile attitude towards the emperor's enemies. At some point, he might then have decided to set down his accumulated experience in a manual and to illustrate the book using his precious collection of astrological analyses made over a span of years or decades. There is an interesting parallel in the late fifth century. As Pingree has shown, the aforementioned horoscope of Pamprepus of Panopolis formed part of a collection of political horoscopes from the reign of Zeno, all cast, as it seems, by one

51 The *terminus ante quem* is his being referred to by the astrologer Antiochus of Athens. See Ps.-Porph. isag. 51 in CCAG V,4 (1940), p. 223,14-21 (= Rhetor. 5,15); and Pingree 2001, 9 ("most of this must be a summary of a work by Antiochus"). Antiochus can be dated to about the end of the second century.

52 Either in the collection as a whole or, if the manual contained several sections with *exempla*, in the one dedicated to political horoscopes.

53 The only negative thing we learn about his end is the painful physical illness (see below note 64).

54 See Cramer 1954, 162-178, which is to be read cautiously because of his uncritical use of the *Historia Augusta* (see the judgements of Syme 1976, 291²; and Tester 1987, 50¹⁵) and because of numerous errors in astrological detail. See further the critical analysis of the *Historia Augusta* by Kuhlmann 2002, 97-172, esp. 105-115 and 171 (as to astrological technique, however, Kuhlmann reveals shortcomings similar to Cramer's, esp. 108f.). Hadrian's interest in astrology seems to be confirmed by Cass. Dio 69,11,3.

astrologer who later used them to illustrate a manual. The six preserved examples⁵⁵ are concerned with enemies or rivals of Zeno,⁵⁶ and the tone is, of course, hostile. In three cases it is shown that prominent rebels were fated to revolt in vain: these are Pamphilius (see above), Basiliscus,⁵⁷ and Leontius.⁵⁸ In the case of the Ostrogothic leader Theodoric Valamer who had devastated large parts of Greece, it is shown that conferring the consulship upon him in order to get his aggressive energy under control would not dangerously enhance the barbarian troublemaker's power. The remaining two horoscopes are similar in purpose.⁵⁹

The parallel to Antigonus's case is even closer if Caballos Rufino and Birley are right in attributing the second horoscope preserved by Hephaestio to the praetorian prefect, Acilius Attianus, who became Hadrian's enemy shortly after Hadrian's coronation (see above). If Antigonus lived and wrote at the Roman court, his manual would have found the favor of all those who were interested in the stars and owed their political positions to Hadrian. They might have read the preserved text (and even more so an explicit σύγκρισις, if Antigonus in fact wrote one and had it circulated in imperial circles) as a legitimization of Hadrian, as a cosmic proof that the historical course of events had been right and necessary.⁶⁰ The scientific⁶¹ demonstration that it had been Hadrian's fate to become emperor wipes away as nonsense all rumors that Trajan had died without nominating a successor and that his widow, Plotina, had faked Hadrian's adoption.⁶² The analysis of Pedanius's horoscope shows that he was not suitable for imperial power and dig-

55 They are all edited and discussed in Pingree 1976.

56 One case is slightly different; see note 59 about the prefect Theodorus.

57 He was emperor in Byzantium from January 475 to August 476 CE. See PLRE II 212-214 s.v. *Basiliscus* 2.

58 On Leontius (d. 488 CE) see PLRE II 670-671 s.v. *Leontius* 17; and Neugebauer and van Hoesen 1959, 147-148, no. L 484.

59 One of them is of a new born son of emperor Leo, Zeno's father in law, who might have become Zeno's rival. It is shown that the child was fated to die after some months. The sixth horoscope concerns a certain Theodorus whom Zeno had appointed to the prefecture of Egypt; we learn why this magistrate came to fall after a brief period of success. The horoscopes concerning Basiliscus, Theodoric Valamer, Leontius, and Theodorus are not nativities but catarchic analyses of the respective dates of coronation (in the case of Theodorus, of the time when he entered Alexandria). The first two horoscopes are preserved only in an Arabic version.

60 Despite the legally requested anonymity, educated contemporaries would certainly have understood the reference to Hadrian. Compare the later case of Firmicus Maternus who, towards the end of his aforementioned, anonymously presented horoscope of the consul Ceionius Rufius Albinus, remarks: *cuius haec genitura sit, Lolliane decus nostrum, optime nosti* (Firm. math. 2,29,20).

61 In the ancient sense, considering astrology as a science.

62 See Millar 1964, 63: "It is probable that the circumstances of Hadrian's accession were from the first a subject of dispute"; Birley 1997, 289: "his adoption [...] was thought by many to have been fraudulent."

nity, that it was necessary to choose another heir to the throne and, consequently, to remove the dangerous young pretender. Finally, Antigonus's investigation of Hadrian's death could be read as a proof that it was not the famous curse of Servianus⁶³ that had caused Hadrian's painful end, but that his *κακοθανασία* had long before, at Hadrian's birth, been determined by the unchangeable laws of the universe.⁶⁴

4. An Alternative Explanation

It must, however, be emphasized again that there is no definitive proof for Antigonus's association with the Roman court. A basic difficulty is to decide whether Antigonus aimed at illustrating the tenets and demonstrating the truth of astrology by means of famous political horoscopes or whether he aimed at legitimating politics by means of astrology, or maybe both, giving more prominence to one or the other aspect on different occasions. On closer inspection, the hypothesis that Antigonus was a Roman court astrologer reveals, besides its advantages, several weak points. No doubt it allows an easy explanation of how Antigonus had managed to be so well informed and to know even details like the birth dates of minor figures like Acilius Attianus (?)⁶⁵ and Pedanius Fuscus. But since the preserved text was evidently part of a manual written for didactic purposes (see the arguments above before note 34), the comparative analysis that possibly lies behind it—but which cannot be proven to have ever actually been composed—becomes an important missing link. Only if that *σύγκρισις* existed and contained clear references to people, political events, etc., would the assumption that Antigonus was a court astrologer deserve closer attention. The preserved fragments alone seem too veiled to serve a political, legitimating, or adulatory purpose. Besides, the available sources on the reign of Antoninus Pius do not record any predilection of this ruler for astrology or other forms of divination (see Cramer 1954, 180). And there is one puzzling element that does not seem likely to please

63 See Cass. Dio 69,17,2. Michelotto (1987, 189) and Birley (1997, 291) consider the curse of Servianus to be authentic.

64 See Heph. 2,18,51: τοῦτο οὖν κακοθανασίας αὐτῷ αἴτιον γέγονεν. Furthermore, the analysis of Hadrian's childlessness (Heph. 2,18,46) could be directed against gossip saying that Hadrian's wife, Vibia Sabina, purposely avoided pregnancy in order not to produce a monster (see Ps. Aur. Vict. epit. 14,8: *huius uxor Sabina, dum prope servilibus iniuriis afficitur, ad mortem voluntariam compulsa. quae palam iactabat se, quod immane ingenium probavisset, elaborasse, ne ex eo ad humani generis perniciem gravidaretur*).

65 If this identification is correct. But the argument remains basically the same whoever among the individuals discussed above (see after note 39 above) is the native of the second horoscope (Heph. 2,18,54-61).

either Hadrian or Antoninus Pius, or their respective entourages: It is stated that Mercury and Saturn in the twelfth place under certain conditions that are fulfilled in Hadrian's case make the individual prudent, educated, and indeed not well-intentioned (ἀγαθοθελής), but, rather, crafty and deceitful (δολερός).⁶⁶ In addition, some circumstances make it seem more plausible that Antigonus lived and worked at Alexandria, the center of Hellenistic astrology, and wrote not for a Roman but an oriental readership: Note the insistence that all people showed reverence to Hadrian by prostration (προσκύνησις),⁶⁷ an oriental fashion alien to Roman society, and Antigonus's detailed knowledge of old hermetic writings like the *Salmeschoiniaka*,⁶⁸ a copy of which was probably more easily (if not exclusively) available in Egypt.

It is therefore necessary to pay equal attention to the alternative possibility, namely that Antigonus was just a 'regular' Greek astrologer who lived and worked in Roman Egypt (Alexandria?), like so many others, one who had nothing to do with the Roman court. In this case the main difficulty regards Antigonus's source(s): Where did he get his detailed information, and why does he take such a positive view of Hadrian while the prevailing attitude after 138 CE was hostile? The question concerning the source(s) underlying the historical data in Hadrian's horoscope was already raised by Boll (Boll 1908, 114² = Boll 1950, 14¹), but it has never been answered. Maybe this has to do with the aggravating circumstance that no second century historian's account of Hadrian's reign survives.⁶⁹ Nevertheless, there is a possible source available, one that in the present author's view deserves close examination: the emperor's autobiography, comprising at least two books and composed—in all probability—during the last months of his life.

66 Heph. 2,18,38: 'Ἐρμῆς δὲ καὶ Κρόνος ἐν τῷ ιβ' τυχόντες ἐπὶ ἐφ' αὐτῶν ἀνατολῆς καὶ δορυφοροῦντες τὸν ἥλιον ποιοῦσι φρονίμους, πεπαιδευμένους, οὐ μὴν ἀγαθοθελεῖς ἀλλὰ δολερούς (this is the text of the epitome; cod. P has the singular: [...] φρόνιμον, πεπαιδευμένον καὶ μᾶλλον οὐκ ἀγαθοθελεῖ ἀλλὰ δολερόν). See Hist. Aug. Hadr. 14,11 *simulator*.

67 Heph. 2,18,36-37: τὸ δὲ τιμᾶσθαι αὐτὸν καὶ προσκυνεῖσθαι παρὰ πάντων ... καὶ προσκυνεῖσθαι [...] τὸ δὲ καὶ πολλοὺς οὕτως εὐεργετεῖν καὶ ὑπὸ πολλῶν, ὥς ἔφην, προσκυνεῖσθαι.

68 In his manual, Antigonus quoted from the *Salmeschoiniaka*. See the fragment preserved in Heph. 2,18,74-75 and Quack 1995, 101 and 121 (with references to previous scholarly work).

69 We know of a work by Herennius Philon of Byblos (c. 54–142 CE) on the reign of Hadrian (FGrHist 790 T 2), a panegyric by Aelius Sarapion, composed probably around 130 CE, and an encomium by another contemporary of Hadrian, the sophist Aspasius of Byblos (FGrHist 792 T 1). No single fragment of any of these texts survives. For more information, see Fein 1994, 200–201; 214; 280.

Only six short fragments of this work are extant,⁷⁰ but comparison with the remains of earlier Roman imperial autobiographies and with later historians, who drew either directly or indirectly from Hadrian's *De vita sua*, allows one to sketch a quite satisfactory picture of that work. A masterly analysis of this kind that does not indulge in inappropriate speculation has been made by Lewis (Lewis 1993; on Hadrian: 697-702). Lewis never mentions the horoscopes of Antigonos of Nicaea, but his results should clearly be applied to them. As he shows, Hadrian's *De vita sua* stands in a long Roman tradition of autobiographical literature that can be traced back at least to the second century BCE. This literature can best be approached with a broad definition of the term 'autobiography,' including not only comprehensive accounts of entire lives, but also *commentarii* by outstanding Roman individuals on chronologically limited military campaigns and political crises. As Lewis shows, a common feature of almost all these texts is self-advertisement and apologia, often obtained through appraisals of perils (*discrimina*) and designs (*consilia*) to handle them. Already Q. Lutatius Catulus published his *Liber de consulatu et rebus gestis suis* with the intention of an apologia for failure in his campaign against the Cimbri in 102 BCE, and to contest with C. Marius the credit for victory in 101 BCE (Lewis 1993, 636).

The need for apologetic autobiography became all the more urgent in the case of controversial leaders with unprecedented power during the civil wars and the early principate, like Sulla who composed 22 books on his life, and young Augustus, who published 13 books in order to show, among other things, his legitimacy as Caesar's heir and his personal ability to rule the empire. Altogether we know of autobiographical writings—either partial or comprehensive⁷¹—for several Roman emperors between Augustus and Hadrian: Tiberius, Claudius, Vespasian, Titus, and Trajan, and we should not omit those relatives, vice-regents, and military leaders who might be deemed in some degree *capaces imperii*: M. Vipsanius Agrippa, Cn. Domitius Corbulo, C. Suetonius Paulinus, and Agrippina the Younger.⁷²

Whenever a comprehensive autobiography was undertaken, a certain standard format seems to have been applied, which had developed during the last two centuries of the Roman Republic. From several *laudationes* of Cicero, Lewis reconstructs the following model that could easily be applied, with due modifications, to a variety of individual cases and needs: "ancestry, *origo*, parentage; birth, boyhood and education; *toga virilis*, *tirocinium fori* and/or *prima militia (stipendia)*; *honores*, each with its appropriate *res*

70 Collected by Peter 1906, 117-118. As for the number of books, see frg. 1 Peter = Hist. Aug. Hadr. 1,1 *in libris vitae suae*.

71 I.e. covering the individual's whole life.

72 Lewis 1993, 631 (with individual discussions of their memoirs in the subsequent chapters).

gestae; mores, either independently covered or incorporated in the foregoing material” (Lewis 1993, 659).

The preserved fragments of Hadrian’s *De vita sua* indicate strongly that Hadrian followed the same standard format (Lewis 1993, 700). And there must have been many apologetic elements. This is certain in the case of the alleged conspiracy of the four *consulares* (118 CE) who were executed, according to Hadrian (Frg. 4 Peter = Hist. Aug. Hadr. 7,1-2), on the orders of the senate and contrary to his own wishes. Furthermore, “it is inconceivable that Hadrian failed to assert the strongest possible claim to be a worthy and legitimate successor of Trajan, with particular stress on the validity, probably disputed even at the time, of the famous death bed adoption.”⁷³ And it is more than likely that he gave an acceptable explanation of the deaths of Pedanius Fuscus and Iulius Servianus, probably in connection with the problems and dangers inherent in providing for the succession to his own principate.⁷⁴

In view of these and related arguments,⁷⁵ it is clear that most, if not every aspect of Hadrian’s life discussed by Antigonus (see above after note 14), as well as the data concerning Acilius Attianus (?) and Pedanius Fuscus, could have been drawn from Hadrian’s autobiography. As far as we know, it had been published in a Greek version as well, the work of Hadrian’s learned freedman Phlegon of Tralleis (see Hist. Aug. Hadr. 16,1; Lewis 1993, 698 ad loc.). Publication of leading men’s memoirs in both Latin and Greek was a traditional way of addressing the entire audience of the Mediterranean world. Already P. Rutilius Rufus, Sulla (through L. Lucullus), Cicero, and Augustus (through Nikolaos of Damaskos) had done the same.⁷⁶ Since Hadrian wrote *De vita sua* during the last months or even weeks of his life, it would not be surprising if Phlegon, in his Greek version, supplied some final information on the emperor’s death, specifying its date and medical cause. Compare the case of Sulla, whose freedman Epicadus completed the last of the 22 books of the dictator’s memoirs.⁷⁷ Antigonus would in all probability have read Phlegon’s Greek version; consequently, his discussion of the time and cause of Hadrian’s death (See Heph. 2,18,24 [see note 23 above] and 2,18,49) is not necessarily an argument against the hypothesis that he based the three preserved horoscopes on the emperor’s autobiography.

73 Lewis 1993, 699-700. Compare the harsh verdict of Cass. Dio 69,1,1: ‘Ἀδριανὸς δὲ ὑπὸ μὲν Τραϊανῶν οὐκ ἐσεποιήθη (“Hadrian has not been adopted by Trajan”).

74 Lewis 1993, 701-702 (Lewis’s date 136 CE should be corrected to 138 CE; see above before note 30).

75 They will be discussed in more detail in my monograph announced in note 3.

76 See Lewis 1993, 630², 636²⁰, 662¹¹⁰, 672; 698. See further Cic. Arch. 23 on the value of publication outside Italy.

77 See Suet. gramm. 12,2: *librum autem quem Sulla novissimum de rebus suis inperfectum reliquerat ipse [scil. Cornelius Epicadus] supplevit*. See also Lewis 1993, 630³. After the completion through Epicadus, L. Lucullus published the whole, including a Greek version (ibid. 697-698).

This hypothesis further provides an easy explanation for Antigonus's respective attitudes, benevolence towards Hadrian and hostility towards the other two individuals. Our astrologer would simply reflect the apologetic tendency of his source without a deliberate or systematic intention of doing so.⁷⁸ Not a few ancient historians, for different reasons and to various extents, used imperial autobiography in exactly the same way. For example, Lewis points out that "Appian's account of the Illyrian campaign [*scil.* 35-33 BCE], almost certainly from Augustus,⁷⁹ shows concern to avoid unnecessary bloodshed and evasion of a charge for what might easily in fact have been genocide."⁸⁰

Only two elements of Antigonus's three preserved horoscopes require further explanation: the birth-dates of Acilius Attianus (?) and Pedanius Fuscus, which are implicit in the astronomical data of their horoscopes.⁸¹ These must have been much more easily accessible to someone who lived in the environment of the Roman court than to a resident of, let us say, Alexandria. But alternative explanations are not impossible: Antigonus could have had some kind of informant or correspondent in the capital,⁸² or maybe he also drew these data from Hadrian's autobiography: We know that *omina* and divination played an important role already in Sulla's and Augustus's autobiographies,⁸³ and it is beyond doubt that Hadrian included similar features. One omen is attested among the six preserved fragments of his memoirs.⁸⁴ After examination of all the available direct and indirect evidence "may we suppose that Hadrian [*scil.* in his autobiography] made liberal use of astrological and perhaps other means of prophecy in claiming not so much perhaps skill in the art as the sanction of Fate."⁸⁵

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- 78 Compare the otherwise inexplicable slip in the remark on Hadrian's being not well-intentioned, but crafty and deceitful (note 66 above).
- 79 Appian explicitly cites Augustus's autobiography (App. Illyr. 14 = frg. 13 Peter).
- 80 Lewis 1993, 680; see *ibid.* 679-683 on similar assimilation of apologetic features from Augustus's autobiography by other Greek and Roman historians.
- 81 That Hadrian's own date and place of birth were mentioned in the autobiography is beyond question because these elements are part of the 'standard format.'
- 82 Theoretically the two birth-dates in question could even be pure invention; but this is unlikely.
- 83 See Lewis 1993, 667 and 686. The same is true in the later case of Septimius Severus's autobiography (see *ibid.* 706).
- 84 Hist. Aug. Hadr. 3,4-5: *omen sibi factum adserit etc.* (= frg. 3 Peter).
- 85 Lewis 1993, 702, with special reference to Hist. Aug. Hadr. 16,7 (*mathesin sic scire sibi visus est etc.*), which despite some patent exaggeration due to Marius Maximus's malice (see Hist. Aug. Ael. 3,9) seems to be inspired by the emperor's memoirs.

5. Conclusion

In view of the preceding arguments, there is a strong possibility that Antigonus of Nicaea was inspired by Hadrian's autobiography (in the Greek version of Phlegon of Tralleis) to analyze the emperor's and some related individuals' horoscopes. The necessary data will have been completely—or almost completely—available from the same source. If this is so, the preserved astrological fragments are not to be considered as independent historical documents, but as *testimonia* of this lost imperial autobiography and its apologetic traits. Even some biographical details that have long been disputed by modern historians could, then, be definitively ascertained, like Hadrian's birthplace (Rome, not Italica)⁸⁶ and his number of sisters (one, not several; see above note 27). All this would, in conclusion, allow us to speak in a second, unexpected sense of 'the emperor Hadrian in the horoscopes of Antigonus of Nicaea'.

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Abbreviations of Latin authors follow the Index of *Thesaurus Linguae Latinae*, Leipzig 1990.

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The Possible Survival of Babylonian Astrology in the Fifth Century CE

A Discussion of Historical Sources

NICHOLAS CAMPION

1. Introduction

In 475 and 484 CE rebellions took place against the Eastern Roman emperor, Zeno. Horoscopes for the proclamations of the two rebel emperors survive and the texts were published by Neugebauer and van Hoesen in 1959 (p. 147), and Pingree in 1962. Pingree suggested that the rebellions may have been associated with pagan opposition to the Christianizing tendencies of Byzantine culture. The texts present us with a problem, however, for analysis of the astrological reasoning given in these charts, combined with the examination of the actual disposition of the observable planets, suggests that the astrology being used may have had little to do with fifth century Greek horoscopic astrology. An alternative hypothesis, which is developed in this paper, is that the rebel emperors' astrologers may have been working within a context provided by solar religion and a surviving tradition of observation-based Babylonian astrology. If so, the conclusions add to a picture of complexity and diversity in the religious world of Late Antiquity.

2. The Religious Environment in the Fifth Century

The religious climate in the late Roman Empire was complex and the relationship between Christianity and paganism defies simple categorization.¹ It has been argued, for example, that, in spite of the periodic and sometimes brutal persecutions of Christians, there is little evidence of pagan-Christian

1 See the discussion in Cameron 1993, esp. pp. 67-98. See also Lee 2000 and Lançon 2000, esp. pp. 92-97.

conflict in Britain and evidence instead of peaceful transition.² In addition, by the mid-fourth century, Christianity itself was subject to bitter disputes between Catholics, who had aligned themselves with the state, on the one hand, and various 'heresies' on the other. The Vandal kingdom in North Africa was Arian and, after years of intermittent harassment, king Huneiric (477–484) ordered all Catholics to convert to Arianism (Moorhead 1994, 65). Christianity's very diversity was the reason why there were such persistent attempts to establish and enforce a single set of dogmas, beginning with the Council of Nicaea in 325. There also appears to have been a substantial problem (from the Church authorities' perspective) of Christians converting to Judaism (Cameron 1993, 77), suggesting that the boundaries between different religious groups could be extremely fluid.

The dispute between paganism and Christianity, it is true, could be bitter. When the emperor Aurelian died in 275, the year after he instated the worship of Sol Invictus, the Unconquered Sun, as the state religion, he was "apparently planning a new attack on the Christians" (Salway 1981, 715). After an unsuccessful revolt by a pagan sympathizer, Magnentius, who reigned from 350–353, the emperor Constantius II (337–361) enacted a series of anti-pagan measures in 353–354 (Cameron 1993, 75), establishing a pattern which continued in spite of the attempt by the emperor Julian, Constantine's nephew, to restore the official pagan religion in 360–363. Theodosius I (379–395), the last man to rule the entire empire before its disintegration in the west, was strongly anti-pagan. He presided over a spate of violent assaults by Christians on pagan sacred sites, and passed laws prohibiting pagan rites in 391 and 392. The worst violence of his reign occurred in Alexandria, where the bishop organized the destruction of the Serapeum, the temple of the Egyptian god Serapis and reputedly one of the most magnificent buildings in the empire. The direct consequence was a rebellion in 393 which, though led by a Christian, Eugenius, attracted widespread support from aristocratic pagans (Cameron 1993, 75), an illustration of the complexity of theological-political allegiances. As John Moorhead put it, "intellectual culture in late antiquity was subject to currents which flowed in different directions" (1994, 28).

Within the Roman elite itself, the Senate, based in Rome, remained far more friendly to paganism than did the emperors, whose capital in Italy was now at Milan. Neither were the emperors necessarily hostile to the old ways. Their principle task was to maintain order and their interests were not necessarily served by enforcing religious laws against a substantial pagan population. Aside from concerns of state, the pagan-Christian debate also involved genuinely rival cosmologies, with pagans accepting the stars as a possible route to the divine and Christians denying this, insisting that the

2 See the discussion in Hutton 1991.

soul's relationship with God was always direct. The authoritative Christian theological position on astrology was established by Augustine when he complained that Manichaeism, of which he had been an adherent when he practiced astrology, came too close to worshipping the sun and the moon, in other words, worshipping the creation rather than the creator (Augustine, *Confessions* III.6; *City of God* V.30). However, as an illustration of the fluid nature of philosophical boundaries, Augustine had a high respect for Platonists who were themselves among the strongest advocates of astrology (while sometimes being critical of both its practitioners and Aristotelian cosmology).³

Pagan teaching continued at a high level in the Platonic Academy in Athens, which offered a safe home to philosophical supporters of solar religion. As Cameron has pointed out, the major intellectual alternative to Christianity in the late Roman Empire was provided by Neoplatonism and its leading advocates, including Proclus (412–485), one of the last and most notable official teachers at the Academy (Cameron 1993, 80f.). For many, it was the state sun religion, Sol Invictus, which represented a preferable alternative to Christianity (Halsberghe 1972). Indeed, among Proclus's surviving works are a series of hymns, of which one, the *Hymn to Helios*, the sun, is illustrative:

Hear golden Titan! King of mental fire,
 Ruler of light; to thee supreme belongs
 The splendid key of life's prolific fount;
 And from on high thou pour'st harmonic streams
 In rich abundance into matter's worlds.
 Hear! For high rais'd above th' aetherial plains,
 And in the world's bright middle orb thou reign'st
 Whilst all things by thy sov'reign power are fill'd
 With mind-exciting providential care.
 The starry fires surround thy vig'rous fire,
 And ever in unweary'd ceaseless dance,
 Over earth wide bosom'ed, vivid dew diffuse.
 By thy perpetual and repeated course
 The hours and seasons in succession rise.⁴

The religious tone of Proclus's Neoplatonism and its close relationship to the worship of Sol Invictus is unmistakable. The rivalry between paganism and Christianity was all the sharper because they both (particularly the pagan religions of Isis, Dionysus, and Mithras) "took on universalist claims and pretensions, such as the offer of salvation" (Elsner 1998, 200; see also Fowden

3 For Augustine on Platonists, see *City of God* VIII.6–12, and for the Platonic position on astrology, see Plotinus, "On Whether the Stars are Causes," *Ennead* II, 3.

4 Proclus, "Hymn to the Sun," trans. Thomas Taylor (1986).

1993, 37-60). Pingree's argument that Basiliscus's and Leontius's rebellions can be seen as pagan challenges to the rising Christian orthodoxy suggests that both may be seen within the context of competing world views as well as personal ambition. The apparent use of astrology in both rebellions then becomes a sub-text in the historical narrative of Christianity's complex struggles with paganism.

3. Basiliscus's Revolt

The first of the two horoscopes translated by Neugebauer and van Hoesen, and Pingree, was set for the rebellion of Basiliscus against the Eastern Roman emperor Zeno in 475. By this time the empire was in a deep and prolonged crisis. It had been coping with massive Germanic migrations for most of the century; in 410 Rome had been sacked by the Visigoths, a trauma repeated in 455 at the hands of the Vandals. In the year after Basiliscus's rebellion, 476, Romulus Augustulus became the last emperor to live in Italy, and his abdication marked what is often considered the end of the Roman Empire in the West. Basiliscus's reign was itself short-lived and he was defeated by Zeno in July 477, having alienated all his supporters, especially those in the mainstream church.

Basiliscus was extremely well connected; he was brother-in-law to Leo I (457-474) and uncle to Leo's daughter Ariadne, Zeno's wife (Norwich 1988, 165; see also 169f., 174, 178, 206). Basiliscus was not himself a pagan, which complicates Pingree's argument that his revolt was part of a pagan reaction to Christianity, but it is nevertheless perfectly plausible, given the precedent of the Christian-pagan collaboration in Eugenius's revolt. Moreover, that Basiliscus was a heretic, a Monophysite, who rejected Christ's divinity, was a factor in his failure to secure lasting support in Byzantium. His educated, Hellenized instincts also hint at some sympathy for the Neoplatonic position. If the horoscopic sources are correct and Basiliscus authorized the use of astrology, further questions arise: did either his Monophysite allegiance or possible Platonic inclinations make it possible for him to use astrology where a more orthodox emperor would have refused? Clearly, Christian-pagan rivalry was not bi-polar but multi-faceted, with complex rivalries and affinities.

Pingree noted that there had been a lunar eclipse on 8 January 475 which, being interpreted as a bad omen for Zeno, might have precipitated Basiliscus's revolt. The time for the coronation itself is assumed to have been elected by Basiliscus's astrologer who was employed by another general, Illus. The presumed astrological documentation was preserved and has been

handed down to us in a Persian text from the late ninth century.⁵ The text contains what purports to be the astrologers' original rationale, together with the later Persian astrologers' subsequent explanation of why the coronation moment was, in their view, highly inauspicious. The data given is consistent with a horoscope set for 9:00 am, 12 January 475 at Constantinople. The chart (ill. 1) is calculated using whole sign houses.

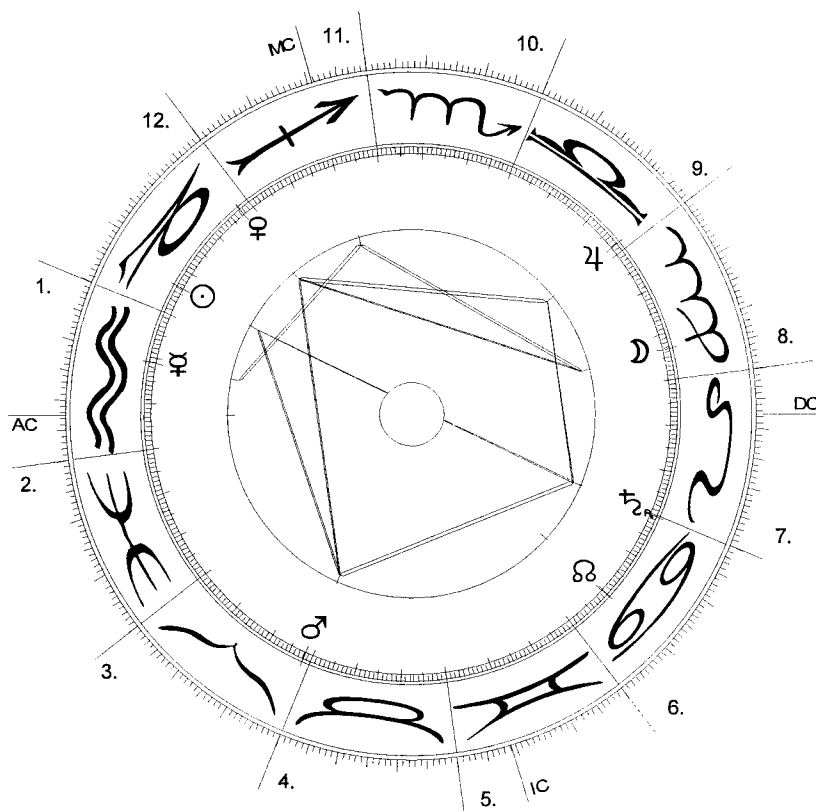


Illustration 1: Basiliscus's Coronation, 12 January 475, 9:00 am LMT, Constantinople

5 The text is translated by David Pingree (1962) from the astrological compendium *Jami al-Kitab*, written by Abu Yusuf Ya'qub ibn 'Ali al-Qasrani in Persia in the late ninth century.

There is a problem with this data, though: according to John Julius Norwich, Basiliscus actually deposed Zeno in November 475 (Norwich 1988, 169). It must be supposed that this horoscope, if set for a genuine astrological moment, was set for an event which may have been considered of astrological significance but preceded the revolt itself.

In the Greek text the horoscope is referred to as a *katarche*, a word which can be translated simply as 'initiative.' The word also suggests, though, the descent of the archetype, and so potentially has clear significance in a Neoplatonic context; the horoscope may be set for the launch of a new enterprise, but it is one which carries the sanction of heaven. The house positions given in the text are consistent with the assumption that the two horoscopes would have been calculated using whole sign houses, in which the cusp of the sign containing the *horoscopus*, or ascendant, was also the cusp of the first house.

2.1. Commentary on the *Katarche* for the Coronation of Basiliscus at 9:00 am, 12 January 475, at Constantinople.

There is a tension between positive and negative readings of the horoscope. To begin with, the following were given as reasons for Basiliscus's astrologer's belief that this was an auspicious moment:

- (1) Venus, one of the most benevolent planets was "at the midheaven." In fact it was not, but this statement may refer to Libra's elevated position, since Venus rules Libra (Ptolemy, *Tetrabiblos*, I.17, p. 81).
- (2) Venus is lord of the Lot of Fortune.
- (3) Venus is lord of the sun's triplicity, namely, the earthy triplicity (Taurus—Virgo—Capricorn—), because the sun is in Capricorn (Ptolemy, *Tetrabiblos*, I.18, p. 85).
- (4) Jupiter, the most benefic planet, aspects the sun "from quartile" (i.e., Jupiter is in Libra, the sun, in Capricorn). We are told that "This indicates power and eminence and splendor."⁶

Against this positive reading, the following reasons were given to explain the failure of Basiliscus's revolt:

- (1) The sun is weak in the twelfth place (house) from the *horoscopus*, i.e., ascendant.
- (2) The sun is in the same sign as the descending (i.e. south) lunar node.

6 Yet see Firmicus Maternus: "Those who have Jupiter in Libra will have disasters and riots in early life" (*Mathesis*, V.iv.16, p. 176).

- (3) Mars, a malefic planet, aspects the sun by quartile (i.e., Mars is in Aries, the sun, in Capricorn). Thus Basiliscus will fall from the power and splendor indicated by the quartile from Jupiter to the sun.
- (4) Saturn, the most malefic planet, is (a) weak, being cadent in the sixth place, “diminishing and evil in its influence”; (b) important, being lord of the sun and the *horoscopus*; and (c) destructive, being quartile to Mars and opposed to the sun.
- (5) The moon is in the eighth house of death.
- (6) The moon is in Virgo, but is not aspected to Mercury, the ruler of Virgo.
- (7) Jupiter, the benefic planet, is weakened by the opposition from Mars.
- (8) The previous full moon was an eclipse, conjunct Saturn, and in quartile to Mars.

The revised conclusion stated that, “All of this indicates poverty, the loss of rulership and its diminution, and strife and evil and misery.”

4. Leontius's Revolt

In 484, nine years later and the year before Proclus's death, another general, Leontius, rebelled against Zeno in a last attempt to restore the pagan religion. According to the texts, he was advised by two astrologers who elected the time for his proclamation, which took place in Tarsus in Syria and, like Basiliscus, was supported by the general, Illus. Zeno defeated Leontius with the assistance of the Ostrogothic king Theodoric, who was rewarded with Italy, over which Zeno was still nominal emperor.

The horoscope and commentary survive in two versions; the Greek was translated by Neugebauer and van Hoesen (1959, 147) and the Persian by Pingree (1962). Pingree reports that Leontius was crowned at Tarsus, Neugebauer at Antioch; the data is consistent with a coronation at sunrise on 18 July 484 in Tarsus. Neugebauer's and Pingree's translations differ in style; for example, Neugebauer's “Mercury in epanaphora”⁷ is translated by Pingree as “Mercury and how it happens to be in the second (place) from the ascendant, cadent [...]”⁸ The astrological significance of the comment in Neugebauer's text that by the time the moon passed Jupiter, so would Venus,

7 Epanaphora = “a sign which follows, in the order of signs of the zodiac, a centre”; thus Taurus is the epanaphora if Aries is on the midheaven; “that which immediately follows a centre, which is one of the four angles”; the zodiac signs on the cusps of houses 2, 5, 8, and 11 are called epanaphora. See Neugebauer and van Hoesen 1959, 7 and 8.

8 Mercury is succedent.

is also unclear (Neugebauer and van Hoesen 1959, 147, note 14). In addition there were errors in computation. In the texts Jupiter is mistakenly located at 5° Cancer instead of 17°. Recalculation using Galeastro software gives an ascendant of 23° at 5:04 am as opposed to Neugebauer's assumed time of 6:00 am.

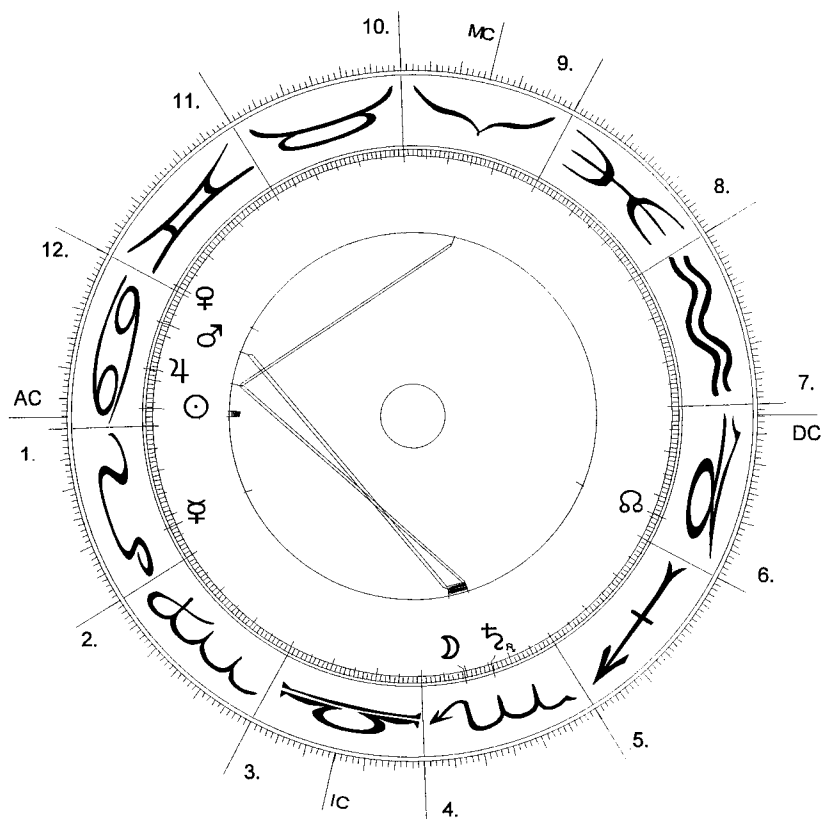


*Illustration 2: Leontius's Coronation, 18 July 484, 5:04 am LMT,
Tarsus (36N55, 34E53)*

The fact that this chart, like that for the coronation of Basiliscus, is set for sunrise, suggests first that this was a struggle involving adherents of the solar religion, second that astrology was a means of arranging political events under this religion. The chart (Ill. 2) and is calculated using whole sign houses.

4.1. Commentary on the *Katarche* for the Coronation of Leontius: 4:42 am, 18 July 484, Tarsus

Let us first consider the original positive reading by Leontius's astrologer. According to the texts, Leontius's astrologer elected what he thought was the most auspicious moment possible on the basis of the following arguments:

- (1) The sun, Mars, and Jupiter were in the *horoscopus*, i.e., Cancer, the sign containing the ascendant.
- (2) Mercury was in epanaphora.
- (3) The moon was in the fifth *locus* (Scorpio), thus forming a benevolent relationship with the planets and the *horoscopus* in Cancer.
- (4) After its conjunction with Saturn, an aspect with profound malefic consequences, the moon forms a trine to Jupiter, a benevolent contact (N.B. although the text places Jupiter at 5° , its computed position is 17°).

It is not clear how soon after Leontius's defeat the horoscope reading was revised, but subsequent astrologers found good reasons why the *katarche* was inauspicious. In their opinion:

- (1) Mercury, being extremely important as lord of the day (Wednesday) and hour, "had fallen into passivity," being at its greatest elongation from the sun (from then on Mercury's speed relative to the sun began to slow down and the two bodies began to grow much closer).
- (2) Mercury was making only one aspect, a malefic square to Saturn (from Leo to Scorpio), indicating violent death.
- (3) Venus was unable to exert its benevolent role and relieve Mercury's passivity (Venus in Gemini was in a benefic relationship with Mercury in Leo, for the sun was between them). Pingree's version gives a different rationale: the *Jami al-Kitab* claims that Venus is unable to drive Saturn's maleficence away from the moon because it is cadent from the *horoscopus*, that is, in the second place (house) counting clockwise, an interesting claim as normally such places are counted anti-clockwise.

- (4) The moon, the ruler of Cancer, and hence of the *horoscopus*, and therefore also of the supposedly beneficially located sun, Mars, and Jupiter, was “in depression” in Scorpio, that is, opposed to Taurus, the sign in which it is exalted.
- (5) The moon was in the twelfth locus from the Part of Fortune, that is the twelfth *Athla*, the *Bad Daimon*.⁹
- (6) The sun at 26° is trine the moon at 7°, but Saturn at 17° blocks the beneficial results.

The revised conclusion was that the beneficial effect of the sun-Jupiter-*horoscopus* conjunction is overwhelmed, the ruler of the sun and the moon, the two luminaries, are malefic, and Leontius can only rule for a short while. Note that neither the original nor revised readings considered what was later seen as a crucial relationship between the moon and Mars: that the moon was in Mars’s sign, Scorpio, while Mars was in the moon’s sign, Cancer. Neither is it mentioned that Venus would have been rising as morning star, a fact that would have been extremely significant to any group of solar pagans watching and waiting for the dawn.

5. Critical Analysis of the Horoscopes

While the horoscopes for both rebellions may be subject to a variety of interpretations as the disputed readings which survive from the Persian manuscripts show, the damning indications in both horoscopes are undeniable. However, any attempt to reconstruct the rules which may have been used by the fifth-century astrologers is hampered by the fragmentary nature of the literature, the diversity of opinions, and the uncertainty as to the extent to which the theoretical structures outlined in the written texts were actually applied by astrologers. There is a further problem: most of the surviving texts provide rules for the interpretation of nativities and almost none deal with *katarchai*, aside from brief passages in Dorotheus and Ptolemy.¹⁰ Nevertheless, there is sufficient textual evidence from the rules for interpreting nativities to suggest that both horoscopes should indeed be regarded as inauspicious.

9 The *athla* were twelve houses in which the cusp of the first house was the Part of Fortune. For a description, see Manilius, *Astronomica*, 3.43-159, and Goold’s description on pp. lxii-lxv.

10 Dorotheus of Sidon, *Carmen Astrologicum*, ed./trans. Pingree, V.30, 290f., “The Commencement of all Things”; Ptolemy, *Tetrabiblos*, trans. Robbins, esp. IV.4, pp. 381-393, “Of the Quality of Action.”

5.1 Basiliscus's *Katarche*

The rules of *katarche* are sparsely covered in the surviving Greek literature and, even then, they may be later Persian or Arabic interpolations. In one brief section in Dorotheus of Sidon's first century *Carmen Astrologicum*, a text which does not survive in any Greek original, instructions are given to look at the power of Mars in order to determine the outcome of war.¹¹ According to the rules outlined by Ptolemy (though in relation to nativities), Mars in the horoscope for Basiliscus's coronation was strong, being in its own sign, Aries, which, he claimed, supported its "destructive and inharmonious" nature (Ptolemy, *Tetrabiblos*, I.17, p. 81). Yet, however strong Mars was in itself, it was still in an inharmonious square aspect to Saturn and the sun (Ptolemy, *Tetrabiblos*, I.13, p. 75). As Firmicus wrote (in line with standard astrological tradition), "If Saturn and Mars are in any aspect or together with the sun, this produces treacherous perjurers, miserable because of constant accusations of this crime. They will be gluttons, frequenters of secret dens of vice, and will be free with sacrilegious words against the gods. They will be disturbed by constant burning anxieties" (Firmicus, *Mathesis*, trans. Bram, III.v., 16, p. 90). Had Firmicus not already stated unequivocally that not only was it wrong to comment on the emperor's horoscope, but that such a thing was theologically impossible,¹² he might have mentioned that the sun was a universal and very public symbol of the emperor, and had been so since Nero became the first ruler to portray himself on his coins wearing a gold crown with solar rays. The sun-emperor relationship was an accepted part of imperial iconography in the fourth century. According to Ferguson, writing of the period immediately before Firmicus, when the emperor Constantine Chlorus (305–306) returned to Britain after defeating the usurper Allectus, "the great medallion which he struck proclaimed him REDDITOR LVCIS AETERNAE, the restorer of eternal light; this is the emperor's sunrise in other language" (Ferguson 1972, 55). Ferguson adds that the same identification between the sun and emperor was followed by Constantine I, for whom the sun was, effectively, an ally.

Whatever else can be said about this horoscope, only an astrologer wishing to see Basiliscus fail can have elected the time for his coronation with the sun applying to an opposition to malefic Saturn, no matter how weak that planet was, and a square to malefic Mars. An alternative hypothesis is that the astrologers' primary concern was not with the complex techniques of Hellenistic astrology but with observation of the night sky.

11 Dorotheus of Sidon, *Carmen Astrologicum*, ed. and trans. Pingree, V.30, 6-7, p. 291.

12 Firmicus, *Mathesis*, II, 4-5, p. 69. Firmicus still allowed himself to discuss general indicators of imperial status; see for example II.ii, 20.

5.2. Leontius's *Katarche*

The horoscope for Leontius's coronation does indeed, as the positive reading claims, contain auspicious indications, and supporting evidence can be found in contemporary texts. For example, Firmicus, writing probably in 334, comments that "Saturn in the fifth house, if by day, will make kings and leaders, very powerful men. But if the sun is on the degree of the ascendant and Saturn comes into conjunction with the waxing moon, continual good luck and great power are indicated" (Firmicus, *Mathesis*, III.ii.10, p. 76). Yet, there is a problem with using the *Mathesis* as a reliable guide for fifth-century horoscope interpretation; Firmicus seems to have constructed the book entirely out of examples which are so specific that it is difficult to generalize. For example, the above text is directly contradicted later in the same passage when we are told that "if the waxing moon is in aspect with Saturn or moving toward him, this indicates widowhood for the mother and constant grief for the house of women" (Firmicus, *Mathesis*, IV.ii.1). Firmicus added to the latter example the information that an individual born with this placement will work in a temple and lose their inheritance, but later gain it back through their own efforts, suggesting that he is attempting to extrapolate general rules from a single example. The best that can be said is that the indications in the horoscope are ambivalent and, as is clear from the very brief rules for initiating new enterprises included in Dorotheus of Sidon's *Carmen Astrologicum* (ed./trans. Pingree, V.30.1-2, p. 290), benefic indications are balanced by malefic ones.

It is undoubtedly true that the moon and Saturn in Scorpio are in a trine, a harmonious aspect (Ptolemy, *Tetrabiblos*, I.13, p. 75). Yet the moon's location in Scorpio, Mars's sign, in a conjunction with Saturn, is so serious as to completely destroy Leontius's chances of success. In spite of justified skepticism concerning Firmicus, his reading of the moon in aspect with Saturn is in line with the astrology of the time.¹³ Saturn and Mars are, quite simply, malefic planets (Ptolemy, *Tetrabiblos* I.5, p. 39). Valens's judgments on Mars's and Saturn's aspects to other planets were universally damning (*The Anthology*, Book IV, trans. Robert Schmidt, 20 and 22, pp. 50-52, 54-56). As Dorotheus wrote, "if a malefic is with it [the moon] or aspects it, it will cut off [his] hope" (*Carmen Astrologicum*, I.21.ii, p. 224). Antiochus of Athens, writing in the first or second century, reinforced the point, stating that "when the Moon is conjoining Kronos [Saturn], opposition is encountered for everything" (Antiochus of Athens, *The Thesaurus*, trans. Robert Schmidt, II.1, p. 40). Worse, discussing astrological indications of the length of life, Ptolemy wrote, "the places of the maleficent planets, Saturn and Mars, destroy [...]" (Ptolemy, *Tetrabiblos*, III.10, p. 283). To have Saturn in Scorpio, as it was

13 See also, for example, Firmicus, *Mathesis*, III.ii. 9. 17, pp. 76f.

for over two years, was bad enough; according to Dorotheus, “if Saturn is in Mars’ house [i.e. sign], he will be difficult in his own and in others’ work” (Dorotheus, *Carmen Astrologicum*, I.21.ii, p. 224; II.28.2, p. 231). To have the moon in the same place compounded the problem; the moon in Scorpio was in its “depression” (Ptolemy, *Tetrabiblos*, I.19, p. 89). The question of house system is an additional complication. For this paper I cast the horoscope using whole sign houses, placing the sun, Venus and Jupiter in the first house. Were the *horoscopus* to be the cusp of the first house, that would have placed all three planets in the inauspicious house of the *Cacos Daemon* or *Malus Daemon* (Ptolemy, *Tetrabiblos*, III.10, p. 275; Firmicus, *Mathesis*, II.xix.13, p. 51). That said, the Scorpionic moon-Saturn conjunction was itself sufficient to lead Leontius to disaster. Such a malefic configuration could easily have been avoided by delaying the coronation for a matter of days. After ten days the moon would have moved into Pisces, once again making trines to the Cancerian planets, but this time to Saturn as well. As Antiochus of Athens wrote, the moon trine Saturn is fine for building, planting trees, and intercourse and, when it is trine Jupiter, it is “fine for everything” (Antiochus, *Thesaurus*, II.1, pp. 40f.).

From the point of view of horoscopic astrology, the moments supposedly elected for the proclamations of Basiliscus and Leontius contain serious weaknesses. The former places the sun in the twelfth *locus* (house) in square to Mars and Jupiter and in opposition to Saturn, while the latter puts a debilitated moon in Scorpio in conjunction with malefic Saturn. Given that the judgment as to whether a horoscope is auspicious must always be made on the balance of probabilities, weighing up benevolent and malevolent factors, it is frankly unlikely that these horoscopes were elected with the aid of the rules of horoscopic astrology. It is clear that, whatever the provenance of both horoscopes, if they were chosen by astrologers using the text-based rules of Hellenistic astrology, the intent can only have been to destroy the rebel cause.

There are a number of solutions to this dilemma. One is that the texts originated in the astrologers’ commentary on, rather than election of, the respective horoscopes. That is, the horoscopes were not cast at the time of the rebellions, but were calculated retrospectively and were later assumed to have been elected. However, if the claim that the times of coronation were indeed elected is accepted as sound, then a different possibility emerges: that the actual disposition of the heavens was more important than the rules of horoscopic astrology.

6. Phenomenology

Neugebauer and van Hoesen and Pingree based their discussion of the Basiliscus and Leontius rebellion horoscopes on documentary sources. In both cases the veracity of the texts as originating in horoscopic work undertaken by astrologers working for the respective rebel emperors was accepted on the basis of the manuscript evidence. However, examination of these texts in relation to the extended literary context, the instructional texts of Greek astrology, suggest that no fifth century astrologer working from the rules of Hellenistic horoscopic astrology would have elected such moments.

An alternative hypothesis is that, if astrologers were indeed employed by the rebel emperors, they were working from direct observations of the sky. Such an argument finds support in an application of phenomenology, namely that it is possible, within a modern perspective, to understand the actual experience of fifth century astrologers when faced with the awesome sight of a dramatic pre-dawn sky, especially one containing a prominent Venus.¹⁴ As Husserl, who first set out the principles of phenomenology in the early twentieth century, argued, it is essential to understand the “I,” the individual’s subjective, inner, often transcendent, experience (1972 [1913], 7), the aim being, according to Twiss and Conser, the “qualitative understanding of the forms of life of a religious tradition from that tradition’s standpoint” (1992, 27). This model is finding its way into archaeological thought, and from there into contemporary archaeoastronomy. For example, Tim Robinson claimed, in his account of a Bronze Age site in the west of Ireland, that he was able to understand its purpose and function better by experiencing a particularly brilliant setting sun in the same landscape (1996, 201). This approach has recently been championed by Clive Ruggles in relation to the study of archaeoastronomy, citing Ed Krupp, Director of the Griffith Observatory in Los Angeles, on the experience of the solstice at Stonehenge. Krupp wrote:

One should make a point of being there. Celestial events take place in context. When you see what actually happens in the landscape, you learn a great deal more about it. It is, of course, possible to determine the alignment of a building with instruments, but nuances of light and shadow, details of the horizon, difficulties in practical observation, and many more subjective aspects of a site can only be appreciated in person.¹⁵

Ruggles himself added, “Similarly, by walking in the modern landscape we can try to appreciate patterns of relationship between monuments and the topographic elements of the landscape as experienced by people living in that landscape in prehistoric times” (Ruggles 1999, 151). He concedes that we

14 For a useful discussion of phenomenology as applied to questions of landscape and sacred space, see Tilley 1994.

15 Ed Krupp, HASTRO History of Astronomy e-mail list 8 August 1995, cited in Ruggles 1999, 151.

can never exactly know that we experience the same feelings when watching an especially bright full moon as did a prehistoric observer, but he does argue that “the idea deserves serious consideration in contextual interpretations” (ibid.). It is that serious consideration which the horoscopes for Basiliscus’s and Leontius’s rebellions require.

Writing on the phenomenology of sociology, Alfred Schutz argued that phenomenology is the source of all philosophical thinking: “phenomenology, searching for a real beginning of all philosophical thinking, hopes when fully developed, to end where all the traditional philosophies start” (1979, 54). Helmut Wagner added that phenomenology’s “starting point is given in the experiences of the conscious human being who lives and acts in a ‘world’ which he apperceives and interprets, and which makes sense to him” (1979, 5). Following Schutz and Wagner, then, it may be argued that the testimony of the night sky and an especially bright rising Venus might reveal more about the intentions of fifth century astrologers than the abstract interpretive structures of Hellenistic astrology. As Ninian Smart argued, the goal should be to achieve a “value-rich” appreciation of the world view of the fifth century astrologer (1973, 21). The astrologer working for Basiliscus or Leontius would have lived in a culture in which the planets might still be regarded as divine and their heliacal risings as heralds of the sun, Sol Invictus, Proclus’s “golden Titan,” and might still send messages which were far more immediate and powerful than the complex readings contained in the astrological texts. It may, therefore, have been the astrologers’ lived experience in their fifth-century world, and their numinous awe when faced with a brilliant pre-dawn sky, rather than their use of the rules of Hellenistic horoscopic astrology, which informed their work. Whatever the astrological texts claimed, the astrologers’ primary perception, their ‘real beginning,’ or ‘starting point,’ was their experience of night giving way to dawn.

7. The Pre-Dawn Sky

The time for Basiliscus’s coronation is given for early morning; that for Leontius, for sunrise. It is evident from the horoscopes that the pre-dawn sky in both instances would have featured a prominent Venus. The pre-dawn sky for Leontius’s rebellion would have been the most striking, with Mercury, Jupiter, and Venus all rising. If the time of Leontius’s coronation is moved from sunrise to before dawn, then all three planets would have been rising and visible. Illustration 3 shows the visible predawn sky for the morning of the coronation (generated by Starlight version 1.0).

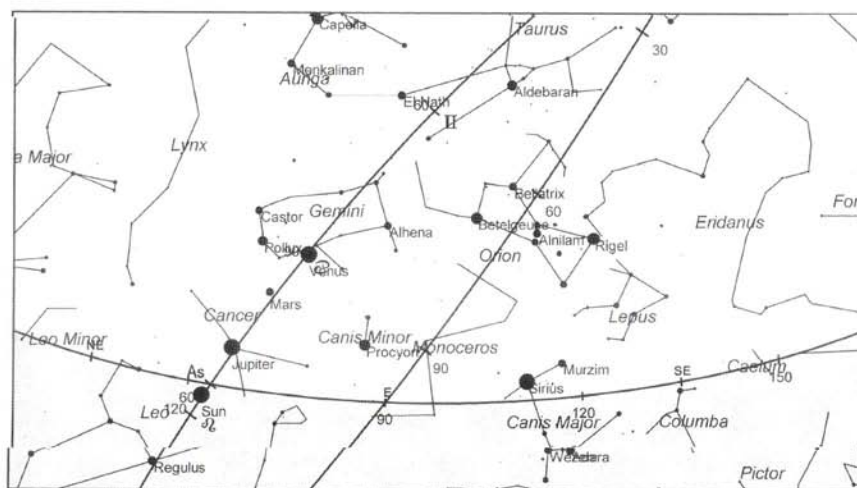


Illustration 3: The Visible Pre-Dawn Sky, 18 July 484, 4:50 am LMT, Tarsus

Venus's magnitude was especially bright at -3.2 , a fact which would have held particular significance in the context of the survival of Babylonian, or more properly Near-Eastern astral religion, in the form of Ishtar worship (Green 1992, 59, 62f.); the worship of Venus in association with astrological practice was a persistent feature of Near-Eastern religious culture. From the Assyrian period, probably the seventh century BCE, one tablet survives in which the astrologer wrote to his emperor:

Since the planet V[enus] is shining he[re], [the time is oppo]rtune for my reverence." The king, my lord, [kno]ws that the [Venu]s rituals of the "overseer's wife" are performed [...] the said [...]; now then Venus has risen [at] the (very time of its (computed) [appearance]. [Tod]ay is favourable [to] do [...]. (Hunger 1992, 31, p. 23)

In the second century CE, Ptolemy reported the surviving reverence for "the star of Venus under the name of Isis" in Mesopotamia and Iran (*Tetrabiblos*, II.3, p. 139), while Venus worship appears to have survived into the Islamic period in the astrological-Hermetic religion based in Harran.¹⁶ That is, the religious context within which Babylonian astrology flourished, including Venus worship, survived in the Near East until well after the late Roman period.

16 See the discussion in Green 1992, esp. pp. 158f.

7.1. Basiliscus's Rebellion

Aside from Venus's distinctive presence as morning star, there were a number of potentially significant features in the night sky at Basiliscus's rebellion. Jupiter was very close to Spica and, even though it would have been partially obscured by moonlight on the night in question, it would have been very noticeable on preceding days. However, the most notable feature of this event is its preceding lunar eclipse, which was commented on in the text. Illustration 4 is set for the Full Moon of January 475.

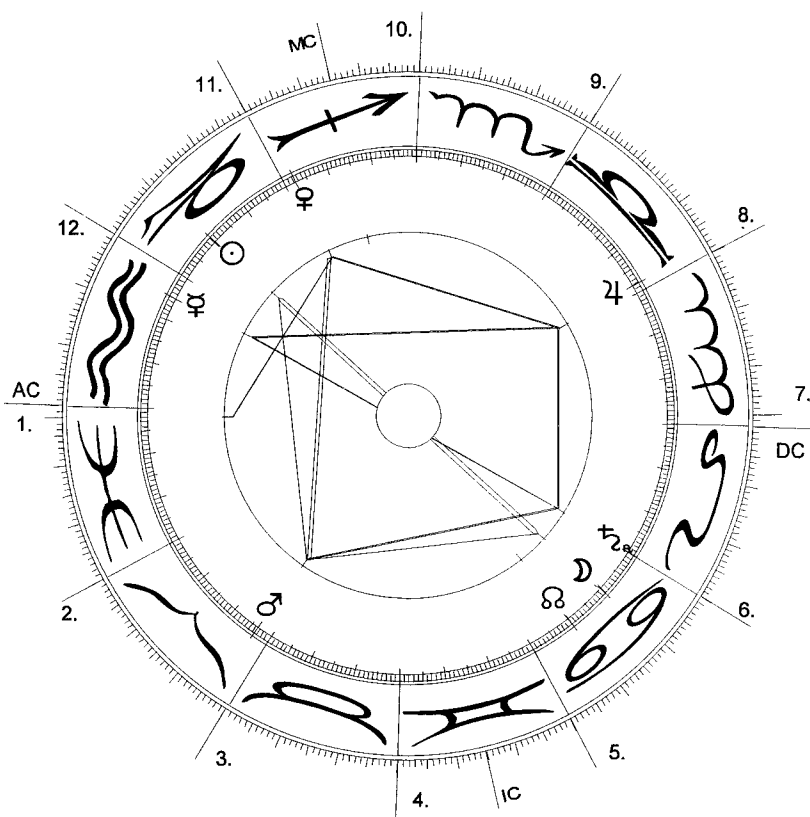


Illustration 4: Full Moon, 8 January 475, 9:40 am LMT, Constantinople

The eclipse would have been visible in the early hours of the morning. The moon was in Cancer and its most distinct planetary relationship was its proximity to malefic Saturn. The eclipse omens from the *Enuma Anu Enlil*

did not mention planets and were concerned solely with the day and month of the eclipse and phenomenological considerations, such as its color and the accompanying weather (Rochberg-Halton 1988a). Neither do the eclipse reports to the Assyrian kings mention planets (see Hunger 1992). It is clear, though, from both the omen texts and the eclipse reports, that an eclipse is an overwhelmingly bad indication for the king.

One indirect route by which Babylonian eclipse astrology was transmitted to the late classical world was via a set of texts derived from the *Enu-ma Anu Enlil*, introduced, adapted to local conditions in Egypt in the Persian period, around the sixth or fifth centuries BCE (Parker 1981, 723), and subsequently paraphrased in Hephaistio's *Apotelesmatica*. The texts may then have been further edited in the second and third centuries CE. Hephaistio has just this one comment on lunar eclipses in Cancer: "the ruler of Syria will clash with another ruler and a certain great man will be destroyed, and the leader will be given up by the multitude" (Hephaistio, *Apotelesmatica*, I.21, p. 46). It is possible that, if this text was current, Basiliscus's astrologers would have identified Zeno as the ruler of Syria and seen the eclipse as a benevolent indication to their candidate for the throne.

7.2. Leontius's Rebellion

At Basiliscus's coronation, Venus was a bright morning star, which may have been taken as a good omen. However, at Leontius's proclamation, Venus, Mars, and Jupiter were all morning stars and Regulus was an evening star. In addition, Sirius was rising (its heliacal rising would have taken place a few days earlier) and Orion was prominent. The interpretive possibilities are therefore more complex. The relevant texts would be concerned with Regulus setting, Venus, Mars, and Jupiter rising in Cancer or Gemini, and the relationship between them. If, for example, the reports of the astrologers to the Assyrian kings are consulted, then there are some deeply relevant texts. For example:

If Jupiter reaches and passes Regulus, and gets ahead of it, (and if) afterwards Regulus, which Jupiter has passed and got ahead of, reaches and passes Jupiter, moving to its setting; there will be rivalry; someone will rise and seize the throne, variant: the land will have worries. (Hunger 1992, 279)

Jupiter had not performed the required maneuver, but it was close to Regulus, although it was a morning star while the latter was an evening star. But the report to the king may have been an adaptation of a more general omen concerning Jupiter and Regulus.

Mars, though, offers less ambiguous information. In the seventh century BCE the Babylonian astrologer Akkallanu wrote to the Assyrian em-

peror, “Maybe someone will w[rite] the king my lord as follows: ‘If a strange star (i.e. Mars) comes close to Cancer: the ruler will [die]’” (Hunger 1992, 101.6-8, p. 60). And again, “If a strange star [comes close] to Can[cer]; the ruler will die” (Hunger 1992, 452.6, p. 255). Further, “Mars reached Cancer; [the king sh]ould know and be circumspect until it goes out” (Hunger 1992, 380.4, p. 218). And “[w]hen Mars, furthermore, retrogrades from the Head of Leo and touches Cancer and Gemini, its interpretation is this: End of the reign of the king of the Westland” (Parpola 1993, 9).

Mars, in this case, was not retrograde, but it had just moved from Gemini to Cancer. Regarding Venus and Jupiter, a letter from an unknown astrologer reported, “[If Venus] comes close to [Jupite]r: the king of the Westland [will see destruction. [...] comes near: land will become hostile to king, brother to brother [.....].”¹⁷ And: “If Jupiter passes to the right of Venus: a strong one will conquer the land of the Guti (i.e., the north)” (Hunger 1992, 448.1, p. 251). Another, which may, perhaps, have encouraged pagan rebels, predicts, “If Jupiter goes with Venus: there will be praying of the land to the gods” (Hunger 1992, 244.r.2, p. 136).

There are a number of problems with the Babylonian hypothesis, not least the lack of evidence for the direct transposition into Hellenistic astrology of any texts apart from the eclipse omens. There are, however, some textual comparisons between cuneiform and Greek texts; for example, Firmicus Maternus stated that “all kinds of danger” occur when Mars is in aspect to Cancer (*Mathesis*, VIII.ix.2). In relation to Jupiter and Venus, he wrote that individuals born when they are in conjunction “are devout in religious rites” (*Mathesis*, VI.xxiii.4). Yet these examples do not necessarily imply direct transmission. However, the phenomenological argument—the impact of the numinous power of the night sky or the rising sun—provides weight for the continuation of an observational astrology. Supporting evidence is provided by the insistence in Jewish practice on the observation of the rising crescent moon (a religious necessity inherited and maintained by Islam).

8. The Survival of Babylonian Astrology

There is a widely held view that Greek astrology was fundamentally different from Babylonian in both its conceptual foundations and technical applications, an opinion which pervades the literature on the history of astrology.¹⁸ However, Francesca Rochberg has demonstrated aspects of technical continuity between Babylonian and Greek astrology (Rochberg-Halton 1988b),

17 Hunger 1992, 212.4, p. 119. Also, for Venus-Jupiter conjunctions, see 214.1-2, p. 120.

18 See for example, Tester 1987.

while Alexander Jones has documented the influence of Babylonian astronomy, that is, the computations necessary for the practice of astrology, on its Hellenistic counterpart (Jones 1997, 1993, and 1996). David Pingree has argued convincingly that Babylonian lunar and eclipse omens were then incorporated into such texts as Vettius Valens's second-century *Anthologies*, Hephaistio of Thebes's fourth-century *Apotelesmatica*, and John of Lydia's *On Signs*, composed around 550 (Pingree 1998). Certain passages in Hephaistio's text are clearly survivals from Babylonian tradition, such as the study of the color of eclipses and comets, and meteorological omens (Hephaistio of Thebes, *Apotelesmatics*, trans. Robert Schmidt, I.25-26). Pingree also identifies passages derived from the *Enuma Anu Enlil*, the great seventh-century BCE Assyrian compilation of Babylonian astrological omen texts, in a Greek translation of the *Apocalypse of Daniel* made by Alexius of Byzantium in 1245. This text had been available in Arabic after the 660s, and was formerly known in Greek in the late Roman period, if not earlier. Pingree records that the passages included in Alexius's text include the "interpretation of solar and lunar eclipses, halos around the two luminaries, new moons, comets, falling stars, rainbows, flashes of light, the reddening of the sky, thunder, lightning, rain, hail and earthquakes" (Pingree 1998, 134).

There was, of course, an overlap between the technical procedures of Babylonian and Greek astrology. The codification of astrology, including the development of birth charts and a zodiac of twelve thirty degree signs, which culminated in the complex rules evident in the extant Greek texts of the first century onwards, predated the Hellenization of the Near East and appears to have begun under Persian rule in the fifth century BCE.¹⁹ The only safe distinction to be made between Babylonian and Hellenistic astrology is that the Babylonian art relied heavily on direct observation, while the Hellenistic craft could be practiced on the basis of tables. Until such time as the astrology that the Babylonian priest Berossus taught to the Greeks on Kos around 280 BCE (Vitruvius, *De Architectura*, 9.6.2) can be reconstructed, we can have no absolute idea of the extent of the distinctive Greek contribution to astrology. Indeed, the evidence suggests that the observational Babylonian tradition was flourishing in the first century BCE, two hundred years after Berossus set up his school; Cicero reported that the Chaldaean, by whom he specifically meant the astrologers of the Babylonian tradition and race, were active in Syria and well-known for their knowledge of the stars and impressive intellectual qualities (Cicero, *De Divinatione*, I.i.2; I.xli.90 - xlii.93). The magi, the Persian priesthood, were also active throughout the Middle East and met regularly in sacred places, including hill tops, to conduct divinatory exercises, which I assume, on the basis of their inclusion in the Christian nativity story, would have included astrological consultations. Such prophecies

19 For discussion, see Campion 2000.

may have been inseparable from the soothsaying, interpretation of oracles, lightning, and prodigies which were an integral part of political decision making in the Mediterranean and Middle East (Cicero, *De Divinatione*, I.vi.12; I.xliii.95). It is known from evidence in the Dead Sea Scrolls that these practices surfaced in Jewish culture in the first century CE. Two passages from a surviving astrological text are typical:²⁰ “if it thunders in the sign of Taurus, revolutions (in) the wor[ld]...”; “if you saw the moon upright towards the south and its other horn inclined towards the north, let it be a sign for you: be careful of evil; trouble will go out from the south.”

There are no extant texts discussing observations of Venus in the Hellenistic period, and to draw comparisons between cuneiform and Greek literature is problematic. Is it really possible to link the Venus tablet’s claim, from around 1700 BCE, that Venus’s reappearance in the east signifies messages of reconciliation from king to king, with pseudo-Valens’ statement that “when the star of Aphrodite [Venus] has come on to the *Horoscopus*, it produces gaiety with good cheer”?²¹ It is, though, reasonable to argue, on the basis of the survival of an observational Babylonian astrology together with a continuation of Venus worship, that Venus’s physical appearance in the pre-dawn or early evening sky was still of astrological significance in the Roman Near East.

Whereas Pingree looked for the direct incorporation of Babylonian omen texts into Greek works, there was also a more subtle incorporation of the principles of Babylonian astrology. Hephaistio, for example, described a technique which was clearly an adaptation of Babylonian principles, and which he defined as “spear-bearing” (Hephaistio, *Apotelesmatica*, I.17, p. 35); essentially, spear-bearers were rising planets. At Leontius’s coronation benefic Jupiter (and perhaps Venus and Mars) was spear-bearer to the sun, rising immediately before it. Hellenistic astrology therefore maintained, in at least some respects, the principle of direct observation.

Equally significant is that the Babylonians’ theoretical model of astrology survived. As Gadd put it, the Babylonians regarded the stars as “the writing of heaven,” a question of interpreting signs of divine intent, favor, or displeasure to which humanity might then respond (Gadd 1980, 57). It is often argued that Greek astrology replaced omens and signs with a mechanistic Aristotelian model of causes and influences, and that Greek and Babylonian astrology were therefore necessarily fundamentally different practices (see for example, Rochberg-Halton 1988b). However, the notion of astrology-as-signs was not replaced by the theory of astrology-as-influence, but existed in parallel with it. Plotinus, who shaped late Roman Platonism, made the most

20 4Q318: A Divination Text (Brontologion), in Wise et al. 1996, 303-305. See also Martinez 1994, 451-454.

21 Pingree and Reiner 1975, I, 29; Dorotheus, Orpheus, Anubio, and Pseudo-Valens, *Teachings on Transits*, trans. Robert Schmidt, p. 20.

effective statement of the Babylonian position when he angrily dismissed the notion of planets as causes in favor of signs.²² The possible survival of Babylonian astrological practice was therefore complemented by the continuation of Babylonian astrological ideology at the highest intellectual level, in the Platonic Academy.

9. Conclusion

The horoscopes for the proclamations of the rebel pagan emperors Basiliscus and Leontius are of historical interest, being set in the period when the Roman Empire in the West disintegrated and that in the East was adopting its Byzantine Greek identity. It is, however, highly implausible that the astrologers were using the rules of Greek horoscopic astrology suggested in the commentaries translated by Neugebauer and van Hoesen, and Pingree. Thus other explanations must be considered. I have argued in this paper that an approach adapted from phenomenological principles should include an examination of the visual sky and an understanding of the numinous awe which a striking celestial display can inspire. It is therefore suggested that the key to understanding the astrological moments recorded in the texts lies not in the abstract interpretive procedures typical of Greek astrological texts, but in a surviving tradition of the observational astrology characteristic of Babylonian practice, linked to astral religion and flourishing within a philosophical context provided by Neoplatonism. As Pingree has shown, there is textual evidence for the survival of Babylonian eclipse and lunar omens into the Roman and Byzantine periods, though there is almost no evidence for the survival into the fifth century of a textual tradition of Babylonian planetary astrology, aside from general notions such as the importance of rising planets. The possibility of continuity between the interpretive frameworks of Babylonian and Greek horoscopic astrology has been discussed. However, it is suggested that the reconstruction of the pre-dawn sky provides more effective evidence for the fifth century astrologers' intentions than do the documentary sources. If such an observational astrology survived, it adds a further dimension to the understanding of the political uses of sky-based pagan religion in the context of the religious complexity of Late Antiquity.²³

22 Plotinus, *Ennead* II.3, "On Whether the Stars are Causes," trans. A. H. Armstrong.
 23 I am grateful to Bernadette Brady for suggesting that the fifth-century astrologers may have been working with direct observations.

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Māshā'allāh's Zoroastrian Historical Astrology

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Māshā'allāh ibn Atharī (Pingree 1974, 159-162), a Persian Jew, composed the earliest history that we possess based on a millennial theory in which each millennium is measured by the passage of conjunctions of the two planets furthest from the earth—Saturn and Jupiter—over the four triplicities of classical Greek astrology. This passage is completed in 51 mean conjunctions spread approximately twenty years apart. Māshā'allāh's history, the *Kitāb fī al-qirānāt wa al-adyān wa al-milil* ("Book on Conjunctions, Faiths, and Religions"), is preserved for us only in the *Kitāb al mughnī* ("Book of Satisfaction") composed by a Christian named Ibn Hibintā at Baghdād after 929. Māshā'allāh had written his *Kitāb fī al-qirānāt* in 810, but Ibn Hibintā because of hindsight believes that its predictions were distorted by its author so that he attempts to correct them. One such intervention is Ibn Hibintā's promise, at the beginning of his discussion of Māshā'allāh's work, to include "what Hermes and others mentioned concerning judgments based on conjunctions and world-year transfers and as to what the ancients had to say concerning judgments on nativity years and so on as to what follows it of the duration (of the reigns) of kings and governors, and the times of wars" (Kennedy and Pingree 1971, 39). Since no one in antiquity wrote about the historical interpretation of Saturn-Jupiter conjunctions, Ibn Hibintā must be referring to the mythical role of the three Hermes in the history of science proposed by Abū Ma'shar (Pingree 1968, 13-19), and perhaps to the *Kitāb asrār kalām hurmus al-muthallath bi al-ḥikma* ("Book of the Secrets of the Words of Hermes who is Tripled in Wisdom"), which presents a variant version of the horoscope of Gayōmart (Pingree 1997, 43).

However, whereas Abū Ma'shar followed an Indian chronological tradition in making the mean conjunctions that occur in 0° of Aries, the tropical sign in the triplicity of fire, mark the beginning and the end of a yuga, Māshā'allāh connected the birth and death of the universe with conjunctions in Cancer and Capricorn, under the influence of an ancient Greek tradition associated by Seneca with Berosus the Babylonian (*Quaestiones Naturales* III 29,1). Seneca claims that Berosus states that a conjunction of all the planets in Cancer indicates that the earth will be burned, one in Capricorn that it

will be flooded. The Zoroastrian astrologers followed by Māshā'allāh shifted the flood to Cancer so that it fit into their conception of world history and so as to make it conform to the astrological doctrine that defined that zodiacal sign as watery. This is cleverly combined with the Zoroastrian theory of the universe that lasts for twelve millennia corresponding to the twelve zodiacal signs. The first three millennia, according to such sources as the *Bundahishn* (Anklesaria 1956, 305-307) saw the creation by the Good Spirit, Ohrmazd, of the material world, which, however, remained motionless. Motion began—in particular, the motions of the planets, which had all been in their exaltations (Anklesaria 1956, 59), awaiting their leader, the evil spirit, Ahriman, who was aroused—at the beginning of the fourth millennium (Anklesaria 1956, 47).

The Iranian *Bundahishn*, from which I have been quoting, speaks of a cow that Ohrmazd created along with Gayōmart (Anklesaria 1956, 25); the *Saddar Bundahishn* calls this creature a bull (Molé 1963, 519); both texts state that this creature was slain by Ahriman at the beginning of his assault. The celestial symbol of the bull is the zodiacal sign Taurus, which belongs to the astrological triplicity of earth. It is presumably for this reason that Māshā'allāh claims that the first Saturn-Jupiter conjunction occurred at the beginning of motion at Taurus 7;42° when 509 years, 2 months, and 24 days had passed of the millennium of Mars (Kennedy and Pingree 1971, 40). This millennium was considered to belong (appropriately enough) to Mars because the tropical sign within the triplicity of earth is Capricorn, in which is located the exaltation of Mars, where that planet was at the time of the assault. Using the parameters of the *Zīj ī Arkand* (Haddad, Kennedy, and Pingree 1981, 209-211), which were adopted by Xusraw Anōshervān's astronomers in the *Zīj ī Shahryārān* which in turn was used by Māshā'allāh (Kennedy and Pingree 1971, 75-85 and 127), the mean increase in the longitudes of successive Jupiter-Saturn conjunctions is about 242;25,35°, and the mean increase in time about 19 years, 10 months, and 10+ days. The first potential conjunction, then, in the triplicity of earth would have occurred in Capricorn 2;25,35°, the second in Virgo 5;10°, and the third (the actual first, in the symbolic Taurus) in Taurus 7;16,45°, for which the manuscript of Māshā'allāh has Taurus 7;42°.

Māshā'allāh states that this mean conjunction which occurred 9 years, 2 months, and 24 days after the middle of the millennium of Mars preceded the shift in triplicities that indicated the Flood by 2412 years, 6 months, and 26 days (Kennedy and Pingree 1971, 40). This shift from the airy to the watery triplicity is firmly dated -3380 (Kennedy and Pingree 1971, 77-88 and 187-193), so that Māshā'allāh took the fourth millennium, that of Mars, to have begun in -6291, and the first millennium in -9291. The first mean conjunction immediately preceding the Flood occurred in -3380 in Scorpius 1;24°, the second mean conjunction in -3360 in Cancer 3;49°; Cancer is the

tropical sign in the triplicity of water and the sign containing the exaltation of Jupiter. In Zoroastrianism the fixed stars—and especially Tishtrya or Sirius (Panaino 1986)—released the immobile waters in heaven at the beginning of motion, thus according a special relationship of floods to the region of Cancer; for the astrologers who were followed by Māshā'allāh, it was the conjunction of -3360 in Cancer that precipitated the Flood.

According to the Persian king-lists available to al-Bīrūnī in 1000 when he composed his *Al-athār al-bāqīya 'an al-qurūn al-khālīya* ("Chronology of Ancient Nations"), the Persian kings reigned for 3352 or 3354 years (Sachau 1923, 103-109), from the "birth" of Gayōmart to the death of the last Achaemenid; these numbers, of course, are rounded to integers, so that the number of solar years must be close to 3360. The Flood is said to have occurred in the reign of Tahmurath, which began, according to the same sources, 253 or 250 years after the "birth" of Gayōmart. This implies that the Macedonian and early Seleucid kings were not counted; the approximately 3600 years extend from the time of the Flood to the beginning of the rule of the Arsacids. Note, however, that the *Bundahishn*'s horoscope of Gayōmart essentially locates all the planets in their exaltations (Raffaelli 2001), which were in those zodiacal signs before the beginning of motion in the fourth millennium.

How this astrological re-interpretation of the Zoroastrian theory of twelve millennia gives significance to the later, more real events of Sasanian and early Islamic history is not clear from what Ibn Hibintā reports. But we do have some relevant information, provided by Māshā'allāh himself as quoted by al-Hāshimī in his *Kitāb fī 'ilal al-zījāt* ("Book on the Reasons behind Zījēs"), composed in about 890, and by al-Bīrūnī in his *Al-qānūn al-Mas'ūdī* ("Masudic Canon") of the early 1030's. Al-Hāshimī reports (Haddad, Kennedy, and Pingree 1981, 95):

It is stated of Māshā'allāh that he said: —Khusrō Anōsherwān, when he beheld the difference between the *Arkand* and what Ptolemy asserted, gathered together the people learned in computation and in (astrological) judgments, and looked over these two books. He found the *Arkand* to be the more accurate by observation and eye-sight, and the judgments based on its planets more accurate. So he worked out a *Zīj*.

The actual date of the composition of this *Zīj* is indicated by al-Bīrūnī (*Al-qānūn al-Mas'ūdī*, vol. 3, 1956, 1973f.):

It is their (the Persians') opinion that the seven planets and the two nodes rule in turn the years in numbers which are assumed for them and which are called *fardārāt*. Their agreement as to these is that there had passed of the *fardārīya* of Jupiter 4 years when 25 years had passed of the reign of Anōsherwān (556 CE) ... there had passed of the thousands 3,851 years.

If we go back 3,851 years from 556 CE we arrive at -3295, just four years before the beginning of the seventh millennium in -3291 according to our

reconstruction of Māshā'allāh's chronology. The time since -3295 was divided into *fardārs*, each of which contains 75 years of which specified numbers are ruled by the planets and the lunar nodes in the order of their exaltations (Pingree 1968, 62)—sun 10 years, moon 9, Ascending Node 3, Jupiter 12, Mercury 13, Saturn 11, Descending Node 2, Mars 7, and Venus 8. In 530 CE, the year before Anōsherwān's coronation, 3825 years or 51 *fardārs* had passed; the first 26 years of Anōsherwān's reign contained the *fardārīyas* of the sun, the moon, and the Ascending Node, and the first 4 years of Jupiter's *fardārīya*, as al-Bīrūnī correctly notes. From this one can conclude that our account of Māshā'allāh's chronology is essentially correct, that it may have been known to the astrologers/astronomers at Anōsherwān's court, and that in it the tenth millennium, the first of the final three in which Ohrmazd defeats Ahriman, began in -295 or -291 and included the reign of Anōsherwān.

Unexpectedly, we have an independent witness to the chronology followed by Anōsherwān's astrologers. It is the horoscope they cast for the king's coronation at c. 7 A.M. of 18 August 531 in the garden of Rām-Qobad in the district of Rām-Ardashīr (Pingree and Madelung 1977, 249f.). The horoscope, preserved in the *Jāmi' al-kitāb* ("Compilation") composed by al-Qaṣṣrānī after 882, by its details shows every sign of being a genuine product of Anōsherwān's time, whether it was cast before the coronation in order to select an auspicious time for the ceremony or after it as a record. It claims to have been cast by the astrologers of Fārs and Hind, whom we know to have collaborated at the Sasanian court at this time. It mentions that the date fell in the millennium of the sun. This can be explained not from Māshā'allāh's method of determining the planetary lord of the millennium which is discussed above, but from a method found in the *Zand ī Wahman Yasn*; in this system, as the millennia progressed through the zodiacal sign containing the planets' exaltations, each planet thus designated became the lord of that millennium—Aries indicates the sun, Taurus the moon, Gemini the Ascending Node, Cancer Jupiter, and Libra Saturn. Saturn therefore is the lord of the seventh millennium, which began in -3295/3291 (Pingree in Panaino 1996, 241f.). Saturn's lordship of the millennium of Saturn, in which the assault of Ahriman occurred, is confirmed by the *Bundahishn* (Anklesaria 1956, 69). A related Persian tradition, preserved in a Byzantine Greek translation, indicates that the millennia after the seventh are ruled by the next five planets in descending order from Saturn (Pingree 2004, 544). Therefore, the tenth millennium was ruled by the sun.

The horoscope also says that the century in which Anōsherwān's coronation fell was ruled by the sun. If we follow the rules of the Byzantine text, 531 fell toward the end of the eighth century, near the beginning of the ninth, which commenced in 535 CE and was ruled by the sun, if we accept

that the first century was also ruled by the sun and therefore the eighth as well.¹

The symbolism of the coronation ceremony should now be clear: The King of Kings is associated with the tenth millennium and with the sun; the sun and the moon are in the royal signs, Leo and Aries, both of which belong to the triplicity of fire; Jupiter, the Ascending Node, and the Descending Node are in the signs of their exaltations; the sun and Venus are in their domiciles; and Saturn, Jupiter, and Mars are close to a conjunction in Cancer, wherein occurred the mean conjunction of the Flood. The relative reasonableness of the basic pattern of Māshā'allāh's solution is also apparent. It avoided the fantastically long periods of the Indian tradition of yugas—a Kalpa of 4,320,000,000 years or a Mahāyuga of 4,320,000—for which the Iranian tradition provided no historical narrative. It satisfied both the religious and the historical traditions of Iran. When Abū Ma'shar imitated the Indians by shifting the date of the Flood to that of their beginning of the present Kaliyuga in -3101, he attempted to ameliorate the problem of the length of time by fixing the Flood at the midpoint of a period of 360,000 years, a twelfth of a Mahāyuga. But he did not (or could not) fill in the antediluvian millennia with prophets and dynasties as his theory required.

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1 Pingree 2004, 541; on the importance of astrology in Sasanian imperial ideology, see Panaino 2004.

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Circular Motions

Private Pleasure and Public Prognostication in the Nativities of the Mughal Emperor Akbar

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The Mughal Empire constituted a heyday of Islamic power in India. Its fascination is partly due to the sovereigns' efforts to integrate the different ethnic and religious groups of the subcontinent in their system of rule. These efforts resulted in the propagation of a new faith, the *dīn-e elāhī*, a syncretistic religion initiated and developed by Akbar.¹

The flourishing of the Mughal Empire was accompanied by a flourishing of astrology. It is true that astrology had played an important part in the Muslim world since the middle of the eighth century CE, but no other dynasty apparently made such extensive use of astrological advice and predictions as the Mughal rulers. Historiographic works of that epoch abound with remarks on the omnipresence of astrologers and their activities at court.

The function of astrology in Mughal ideology and historiography has not yet been investigated. In the following article, I will approach this phenomenon by an analysis of the four nativities of the Mughal emperor Akbar given in the *Akbarnāme* of Abū l-Faḡl-e 'Allāmī. In spite of dealing with only a limited part of astrology in Mughal times, this analysis nevertheless catches a glimpse of its use for propagandistic and ideological aims and opens up further research on this subject.

Situated almost at the beginning of the *Akbarnāme*, the accounts of the Mughal emperor Akbar's birth and especially of his nativities hold a very prominent place in Abū l-Faḡl-e 'Allāmī's famous biography. In chapters three to eight of this book, altogether four different nativities of Akbar are depicted and analyzed, covering twenty pages of the printed Persian edition and sixty pages of Beveridge's English translation.² Only after this extensive account does Abū l-Faḡl turn to the history of Adam and of Akbar's prede-

1 For a short introduction to the *dīn-e elāhī*, see Grobbee 2001, 1-9; Rizvi 1975, 374-417; Srivastava 1962, 296-330.

2 *Akbarnāme* I, 23-43; tr. Beveridge 69-128.

cessors, linking this history again to cosmological doctrines of world-years and world-ages.³

As the entire beginning of Abū l-Faḡl's book is filled with accounts of Akbar's miraculous link to supernatural forces, one would expect that these nativities also serve propagandistic intentions. The main objective of this study is to demonstrate how Abū l-Faḡl achieved this aim. First, I will show how the four horoscopes were constructed and their respective differences, then I will address their ideological content and their association with the *dīn-e elāhī*. Finally, I will inquire about the importance of astrology in Abū l-Faḡl's book and the causes of its prominence.

1. The Nativities of Akbar and Their Setting

Let me begin with some remarks on nativities in general. Assuming that the astral configuration at the moment of birth has an enduring influence on a person's fate, the drawing up of nativities has always been one of the astrologer's most important tasks.⁴ To determine the time of birth as precisely as possible, astrologers had to be present at the moment of birth. In miniature paintings of Mughal times we therefore see astrologers in close proximity to the birth-chamber.⁵ The astrologers then calculated the position of the ascendant and the planets, and drew the figure of the nativity. But this natal figure was not the astrologer's only requirement. To get the astronomical data for future moments in the new-born's life, they usually undertook extensive calculations. As a result, they produced large books with computation tables, called *zāyche*. At the core of such books, we find the figure of the nativity, sometimes splendidly decorated. Astrological prognostications appear only in the second and shorter part, while most of the space is occupied by the astronomical calculations and tables.⁶

With such extensive *zāyches* in mind, the nativities provided by Abū l-Faḡl are rather disappointing. They do not contain any calculation tables, giving us only the figure of the constellation at the moment of birth and its astrological interpretation. Instead, Abū l-Faḡl depicts four different horoscope figures, and embeds them in a comprehensive account of the circum-

3 *Akbarnāme* I, 48-52; tr. Beveridge 143-154.

4 Ullmann 1972, 357.

5 See, for example: Wade 1998, figures 53 and 54 (The birth of Prince Salim), figure 55 (Rejoicing at Fatehpur Sikri on the birth of Akbar's second son); Welch 1978, plate 16 (The birth of a prince).

6 Tourkin 2003; Keshavarz 1986, 396-399 + plate IV-VI; further examples of *zāyches*: *Zāyche-ye Solṭān Abī Ṭorāb*, (MS Sipahsālār 667), *Zāyche-ye Manūchehr Khān* (MS Majles 4031).

stances of Akbar's birth and the horoscopes' interpretation. We should consider the beginning of this account which deals with the delivery, because it stresses the significance of the moment of the emperor's birth:

Among the strange circumstances which occurred near the time of the appearance of the light of fortune, there was this,—that before the auspicious moment above-mentioned, the mother felt a pressing urgency to bring forth the child. Moulānā Chānd,⁷ the astrologer, who by the king's order had been stationed by the chaste threshold in order that he might cast the horoscope, was perturbed, as the moment was inauspicious. "In a short time, a glorious moment will arrive, such as does not happen once in a thousand years. What an advantage if the birth could be delayed!" Those who were present made light of it and said, "What is the good of your agitation? Such things are not under control."

At this very instant the impulse to bring forth passed off and the astrologer's mind was set at rest somewhat by the transit of the unlucky moment. [...] But when the chosen time came, the Moulānā became disturbed, lest it should accidentally pass by. The confidants of the harem said to him: "Her Majesty, has after much suffering, got an interval of relief and is now slumbering. It would not be right to waken her. Whatever Almighty God, in His good pleasure, has determined, must happen." Just as they were speaking, the pains of travail came upon her Majesty, Miryam Makānī, and awoke her in that auspicious moment, the unique pearl of the vice-regency of God (*khilāfat*) came forth in his glory.⁸

Ascribing the moment of Akbar's birth to divine intervention, this account makes it clear that the main interest in rendering Akbar's nativities is not to provide us with astral positions and astrological houses. They are rather used to create a link between the new-born child and supernatural forces which act with the help of the stars. Therefore, the nativities at the same time provide proof of and establish the emperor's privileged position in comparison with the rest of mankind. In spite of this alleged link, however, it poses no problem for Abū l-Faḡl to transmit four different horoscope figures. As he himself explains, this ambiguity is a divine means of protection:

Keen-sighted inquirers after truth and subtle perceivers of the secrets of the skies fell into the valley of perturbation on account of these discrepancies. [...] Rather it was the Divine wisdom and the Divine jealousy which demanded that the description of this cavalier of the plain of majesty and confidant of the sublime cabinet, should remain hidden from the gaze of keen-sighted, penetrating, minute inquirers, as well as from the eyes of the evil-disposed and the inwardly blind.⁹

7 Moulānā Chānd was an astrologer of Indian origin who accompanied Homāyūn at least at the beginning of the emperor's flight to Iran (*Akbarnāme* I, 374). Later on, he prepared the *Tashīl-e zīj-e Ulugh Beg* for Akbar: Khan Gori 1985, 33f.; King, Samsó, and Goldstein 2001, 55.

8 *Akbarnāme* I, 18-19; tr. Beveridge 56f.

9 *Akbarnāme* I, 41-42; tr. Beveridge 122f.

2. The Four Horoscope Figures

With this background in mind, let us now look more closely at the four horoscope figures. The first figure¹⁰ was prepared by Moulānā Chānd, the astrologer who was present at Akbar's birth. It was calculated according to the "altitudes taken by the Greek astrolabe" at the time of birth and was based on Ulugh Beg's Gurgānī tables.¹¹ In this horoscope, the ascendant—that is, the point of the ecliptic rising above the horizon at the moment of observation—is in Virgo.

Libra Sun Mercury Jupiter Saturn Scorpio	7° Virgo Venus	Leo Cancer
Sagittarius	1st and 4th horoscope	Gemini
Capricorn Moon Mars Aquarius	Pisces	Taurus Aries

The second horoscope¹² was prepared by the Jotik Rai according to the calculations of Indian astrologers.¹³ Here, the ascendant is in Leo instead of Virgo. The position of the planets in the astrological houses is also different: Venus is now in the second house instead of the first, and Mercury in the third instead of the second. The moon has been placed in the sixth house.

The third horoscope¹⁴ was drawn by 'Azod od-Doula Amīr Faṭḥollāh Shīrāzī¹⁵ according to Persian rules and the Greek canon. The ascendant was not observed, but estimated. It is in Leo; Mercury is in the second house again, and the moon back in the fifth.

The fourth figure¹⁶ has a Virgo ascendant. I cannot detect any difference with the first figure apart from the fact that Mercury and Jupiter have

10 *Akbarnāme* I, 23-26; tr. Beveridge 69-84.

11 The Gurgānī tables were prepared by a group of astrologers for the Tīmūrid ruler Ulugh Beg in Samarqand around 1440: Kennedy 1956, 125f.; King & Samsó 2001, 53f. What is meant here by "the Greek astrolabe" is not obvious. It was well-known that the Muslims had inherited the astrolabe from their Greek predecessors (King 1987), but no type of astrolabe was usually given this name. Note that in these horoscope figures the ascendant is shown at the top and not, as elsewhere, on the left side of the diagram.

12 *Akbarnāme* I, 27-31; tr. Beveridge 85-95.

13 Jotik Rai is probably a term for a certain position rather than a personal name: *Akbarnāme* I, tr. Beveridge 86, note 1. This is confirmed by the frequent mention of the Jotik Rai in the *Jahāngīrnāme*, such as p. 337, 362. Abū l-Faḍl does not give us the name of the Indian tables. Beveridge discusses at length whether they were Vikramāditya's: *Akbarnāme* I, tr. Beveridge, 121f., note 2.

14 *Akbarnāme* I, 31-40; tr. Beveridge 94-116.

15 Amīr Faṭḥollāh Shīrāzī originally came from Shīrāz. He first went to the Deccan before he came to Akbar's court. He excelled in all natural sciences and had a talent for mechanics: *Ā'in-e Akbarī* I, 28, tr. Blochmann 34, note 1. He was also responsible for instituting the Elāhī Era: *Ā'in-e Akbarī* I, 277-278.

been dropped altogether. This figure was prepared by Moulānā Elyās al-Ardabīlī,¹⁷ who based his calculations on yet another astronomical foundation, the *Ilkhānī* tables.¹⁸

Virgo Sun Saturn Mercury Libra	Leo 20°	Cancer
Scorpio	2nd horoscope	Taurus
Sagittarius Mars Moon		Aries
Capricorn	Aquarius	Pisces

Virgo Sun Saturn Mercury Jupiter Venus Libra	Leo 28°36'	Cancer
Scorpio	3rd horoscope	Taurus
Sagittarius Moon Mars		Aries
Capricorn	Aquarius	Pisces

To sum up, there are two major points of divergence in these figures: First, the ascendant was calculated differently: it is in Virgo in the first and fourth horoscope, and in Leo in the second and third. As Abū l-Faḡl himself explains, such differences may be caused by the astronomical tables in use. The Indian astrologers used Indian tables which did not take into account the so-called precession, the very slow movement of the sphere of the fixed stars including the Zodiac.¹⁹ Taking a fixed star as starting point, calculations based on such ancient tables do indeed arrive at different results than calculations based on new observations which take this motion into consideration.

The second major difference between the four horoscopes concerns the position of the planets in the astrological houses. Astrological houses are subdivisions of the sky. These houses are not of equal length, and there exist different methods for calculating their boundaries, the so-called cusps.²⁰ It is therefore not surprising that the planets are placed in different houses in the four horoscopes.

16 *Akbarnāme* I, 40; tr. Beveridge 117f.

17 We learn from the *Akbarnāme* that Homāyūn met with Elyās al-Ardabīlī in Kabul in the year 1544: *Akbarnāme* I, 221, tr. Beveridge 446.

18 The *Ilkhānī* tables were prepared by Nāṣer od-Dīn Ṭūsī c. 1270 in Maragha under the patronage of Hülāgū, a grandson of Chingiz Khān: Kennedy 1956, 125; King & Samsó 2001, 46.

19 *Akbarnāme* I, 41; tr. Beveridge 119-122. For astronomy in India and Indian Siddhāntas, see Sarma 1985, especially 7-16; for Indian zījes, see also King, Samsó, and Goldstein 2001, 31-33.

20 Elwell-Sutton 1977, 66-68; in greater detail: North 1986, part I.

2.1. The Astronomical Data of the Nativities

Dealing with astrological material, it is always interesting to verify the given astronomical data.²¹ In Akbar's case, the only horoscope to give detailed information on the position of the houses and the planets is the third one. Here, the house cusps and planetary positions are given precisely in degrees and minutes. We can verify these data by calculating at which day and time the planets reached these positions at Akbar's birthplace,²² namely, October 15th at 1:45 am. Starting with the given ascendant at 28°36' Leo, we then determine the cusps and compare the indicated positions of the planets in the twelve astrological houses with our horoscope figure. As we learn from the enclosed table, we get approximately the same results. The calculations are therefore sound, and the horoscope is well constructed.

3rd horoscope

	Abū l-Faḏl	15.10.1542, 1:45 am 25°21', 69°46'
1 st house	28°36' Leo	28°31' Leo
2 nd house	28°43' Virgo	28°39' Virgo
3 rd house	28°01' Libra	28°52' Libra
4 th house	27°21' Scorpio	27°12' Scorpio
Medium Coeli	27°21' Taurus	27°12' Taurus
5 th house	27°11' Sagittarius	27°05' Sagittarius
6 th house	26°46' Capricorn	26°43' Capricorn
Sun	0°45' Scorpio = 3 rd house	0°47' Scorpio
Moon	19°48' Capricorn = 5 th house	20°36' Capricorn
Mercury	25°24' Libra = 2 nd house	24°48' Libra
Venus	26°23' Virgo = 1 st house	26°10' Virgo
Mars	10°48' Capricorn = 5 th house	10°27' Capricorn
Jupiter	15°13' Libra = 2 nd house	15°16' Libra
Saturn	10°40' Scorpio = 3 rd house	10°11' Scorpio

The first horoscope gives the position of the ascendant as 7° Virgo. At Akbar's birthplace this position was reached on October 15th at about 2:23 am. Since we know neither the cusps nor the absolute position of the planets, we

21 The astral positions and the cusps have been determined with the help of Peter Schiller's computer program (Schiller 2001). The houses are calculated according to Alcabitius, the position of the planets on the basis of a modern ephemeris.

22 Akbar was born at Amarkōt, lat. 25°21' N, long. 69°46' E: tr. Beveridge 55, note 4. See also *Britannica Atlas* (1989), index (s.v. "Umarkot").

have to be content with the relative position of the planets in the astrological houses given by Abū l-Faḏl. We can ourselves calculate the cusps and the positions of the planets on October 15th at 2:23 am. In this way we discover in which houses the planets were at that time. We may then compare our results with the planetary positions according to the first horoscope. They are indeed mostly situated in the houses given in the figure. The only exception is the sun, which is in the second instead of the third house.

The author of the fourth horoscope does not mention any degrees. As the distribution of ascendant, houses and planets is similar to the first horoscope, I assume that he likewise used 7° Virgo for the ascendant.

1st and 4th horoscope

	Abū l-Faḏl	15.10.1542, 2:23 am 25°21', 69°46'
1 st house:	7° Virgo	6°59' Virgo
2 nd house		7°56' Libra
3 rd house		8°14' Scorpio
4 th house		6°18' Sagittarius
Medium Coeli		6°18' Gemini
5 th house		5°22' Capricorn
6 th house		4°55' Aquarius
Sun	3 rd house	0°48' Scorpio = 2 nd house
Moon	5 th house	20°57' Capricorn = 5 th house
Mercury	2 nd house	24°51' Libra = 2 nd house
Venus	1 st house	26°12' Virgo = 1 st house
Mars	5 th house	10°28' Capricorn = 5 th house
Jupiter	2 nd house	15°16' Libra = 2 nd house
Saturn	3 rd house	10°11' Scorpio = 3 rd house

The Indian horoscope also does not contain any degrees. In chapter eight of the Akbarnāme, however, Abū l-Faḏl says that the calculations of the Indians differed by 17° from the other calculations.²³ The ascendant would thus be at 20° Leo. This gives us fairly good data: if we calculate the positions of the planets for the moment corresponding to that ascendant, we find them in the houses indicated by the horoscope figure.

23 Akbarnāme I, 41; tr. Beveridge 122.

2nd horoscope

	Abū l-Faḏl	15.10.1542, 1:06 am 25°21', 69°46'
1 st house:	20° Leo	19°56' Leo
2 nd house		19°03' Virgo
3 rd house		19°00' Libra
4 th house		17°36' Scorpio
Medium Coeli		17°36' Taurus
5 th house		18°32' Sagittarius
6 th house		18°24' Capricorn
Sun	3 rd house	0°45' Scorpio = 3 rd house
Moon	6 th house	20°15' Capricorn = 6 th house
Mercury	3 rd house	24°45' Libra = 3 rd house
Venus	2 nd house	26°08' Virgo = 2 nd house
Mars	5 th house	10°26' Capricorn = 5 th house
Jupiter	2 nd house	15°15' Libra = 2 nd house
Saturn	3 rd house	10°11' Scorpio = 3 rd house

With the result of our calculations, we can clearly state that all the horoscopes are within the limits of possible configurations. Therefore, they were not invented by Abū l-Faḏl, but they were drawn by specialists.

3. The Prognostications and Their Ideological Content

After this survey of the horoscope figures, let us now examine the prognostications. The different horoscope figures have their own explanations and judgments. While the fourth figure does not contain any prognostication, the second figure is explained in two different ways: the first is anonymous, and the second is according to the “Sages of India.” All of the predictions are quite extensive. Their discussion here is therefore limited to the most interesting points.

According to the first horoscope, the masters of understanding and reason will gather around the newborn child. The philosophers of the age from every sect will leave their countries to come to his court. His thoughts and ideas are in total accordance with reason. He bestows justice and equality on everybody.²⁴

24 *Akbarnāme* I, 24-25; tr. Beveridge 73f.

The anonymous prediction of the second horoscope states that the newborn child has a broad understanding of divine worship and theology. He will act according to his own mature reasoning, examining contradictory faiths and different dispositions, and guiding every sect in the way of good works. He is beautiful, accomplishing whatever he undertakes. He will also travel a lot.²⁵

According to the prediction by the “Sages of India” (the second prediction of the second horoscope), the newborn child will be brave and steadfast. He will have a large kingdom and a broad understanding of music. His memory is very good and he will be very rich and generous.²⁶

The third horoscope has again only one interpretation. It predicts that the newborn child will be very rich. At the beginning of his rule, additional territories will be conquered by his soldiers and his father will die early. In his youth, the child will marry the daughters of ruling Indian families. He has some knowledge of mysteries, and happiness reaches him from the world beyond. Most of the time he will be concerned with ordering the state and religion. Endowed with outstanding reason, he will bestow favor on learned and wise men.²⁷

In comparing these prognostications, it is clear that the contents of the first and the anonymous second horoscope are very close to each other. Both predict central issues of Akbar’s later policies, especially concerning his religious ideas. Keywords mentioned in the prognosis are the gathering of representatives from different faiths at Akbar’s court and the harmony of his deeds and thoughts with reason. These are both central ideas of Akbar’s *dīn-e elāhī* (Grobbe 2001, 5f., 70f.).

The prognostications of the “Sages of India” are quite general, the most interesting point being perhaps the native’s broad understanding of music. The third horoscope again contains some interesting details, but they seem to be focused on events of the early days of Akbar’s reign, like the premature death of his father and the emperor’s marriages. Nevertheless, some issues of Akbar’s new order are at least hinted at when the horoscope emphasizes the emperor’s reason and points to his ordering the affairs of state and religion.²⁸

With respect to these differences, I contend that the horoscope of the “Sages of India” had been cast before the outlines of Akbar’s religious reforms were perceptible. As Beveridge found out, these predictions resemble

25 *Akbarnāme* I, 28-29; tr. Beveridge 87-89.

26 *Akbarnāme* I, 29-30; tr. Beveridge 90-95.

27 *Akbarnāme* I, 36-39; tr. Beveridge 106-114.

28 Akbar’s father Homāyūn died in 1556 when Akbar was 14 years old. There is, however, only one marriage mentioned for Akbar’s early youth: *Akbarnāme* I, tr. Beveridge 113, note 4. Other marriages with Hindu and Muslim women are mentioned for his later years: *Akbarnāme* II, 57, 230f., 358f.

predictions in ancient Indian handbooks on astrology.²⁹ I assume, therefore, that we have here the second horoscope's original prognostication, probably prepared soon after the child's birth or at least before his father's death. But since the judgments do not refer to Akbar's political reforms, they were completed later by an anonymous addition.

The third horoscope was cast shortly after Faṭḥollāh Shīrāzī arrived at the Mughal court in 1583. At that time, Akbar had already carried out some important reforms.³⁰ We may wonder why we do not find more allusions to the new policies in the judgments of this horoscope. Perhaps the newly arrived astrologer preferred to remain vague about developments of a not yet predictable extent, and therefore put the stress on earlier events. It is interesting to note that Faṭḥollāh Shīrāzī did not base his horoscope on the observed ascendant, but on an estimated one. There is good reason to suppose that he wanted to change the ascendant from Virgo to Leo, because Leo is much stronger than Virgo and is especially apt for a king. Despite the horoscope's good ascendant and its detailed astronomic data, however, Abū l-Faḥl postponed it to third place in his book. I assume that this was done because the prognostications had lost their immediate relevance: containing no clear announcement of Akbar's reform, they were somewhat outdated.

The predictions of the first and the anonymous prognostication of the second differ greatly from ordinary horoscopes. Such predictions cannot be found in astrological manuals. Too precise to refer back to a time when the outlines of the *dīn-e ilāhī* were not yet perceptible, they were probably invented after the fact by Abū l-Faḥl himself. The horoscope figures, however, may well be the original ones. I assume that the first horoscope figure has indeed been cast by Moulānā Chānd: first, because it fits well with the astronomical data of Akbar's birth, and, secondly, because the Virgo ascendant is not auspicious enough to have been faked. Therefore, Abū l-Faḥl probably reproduces actual horoscopes here, but replaces the original predictions and adds his own explications. As a result, we get a series of horoscopes quite different from what we find in most historiographic works and even at other places in the *Akbarnāme*:³¹ of course, astrology was used for propagandistic ends in many other sources, but I do not know of any other examples with obvious reformulations of existing horoscopes. The only other historiographic work known to me with such an extensive description of a birth

29 *Akbarnāme* I, tr. Beveridge 92, note 1; 93, note 1.

30 The poll tax for non-Muslims (*jezya*) was abolished in 1564 (*Akbarnāme* II, 203-204); the 'Ebādatkhāne was built in 1575 (*Akbarnāme* III, 112ff.) and the so called infallibility decree was signed in 1579 (*Akbarnāme* III, 269-270; text of the decree: *Badā'ūnī* II, 271f.).

31 See for example the horoscope of Akbar's accession to the throne (*Akbarnāme* II, 6), and those of the birth of prince Morād (*Akbarnāme* II, 354-355) and prince Dān-yāl (*Akbarnāme* II, 374-375).

configuration so prominently placed is the *Bādshāhnāme* of Shāh Jahān which probably imitates the *Akbarnāme*.³²

4. Astrology and Propaganda

In this final section, I would like to ask why the emperor's nativities in the *Akbarnāme* were so emphasized. As already stated, these nativities are not an isolated indication of Akbar's unique personality and fate in the *Akbarnāme*. On the contrary, many chapters are filled with accounts of the emperor's marvelous relationship with supernatural forces. In these accounts, however, astrology and astrological symbolism are not merely one narrative device among many others; rather, they permeate all the narrations and set their tone.

Of course, it is also possible that such imagery reflects Abū l-Faẓl's personal inclinations. I contend, however, that such an explanation would be unsatisfactory. To suggest another interpretation, I would like to quote one further account:

And those intimate friends of his Majesty [Homāyūn] [...] have been heard to tell that when his Majesty had the auspicious horoscope shown to him and had considered it, it happened several times that when in his private chamber and with the doors all closed, he fell adancing, and from excess of exaltation, revolved with a circular motion. [...] And he many times said to those who were privileged to converse with him, that the horoscope of this Light of Fortune was superior, in several respects and by sundry degrees, to that of his Majesty, the Lord of Conjunction (Tīmūr) as indeed clearly appears to the scrutinizing students of the prognostications.³³

This last sentence provides us with an important key for understanding the function of the astrological metaphors in the *Akbarnāme*. The emperor's nativities are a way to compare Akbar with his famous predecessor and to prove his superiority. Given the fact that astrology was of outstanding importance in Tīmūrid ideology, astrology was indeed a very obvious medium to do so: Tīmūr himself was called the *ṣāḥib-e qerān*, the Lord of conjunctions.³⁴ This title referred to a conjunction of Mars and Jupiter in the zodiacal sign Taurus in the year of Tīmūr's birth.³⁵ It was used to emphasize the privileged posi-

32 *Bādshāhnāme* I, 17-41. The *Bādshāhnāme* was written for Akbar's grandson Shāh Jahān by 'Abd ol-Ḥamīd Lāhourī who died in 1654-1655.

33 *Akbarnāme* I, 42-43; tr. Beveridge 123f.

34 *Akbarnāme* I, 77- 81; Nagel 1993, 12f. + 448, note 18.

35 Since the term *qirān* denotes any conjunction, the two planets to which it refers remain open; but usually a conjunction of Jupiter and Saturn is meant. The date of Tīmūr's birth, April 8th 1336, clearly shows that in his case, it was a conjunction of Jupiter and Mars. The origin of the title *ṣāḥib-e qirān* and its first use are not clear.

tion of this powerful ruler and testifies to the importance of astrology at his court and to its use as propaganda.³⁶ Splendid zāyches produced at Tīmūrid courts prove that astrology kept its importance later on.³⁷ Abū l-Faẓl's account of the nativities fits perfectly within this ideological frame.³⁸

But what about the dances for joy also mentioned in this quotation? Are they meant only to stress Homāyūn's private pleasure? To fully grasp their meaning, we should pay attention to the vocabulary used in this quotation. It is the same as for the planets: they also revolve with a circular motion. In some way, Akbar's father is thus transformed into a celestial body.

It is hard to decide if this episode and its imagery were simply invented by Abū l-Faẓl or if they had some foundation in Homāyūn's behavior and intellectual orientation. This description, however, is only one piece of evidence among many for Homāyūn's astrological leanings.³⁹ Akbar's father was unquestionably very interested in astral phenomena and calculations. Astrology's important role in Akbar's time may therefore partly be explained by tendencies already present under his predecessors. But there is also the fact that Akbar later invented a kind of solar cult with strong astral symbolism. In the new belief system, Akbar himself was in some way equated with the sun to which he had a special relation.⁴⁰ The literal transformation of his father into a planet is therefore not strikingly different from ideas current at the time of the *Akbarnāme*'s origin.

In my opinion, these ideas were largely responsible for the astrological tone of Abū l-Faẓl's text. Generally speaking, solar cults and a belief in astral deities often imply belief in astrology. Even if the sun and stars were not deified in the *dīn-e elāhī*, I assume that there existed a similar correlation between Akbar's religious innovations and astrology's important role in his empire. Both the prognostications and the narrative frame in which they were embedded connect obviously to Akbar's politics. The nativities therefore provide clear evidence for this correlation. As represented in the *Akbarnāme*, a highly ideological text, they provide particular insight into its importance at the level of language and propaganda. We should not forget, however, that this cohered with strong personal inclinations for prognostication and astrol-

It indicates, however, a propitious rule and has some messianic overtones. For examples of its use in poetry, see Dehkhoda 1995, s.v.

36 The date of Tīmūr's birth was likely invented to fall on a good configuration: Manz 2002.

37 An excellent example of such a splendidly decorated zāyche from a Tīmūrid court is the one of Eskandar Solṭān (Iskandar Sultān; Keshavarz 1986, 396-399 and plates IV-VI). The zāyche of Solṭān Abī Ṭorāb is a further good example.

38 It is noteworthy that later on Shāh Jahān was also called *ṣāhib-e qirān*: *Bādashāh-nāme* I, 9. For the role of Tīmūr in Mughal historiography and ideology, see Habib 1997.

39 See for example *Akbarnāme* I, 15-16, 21, 42, 46, 270, 303, 361.

40 Grobbee 2001, 51-66.

ogy. Private inclination and public propaganda are thus inextricably interwoven in the accounts of Akbar's nativities, resulting in a most interesting example of astrology's use in Mughal India.

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The Horoscope of Iskandar Sultān as a Cosmological Vision in the Islamic World

ANNA CAIOZZO

1. Introduction

Oriental princes and dignitaries of the Middle Ages commonly had their horoscope calculated. The only one that has reached us together with a beautifully decorated miniature is the horoscope of the Timurid prince Mirza Iskandar (1384–1415). This horoscope is preserved at the Wellcome Institute for the History of Medicine in London under the shelf mark *Ms. Pers. 474*. This is thus the most famous illuminated horoscope, and that is why it has caught the attention of the most renowned scholars in the history of art (Keshavarz 1984; Keshavarz 1986, 46f.; 63–66; 69f.; 396–399), in the history of science (Savage-Smith 1992), and in the history of astrology (Tourkin 2004).

Unlike most birth charts, this horoscope was cast in Shiraz on the 22nd of Dhū-l-Hijja 813H./18 April 1411 by the astrologer Mahmūd Ibn Yahyā Ibn al-Hasān al-Kashī (whose shortened name was ‘Imād al-Munajjim), at the beginning of the reign of Prince Iskandar who was then aged 27, and not on the day of his birth, which was on the 3rd Rabī‘ 786H./25 April 1384 (Elwell-Sutton 1984, 120–124; Keshavarz 1984, 198).

Prince Mirza Iskandar, called Iskandar Sultān by modern historians, was the third of the six sons of Umar Shaykh, and one of the favorite grandsons of Tīmūr Leng. Tīmūr first considered choosing Iskandar as a successor, but he decided otherwise because of the prince’s independent mind and his insubordination. Iskandar Sultān ruled over Fars from 1409 to 1414. His reign was brief and turbulent but, at this time, culture reached an incontestable greatness (Gray 1979, 121–145; Sims 1981; Canby 1993, 51–54). Iskandar Sultān was indeed the leader of Timurid patronage (Aubin 1957), one of the most famous protectors of the art of the book of his time; he showed a particular interest in astrological and astronomical illuminated works, which he repeatedly ordered (Soucek 1992).

The miniature (*plate 1*) enclosed with the 86 folios that convey the details of the prognostication is presented as a double-page painting of 26.5 cm by 16.7 cm, entirely illuminated over a royal blue background, upon which arabesques with gilded fleur-de-lis stand in the borders that were left empty around the miniatures.¹ The main picture is composed of a wheel representing heaven, divided into twelve sectors. Each of them is decorated with stars, dots, and gilded Chinese-style clouds, and bears in its centre a circle with a zodiacal sign, followed by six lines of alternating red and black *naskhī* writing that states the characteristics of each of the twelve houses.² In several sectors, the personifications of the planets are drawn next to the local zodiacal sign. Crowned angels carrying presents in their arms are represented in the corners around the main circle.

Among other things, the text of the horoscope indicates that the individual who was born at the given time will have a long, prosperous, and successful life. Mars being both lord of the exaltation and in sextile in the eleventh house generally means victories and conquests (Elwell-Sutton 1984, 130).

2. The Horoscope of Iskandar, a Surviving Form of the Planispheric Vision of Heaven

In the art of Middle-Eastern Islamic books, the horoscope of Iskandar Sultān stands out as an exception: it is both the only individual illuminated horoscope left to us, and one of the rare circular miniatures showing simultaneously the zodiac and the planets surrounded by angels. Some later miniatures similar to such a representation are known (Caiozzo 2004b), but only one of them—which dates back to the first half of the fifteenth century and can be identified as Timurid on the basis of its style and iconography—should be mentioned here: folio 164a of the *Album Hazine 2153* of the T.S.M. (*ill. 1*). That folio (15.5 cm × 23.3 cm) displays a double circular composition: The planets stand around the sun and are surrounded by the zodiacal signs, with

- 1 The Nativity Book is divided into three parts as explained by Tourkin 2004, 105. The first part gives the place and date of birth of Iskandar Sultān and some astronomical observations; the second part gives general astrological predictions on the twelve houses and the location of the five planets, the fixed stars, and the various lots at the time of birth; the third part gives the predictions between 1411 and 1424.
- 2 Mundane houses are never drawn in Islamic astrology. During its own revolution along the zodiac, each planet occupies one of the twelve houses (*bayt/buyūt*). At any given instant, it stands in one of the twelve houses that divide the sky in a given place. Since these houses are similar to the zodiacal signs, the planet has more or less affinity with the house it occupies at any given moment. Houses are sometimes drawn in western miniatures (Halbronn 1994, 10f.).

four angels painted in the corners of the general frame (Kühnel 1922, pl. 41; Çağman 1981).

Thus, while the metalworkers of the geographical area stretching from Syria and Mesopotamia to Khurāsān were used to decorating trays, cauldrons, tops of round boxes, or mirrors with astrological themes displayed within circles from the twelfth century, the circular structures for astrological themes appeared in books within small illuminated miniatures over blue backgrounds and with golden dots representing stars only at the end of the fourteenth century, and especially in the fifteenth century.³

These circular representations, which are limited to the isolated representation of a sign or planet, seem to bespeak the aesthetic and symbolic impulse to place the zodiac and the planets back into their original context, namely heaven. More complex representations are rare: actually three of them are known, which may be surprising, since circular shapes evoking the heavens were quite frequent on any type of support and object in the ancient Middle East (Abry 1993). Indeed, as soon as zodiacal iconography was codified during the Hellenistic period (Obrist 2004, 195-226), circular zodiacs spread in the Mediterranean area during the first and second centuries CE both in the western and eastern parts of the Roman Empire. They were used to decorate mosaic floors of houses (Parrish 1984, pl. LXIV), ceilings of Egyptian temples (zodiac of Dendera or Tabula Bianchini), bas-reliefs of *mithraea*, and also coins dating back to the reign of Antoninus.⁴ In these circular representations, the zodiac, which represents the ecliptic belt of the sun's path in the sky, is divided into twelve equal sectors, each bearing a specific sign. The twelve figures are generally associated with deities of the Greco-Roman pantheon, sometimes with the figures of the Egyptian decans; in most cases the twelve figures surround the busts of Sol and Luna, the two luminaries (Gury 1993, 118-119).

These ancient representations were continued in the Middle Ages both in the East and the West thanks to copies of illuminated manuscripts dating back to the third and fourth centuries CE, such as the *Aratea*,⁵ ninth-century Byzantine manuscripts describing the mythography of the constellations (Panofsky and Saxl 1990, 21-36; Obrist 2004, 214-224).

3 On Turkmen zodiacal and planetary iconography, see *Tuhfat al-gharā'ib*, Vienna, Österreichische Nationalbibliothek, Ms. N. F. 155, Tabriz (?), Rabi' II 897H./1492, drawn by Pīr Husayn, in Duda 1983, I/76 and Kowaleska 1967, 11-18.

4 Coins from Alexandria with Isis and Serapis surrounded by the seven planetary divinities, and a second circle with the twelve signs of the zodiac; Dattari 1901, pl. 26 and nr.2982, nr.2983, nr.2984.

5 The *Aratea* are illustrated texts that include astronomical extracts from Aratus's *Phenomena*, the Hellenistic poem which provides the basis of the heaven's mythography, and its successors: *Introduction to the Phenomena* by Geminus, *Astronomica* by Manilius, *The Phaenomena of Aratus* by Avienus, *Poetic Astronomy* by Hyginus, or *Matheseos* by Firmicus Maternus.

These manuscripts reveal a very original and highly complex vision of the heavens, drawing their inspiration not only from Hellenistic astronomical theories, but also from astrological knowledge. Astronomy was the science of observation and astrology the science of forecast in which planets, by their associations with the zodiacal signs, played a significant role in the macrocosm and in the future of humanity.⁶ Thus, it seems that the miniatures, which show the concentric circles of the planetary paths or the constellations of the fixed stars as planispheres, could have had a higher astronomical function than as 'sectored' representations showing zodiacal signs and planetary deities, yet without any systematic representation of these latter.

Among the miniatures that have reached us, three main categories of celestial representations can be distinguished: Similar to the celestial globes or painted vaults of ancient times (Lehmann 1945; L'Orange 1953, 18-27), some illustrations are limited to the realm of the fixed stars, the constellations of the northern and southern hemispheres, and the zodiac, agreeing with the canonical mythography established by Aratus and his successors, and similar to the planisphere of Bern (*Codex Bernensis*, ninth century, fol. 11b)⁷ or the planisphere of Rome (*Ms. Vat. Graec. 1087*, fifteenth century; see *ill. 2*).⁸ The astronomical sky is also present in Islamic Art. Apart from instruments of study like globes, there exist illuminated treatises among which we find *The Book of the Fixed Stars* by 'Abd al-Rahmān al-Sūfī (Wellesz 1959; Wellesz 1965; Kunitzsch 1986) as the most representative, dating back to the eleventh century. That type of sky is also represented on the vault of the *cal-darium* of the Umayyad palace of Qusayr 'Amrah (Saxl 1932).

The second category is represented by the Byzantine planisphere of Ptolemy's Tables (Vatican Library, *Ms. Vat. Graec. 1291*, ninth century), which was copied from an original dating back to the third or fourth century. Helios, as Apollo Phoebus, stands in the middle of the miniature, surrounded in order by the twelve months, then the twelve protecting deities, and finally the twelve zodiacal signs (*ill. 3*). During the Hellenistic period, the spherical representation of the heavens was an accepted convention, in the upper sphere of which each sign of the zodiac was connected to one of the twelve major gods of the Greco-Roman pantheon (Seznec 1993, 49-52).⁹

The third group of representations, of which the planispheres of the Leiden *Codex Vossianus* (Katzenstein and Savage-Smith 1988; Eastwood 1983) or its Carolingian copy of Boulogne-sur-Mer (*ill. 4*) are examples, shows the cosmological system that Aristotle, then Ptolemy, imposed on as-

6 "Il n'y a aucun traité d'astronomie dans la littérature latine parce qu'il n'y eut aucun astronome de métier à Rome" (Le Bœuffe 1973, 10).

7 Map of the Fixed Stars, Bern, *Codex Bernensis* 88, 1000, eleventh century, fol. 11b, Vermaseren 1974, pl. XXX.

8 Illustration in Savage-Smith 1992, pl. 22.

9 According to Manilius's system (Manilius 1970, 137).

tronomy: the seven heavenly bodies move on homocentric spheres and rotate around the earth. The spheres are embedded on one another in the following order: the moon, Mercury, Venus, the sun, Mars, Jupiter, and Saturn, and, beyond, the eighth sphere of the fixed stars, in this case the zodiac (Verdet 1990, 39-70; Morelon 1997; Obrist 2004, 53-165). This system, in which the number of planets is limited to seven, was founded both on centuries-old astronomical observation and the identification of stars with the Babylonian planetary deities. It was adopted by the Chaldaean astrologers who redefined the relationships between the signs and planets by attributing one diurnal and one nocturnal sign to each planet, and only one sign to each luminary.¹⁰

Thus, in the 'astronomical' planispheres of Leiden and Boulogne, the seven spheres (Saturn, Jupiter, Mars, the sun, Venus, Mercury, and the moon) overlap, but they also embrace the heliocentric conception of Heraclides Ponticus in which Mercury and Venus appear as satellites of the sun (Flamant 1978, 381-391). That point of view was completely abandoned when the Ptolemaic geocentric system stood out in the miniatures of the medieval West.

Although representing planetary orbits is characteristic of geocentric planispheres, it seems to have been either unknown or neglected in Islamic art, since it was mainly used for theoretical purposes within scientific astronomical books.¹¹

This type of Ptolemaic representation is also remarkably illustrated by a Turkish Ottoman miniature dating back to the sixteenth century from a copy of a *Zubdat al-tawārīkh*, which also displays the mansions of the moon (ill. 5).¹² A planisphere is used to represent the earth, which is set in the middle and surrounded by the different spheres upon which the planets are drawn: the moon, Mercury, Venus, the sun, Mars, Jupiter, and Saturn. Above rises the sphere of the fixed stars symbolized by the zodiac, then the 28 lunar mansions (Varisco 1991), and finally the great sphere of the Throne carrying the whole universe (Nasr 1976, 238).

In that perspective, a few miniatures characterized by a very schematic representation of a Ptolemaic heavenly structure illustrate copies of the *Book of Knowledge of Ingenious Mechanical Devices* (*Kitāb fī ma'rīfat al-hiyal al-handasiyya*) by al-Jazarī (595–597H./1198–1200), with the most ancient example, the *Ms. T.S.K. Ahmet III 3472*, drawn in 602 H./1205–1206

10 The location of the five planets and two luminaries in their celestial houses or signs was called the "*genitura mundi*." Firmicus Maternus said it was defined by Nechepso and Petosoris (and more probably by Hermetists) (Bouché-Leclercq 1899, 187; Cumont 1935, 27f.).

11 Nasīr al-Dīn al-Tūsī, *Tadhkira fī 'ilm al-hay'a*, 1389, Paris, B.n.F., *Ms. Ar. 2509*, fol. 41a, Lachièze-Rey and Luminet 1998, nr.23 and nr.27.

12 Istanbul, Türk ve İslam Ezerleri Müzesi, *Ms. 1973*, Nasr 1976, 238, ill. 135. Two almost identical copies are preserved in Chester Beatty Library, *Ms. 414*, and in Topkapı Sarayı Library, *Ms. 1321*; see And 1998, 75.

in Diyār Bakir.¹³ These miniatures are drawings of a clepsydra, which indicate the hours and the seasons by means of the zodiacal signs (Caiozzo 2003a, 56-59). A circular plan shows the main mechanism, the orbit of the sun and moon around the earth, and the zodiacal circle decorated with the twelve constellations whose imagery is taken from the simplified astronomical figures of 'Abd al-Rahmān al-Sūfī's *Book of the Fixed Stars*. These miniatures could thus be the first to show a circular representation of the zodiac, yet without planets and with no cosmological signification.

Variants of the circular zodiac with a stronger astrological association can be seen in two other copies: the manuscript of the Freer Gallery of Art, copied in 1315,¹⁴ and in Istanbul manuscript *T.S.L. A. 3461*.¹⁵ The shape of the signs used in these cases shows the presence of the planets.¹⁶

Thus the horoscope of Iskandar Sultān should be classified as belonging to the iconographic tradition of early planispheres divided into sectors representing the zodiac, planets, and angels, which have been substituted for the winds, seasons, or winged spirits. This overall organization can partly be observed on metallic objects of the Islamic world dating back as early as the twelfth or thirteenth centuries (*ill.* 6-7). Practical requirements explain this organization better than the themes themselves, since these objects are round, for example, trays and the bottoms of bowls or cauldrons (Baer 1981, 17).

The miniature deserves our attention for several reasons: it shows the horoscope of Iskandar as a historical document celebrating his apogee (Elwell-Sutton 1984); it uses an iconography of signs and planets typical of Timurid workshops of the first half of the fifteenth century; and even if it reflects a view of the heavens characteristic of general Islamic cosmological principles, these latter clearly have an ideological dimension influenced by astrological doctrines that reveals the prince's political and religious convictions.

13 The figures of this Zodiac have the same shapes as one of the first illustrated manuscripts of the *Book of Fixed Stars* depicted by the son of the astronomer 'Abd al-Rahmān al-Sūfī and realized according to his recommendations. On al-Jazarī manuscripts, see Ward 1985; Çağman and Tanındı 1979, 10.

14 Atıl 1975, *ill.* no 44, 103: the copy dating back to 715H./1315 was executed in Syria by Farrūk b. 'Abd al-Lātif al-Yakūtī al-Mawlanī.

15 According to Ward 1985, 76, and Atıl 1975, 149, the *Ms. T.S.L. A. 3461* is dated to the thirteenth century.

16 The iconography of the astrological Zodiac is rather different from its astronomical counterpart; see the different shapes in Qazwīnī's illustrated copies from '*Ajā'ib al-makhlūqāt*, Caiozzo 2004a.

3. A Classical Iconography of the Zodiac and Planets in the Horoscope

From a stylistic point of view, the horoscope of Iskandar Sultān has been classified by specialists as belonging to the style of the school of Shirāz (Gray 1979), and some scholars have attributed the miniatures to the master Pīr Muhammad Baghī Shamālī (Robinson 1990, 14). Many elements seem to support this interpretation. After an education in Baghdad, Pīr Muhammad became the greatest master of Sultān Ahmād Jalayir's workshop. He was abducted by Tīmūr among the spoils of war and, once in Shirāz, he first served Iskandar Sultān who then ruled the city. Robinson, who identified his particular style, reminds us that it reflects some specific features of Jalayirid miniatures. The painter is also supposed to have illustrated three scientific manuscripts written for Prince Iskandar: An *Album* (Istanbul, T.S.L. B. 411) and two scientific anthologies preserved in Istanbul and London (Robinson 1990, 8).

The decorative style of the background and faces is close to what can be observed in Iskandar Sultān's other scientific manuscripts that are decorated with astrological, astronomical (Richard 1997),¹⁷ or magical motifs, as in several folios (138a-166b) of an astrological and talismanic treatise enclosed in *Album B. 411* (816 H./1413) in the Museum of Topkapı Sarayı (Lentz and Lowry 1989, 148, pl. 48; Tourkin 2003, 8f.).

In particular, two treatises of the same work entitled *Raudat al-Munajjimīn*—preserved in two volumes of astronomical and astrological texts dedicated to Iskandar Sultān—display constellations drawn in a closely related style using a very similar iconography (Gray 1977, 70f.; Robinson 1958, 11). These two treatises, illuminated at the same time in April and May of the year 813 H./1411, are very similar. One of them is in *Ms. F. 1418* (folios 2b-108b) of the library of the University of Istanbul (Akalay 1976); the other one is classified as *Ms. Add. 27261* in the British Library (folios 372a-542a) (Gray 1977, 70f.; Robinson 1958, 11). P. Soucek suggested that *Ms. F. 1418* could be the original version of the horoscope as well as of the Gulbenkian Foundation's *Anthology* in Lisbon (*Ms. L.A. 161*) (Soucek 1992, 126-128). One can observe similar motifs in the zodiacal constellations decorating both the London and Istanbul manuscripts, and their common affinity with the signs of the horoscope in both the style of the drawing's lines and its shapes (Caiozzo 2003a, 92-95).¹⁸

17 Richard 1997, nr. 38, *Ms. Sup. persan 1488*, Shiraz or Isfahan, c. 1410–1414.

18 Moreover, if Pīr Muhammad was indeed the author of the Gulbenkian Foundation's *Anthology*, a real similarity can be discerned between the miniature of Bahrām Gūr and the seven princesses, and the characters of the horoscope: the colors, together with the themes, the shapes of the crowns, and the faces are very similar in both works.

If the signs and planets belong to the iconographic tradition of the Timurid cosmographies (Caiozzo 2003a, 274-316), their shapes and positions are nevertheless original, thus distinguishing them from common prototypes. One is reminded of the astrological motifs drawn in Jalayirid workshops, such as those decorating the *Kitāb al-Bulhān* preserved in Oxford (Carboni 1988), or the cosmography preserved in the B.n.F. (*Ms. B.n.F. Sup persan 332*) (Caiozzo 2003c, 59-78), and, most of all, the exceptional *Kitāb al-Mawālīd* that was shared between the Keir Collection and the Library of the University of Sarajevo (Carboni 1987). The horoscope illustrations fall between the more elaborate Jalayirid motifs and the astrological prototypes dating from the Timurid Period, which folio 164a illustrates perfectly.

3.1. An Astrological Representation

The horoscope of Iskandar shows the planets and zodiac according to a precise order inspired by the astrological requirements linked to the theme. Thus, the horoscope stands apart from the other circular miniatures, as on folio 164a, or on a formerly isolated folio of the Binney Collection that could be of Jalayirid origin (Badiée 1978, 422, Pl. 58), in which the planets are drawn around the sun in the center of the composition. This particular order echoes that of the planets on many metallic artifacts (*ill. 6-7*).¹⁹

The order in which the planets are displayed could testify to the survival within the Arabo-Persian world of a vision inspired by the astrological geography of the *keshvars*, which can be found for instance in al-Bīrūnī (al-Bīrūnī 1934, 142f., Corbin 1960, 40-48, Nasr 1976, 37). According to the principle of the Hermetic analogies, the planets rule over the parts of the world related to them as in the *Haft Paykar*, one of Nizami's tales of the *Hamsa* (Vesel 1995).

The Islamic tradition brought forth another cosmological vision: the seven planets revolve around the sun, the zodiac belongs to the sphere of the fixed stars, and beyond the external circle appear the angels carrying the world, namely, the 'Arsh or God's throne (Fahd 1966, 162; Fahd 1959, 237-251; Nasr 1976, 31-37; Jachimowicz 1975, 150f.). The superposition of the

19 Ayyubid box: Bologna, Museo Civico, nr.2129, thirteenth century, Baer 1981, pl. 1. Box for the Ayyubid sultān al-Malik al-'Ādil II, thirteenth century: Victoria and Albert Museum, 1238/1240, Baer 1981, pl. 14. Circular box with planets and musicians, Egypt or Syria, fourteenth century: Paris, Louvre Museum, inv. nr. 6032 (Legs L. Dru, 1905), Exhibition 1998, pl. III.33, 59. Mamluk cauldron, Syria, late thirteenth to early fourteenth century: Firenze, Museo nazionale del Bargello, 364c, Curatola 1994, nr.174, 305-306 and pl. 307. Bowl, central or northern Iran, late twelfth to early thirteenth century: New York, M.M.A., Rogers Fund and Gift of the Schiff Foundation, 1957 (57.36.4); Carboni 1997, 20.

seven levels of the heavens related in the Qur'an can only be found on late miniatures of *Mi'raj*, the Prophet's Ascension to heaven.²⁰

Iskandar's horoscope shows a disposition of astrological motifs required by the planets' situation in the houses. Here, although the zodiac does not decorate the image's outer border as the eighth sphere does in theory, it still provides the stable element holding the planets when they enter the sky of the newborn child, or when they come into a given house.

According to Elwell-Sutton,²¹ the planets are distributed in the signs and houses calculated by the astrologers. If Venus is in the third house in Pisces, however, the other planets are distributed with a half-sign shift: the fourth house is vacant but the sun should be there; the fifth house has the sun in it, but Mercury and Jupiter should be there; in the sixth house dwell Jupiter, Mercury, Saturn, and the moon, when it should only have the moon and Saturn; the tenth house, which is vacant, should shelter Mars who in fact appears in the eleventh house.

The painter seems to have favored each planet's position in houses which do not necessarily correspond to the signs. That choice allowed the artist to emphasize Taurus, which had the sun in it and was associated with Iskandar. The sun was represented as larger than the other planets, since it is the planet of kings and princes. Likewise, two other planets have their size increased for emphasis: Mars, the planet of war and victories, was placed in Scorpio (its nocturnal sign), and Venus, as the protector of arts and leisure, was represented in Pisces, usually the sign of Venus's exaltation. Thus, desire for power, ambition for military campaigns and the conquest of new territories, and, finally, patronage of art and spiritual creations are symbolized by these three planets. They establish the specific features of the theme, the major aspirations and realizations of Iskandar Sultān's reign up to 1411.

3.2. The Planets as Iconographic Prototypes in Islamic Astrology

The iconography of the planets was established during the twelfth century, with the most ancient examples transmitted in the decoration of Iranian or Syrian and Mesopotamian metallic artifacts. When not associated with the signs of the zodiac, planetary representations follow two main iconographic tendencies in the fifteenth century.

The planets of Iskandar's horoscope, like those represented on folio 164a of the *Album Hazine* or in the Timurid cosmographies of 1420–1440, follow the original iconographic tradition. At the dawn of Arab astrological

20 For example, Muhammad Refi Khān, *Hamle-i Hayderi*, Ms. B.n.F. Sup. persan 1030, North India, 1195 H./1808, *L'Étrange* 2001, cat. 189, 285–287

21 Elwell-Sutton 1984, 119: the author states that Jupiter was in the fifth house, while it was drawn in the sixth; the sun was in the fifth.

science and under the influence of Greco-Roman traditions combined with cultural elements from Iran (Zurvanism and Zoroastrianism) or other civilizations (e.g. the Dragon, a Hindu pseudo-planet), an original iconography of the planets was born (Hartner 1938). It was mainly inherited from the surviving cults of the planets, such as those worshipped by the Sabians of Harrān. We know them from numerous sources, among which are Ibn al-Nadīm, al-Mas'ūdī, Fakhr al-Dīn Rāzī, and al-Bīrūnī; their intellectual heirs, the Ikhwān al-Safā'; and even from texts describing their rituals, as the compendium entitled *Ghāyat-al-Hakīm*, "*The Goal of the Wise*" or *Picatrix* (Ritter and Plessner 1962).

The iconography of the planets, further endowed with stylistic influences from Central Asia, was fixed as early as the end of the twelfth century, as we can observe on an Iranian cauldron, the Vaso Vescovali (Pinder-Wilson 1951; Hartner 1973), or in a compendium of Saldjuq magic, classified as *Ms. B.n.F. persan 174* (Barrucand 1991). We can also see this in the cosmography of Munich, '*Ajā'ib al-makhlūqāt wa gharā'ib al-mawjūdāt*, illuminated in 1283 during the author's lifetime, and whose figures are not far from those of Iskandar's horoscope (Saxl 1912).

The second iconographic tradition is characterized by the representations of planetary series typical of the Turkmen and Timurid cosmographies of the end of the fifteenth century, such as the '*Ajā'ib al-makhlūqāt* of the B.n.F. (Paris, *Ms. Sup. persan 1781*) and the *Tuhfāt al-gharā'ib* of the Ö.N.B. (Vienna, *Ms. N.F. 155*).²² The latter shows some variation in the figures' attributes, which tend to be simplified (Caiozzo 2003a, 287-290).

Since the twelfth century, *al-Qamar*, the moon, had been a human figure, sitting cross-legged and holding a circle in front of his or her head. The divinity, whose origin is Semitic, is male but, from an astrological point of view, the moon is female, which inverts it towards the sun. Thus, both luminaries have a relatively asexual aspect, as in the present case with the two beardless, crowned figures. They are dressed with great tunics spotted with gold (only the colors are different), sitting in identical postures, holding golden water-drop shaped halos in front of their faces (Caiozzo 2003a, 99-101, 172).

The moon, as the sun, *al-Shams*, stands for power, yet the sun symbolizes the power of sovereigns, temporal kings, and mighty people, whereas the moon symbolizes viziers, administrators, and the followers of the prince (al-Bīrūnī 1934, 252-254).

Mercury, *al-'Utārid*, whose tutelary divinity was Nabū, protector of scribes, dressed in a blue robe and a white turban, points at a bookstand with an inkwell beside it. This picture is different from the usual illustrations

22 See the iconography of the planets in Vienna: Ö.N.B., *N.F. 155* (Tabriz, 1492), Duda 1983, I, 76, pl. 73-74-75, and those in Paris, *Ms. B.n.F., Sup. persan 1781*, Herat, 1488; Richard 1998, pl. 101.

showing this god writing on his lap. Protector of scribes and secretaries in Arab astrology too, he is also the protector of intellectual functions, teachers, thinkers, and astrologers. This may explain his promotion to the role of an active character in the present case, since he points at the book lying on the bookstand (Caiozzo 2003a, 102f., 175).

Dressed in pink and wearing a crown, Venus, *al-Zuhara*, the protector of leisure, whose iconography was inspired by the Mesopotamian and Iranian goddesses (Ishtar, Anāhita, etc.), stands as a courtesan playing the lute as in most representations dating back to the Timurid period (Caiozzo 2003a, 104-106, 175).

Mars, *al-Mirrīkh*, a planet linked to war and violence, is endowed with his usual attributes: he holds a sword in his left hand and grasps the head of the warrior he has just beheaded with his right (Caiozzo 2003a, 106-109, 176).

Jupiter, *al-Mushtarī*, who became the planet of wisdom, of meditation, and of pious and righteous men thanks to astrology, is represented as holding an astrolabe (Caiozzo 2003a, 176). Such a representation was usual after the second half of the fifteenth century, particularly in Turkmen manuscripts. The astrolabe, whose function is to determine the direction of the *qibla*, plays an essential part in the elaboration of astrological charts. This may explain its presence in the picture.

In Timurid and Turkmen manuscripts, Saturn, *al-Zuhal*, is usually represented as a disheveled Hindu divinity with numerous arms holding various attributes. Some are represented: crowns, and a small basket from which a rat seems to escape. Still, this character is close to the type of Jalayirid representation found in the *Kitāb al-Bulhān* or on metallic artifacts, where he stands as an old bearded and dark-skinned man, half-dressed, with a red pair of trousers or a red loincloth. Saturn's attributes are mostly associated with the agrarian activities he protects, or with dark and noxious animals living underground, such as rats. The crowns symbolize the wisdom associated with experience and patience, some of the qualities he embodies as Kronos who founded the kingship during the Golden Age of Humanity, but whose children siezed his throne. Later he became the antithesis of a king, with a black sun symbolizing tyranny. Like Mars, Saturn is a powerful and malefic planet whose attributes can be used as talismans (Caiozzo 2003b).

All the planets are servants of Prince Iskandar and seem to show him the way to follow: Saturn offers him experience in power, Mercury shows him the occupation of the astrologers and intellectual faculties, Jupiter teaches piety and justice, Mars warfare, and Venus leisure and artistic creations.

3.3. The Zodiacal Signs in Timurid Style

The zodiac is finely painted in the horoscope of Iskandar Sultān: animals are drawn with restraint in browns and greys, while the clothes of the people are decorated with golden embroideries; stylized clouds are drawn in every medallion and in the background of the planets.

Its zodiacal signs can be distinguished from the astronomical zodiacal signs in two of Iskandar's other scientific manuscripts (*Ms. F. 1418* of the University of Istanbul and *Ms. Add. 27.261* of the British Library), which show constellations according to the iconographic tradition established at the end of the tenth century by 'Abd-al-Rahmān al-Sūfī (Caiozzo 2003a, 92-95).

The signs of the horoscope belong to one of the two traditions that were established between the twelfth and the fifteenth century. In the first tradition, signs and planets are always associated, as on Syrian and Egyptian metallic objects dating back to the Ayyubid and Mamluk periods. The second tradition shows some series in which the planets are not systematically associated with one of their two zodiacal signs, thus leaving space to create a large number of variations. In this case, animal signs (Aries, Taurus, Cancer, Leo, Scorpio, Capricorn, Pisces) can be distinguished from human signs which merged with their planets in domicile (Sagittarius with Jupiter and the Dragon's tail, Virgo with Mercury, Aquarius with Saturn, Gemini with Mercury and the Dragon's head). At the end of the fifteenth century, these series were progressively simplified as can be seen in Turkmen cosmographies.²³

The iconographic originality is based on the dynamic and lively representation of the human figures, and on the particular image of Gemini, whose characters look as if they were fighting over a crown. These latter accurately follow the Jalayirid tradition, since they are represented as Siamese twins and not yet as an ophidian creature holding a spear stuck into a monster's head, as commonly found later, and in particular on folio 164a.

4. An Ephemeral Reign under the Protection of Heaven?

In contrast to his relatives, Iskandar Sultān was a Shi'ite of Horufi obedience, a reformed Ismaili sect centered on letter symbolism (Richard 1996, 59f.; Corbin 1972, 233-237). This encouraged Iskandar's interest in the study of the skies, including the conception of the heavens presented by the horoscope, its possible singularity, and the meaning or politico-religious intentions that could be detected there.

23 See note 16 above.

According to the epistolary and encyclopedic works of the Ikhwān al-Safā', an Isma'ili sect that inherited the knowledge and rituals of the pre-Islamic Middle-Eastern gnostics and star worshippers (Peters 2004, Green 1979),²⁴ the stars play a fundamental role in the eschatological purpose centered on the *parousia* of the Last Imam (Marquet 1999, x-xiii, 129-138, 414ff.). In addition, human beings are subjected to a system of correspondences between the heavens and the earth through the astral influx which allows the earthly advent of divine archetypes. The planetary influences are thus decisive, and the will of God is exerted via the stars and served by a multitude of angels (Peters 2004, 68-70). The question is then raised whether the horoscope of Iskandar also shows such a system of correspondences between the heavens and the earth, within which the heavenly bodies would play an active part.

4.1. Protective Angels

The four angels that govern the destiny of Iskandar's horoscope on folio 164a remind us of the figures of the winds or of divinities in ancient representations of the heavens. Carved ceilings, bas-reliefs, or mosaics dedicated to the stars were generally surrounded by the winds or the seasons, and here the angels, worthy successors of these apotropaic divinities, are obviously playing the same part.

Winds are indeed the oldest such decorative elements: they adorn the corner pieces of a Babylonian tablet considered to be one of the earliest known planispheres, in which the world is represented according to the principles of both the seven regions and the four quadrants that divide the world. These four quadrants are the four winds that rule the destiny of human beings: The north-west wind, which belongs to Ishtar; the south-west wind, which carries diseases and disasters, associated with the demons; the south-east wind, which blows the clouds from the sea; and the north-east wind, from the mountain (Unger 1935).

The angels gradually replaced the winds in ancient planispheres. Indeed, the four winds theoretically rule the organization of the ancient skies. These blowing winds can be seen on the Tabula Bianchini (Abry 1993, pl. VII). Furthermore, we find them as tutelary divinities in many works of Roman times: mosaics, bas-reliefs, and carved ceilings representing gods, stars, mythological, or cosmological scenes, particularly in the corner pieces of circular compositions.

24 The Sabians of Harrān worshipped the stars until the ninth century; even after their conversion to Islam, they continued—albeit secretly—their rituals and magical practices until the eleventh century; see Green 1992; Pingree 1980.

On Egyptian ceilings and horoscopes, the angels are sometimes represented as four winged spirits surrounding the heavens. Endowed with two pairs of wings, they are reminiscent of certain Timurid angels. For example, one can observe them on the astrological wooden tablets of Grand or in Dakhla. Elsewhere, they are simply *dadophores*, as in Dendera or in al-Salāmūnī (Abry 1993 pl. 2-3-4-5, fig. 5, pl. V, fig. 3). In the same manner, four winged geniuses—in which H. Seyrig wanted to see the eagle, symbol of Jupiter—surrounded the busts of the seven planets in Bēl's temple in Palmyra (Seyrig, Amy and Will 1975, II).

Angels were rather quickly substituted for the winds, since they were deprecated for their evil connotations (Raff 1978–1979). Indeed, the winds belong to the world of sublunary creatures that depend on the generation of demons, in contrast to the angelic inhabitants of Heaven. In Jewish and Gnostic cosmologies, angels and demons are known for their psychopomp function, leading the souls to the beyond. In monotheistic religions, the winds progressively disappeared, leaving their places, appearances, identities, and functions as psychopomp and mediating messengers of God to the angels (Leclercq-Marx 1990, 33; Cumont 1933, 70-75).

Identifying the winds with angels, beneficial and protective creatures, originated in antiquity, for example in Babylon, where protective geniuses were found frequently at the entrances of temples. They were called cherubim, and their names were: Nattig, an eagle; Alap-kirub, a human-faced bull; Lamas-Nirgal, a human headed lion; and Ustur, a human being.²⁵

On folio 164a as in the horoscope, each crowned angel offers a present: in the horoscope of Iskandar, there are two crowns, symbolizing power, and two golden dishes. But the presents are more varied on folio 164a: a sword, a crown, a dish with precious gems, and an incense burner. These four objects brought by the divine messengers symbolize the roles, attributes, and qualities of the prince, which are offered by the angels as nativity gifts: the military qualities are symbolized by the sword; the jewels characterize the prosperity of the reign, and the crown its temporal power; the incense symbolizes the piety of the Muslim leader. In the horoscope, they offer crowns and golden plates, usual presents for good fortune and prosperity in the East, namely power and wealth.

In Greco-Roman antiquity, the winged geniuses were seldom represented as offering presents; likewise, Christian angels discreetly surround the significant scenes (various theophanies, the presentation, etc.), but they never bear presents. Conversely, Buddhist frescoes of central Asia show not only worshippers carrying numerous presents, but also angels offering a dish to

25 Pl. 78 in Parrot 1981, 70, and Amiet 1977, pl. 595, 403; pl. 606 and 607, 406; see also Marquès-Rivière 1972, 96.

Buddha (Von le Coq 1959; Gray 1959).²⁶ The transfer of shapes and designs from Chinese Turkistan, Central Asia, and the Far East to Timurid art are well known (Crowe 1992; Gray 1959).

The four angels were often identified with the highest angels of the hierarchy or archangels (Fahd 1971, 168; Tabārī 1980, 39): Mikhā'il, in charge of human souls (Qur'an 52:6); Jibrā'il, messenger of God; Isrā'fīl, blowing into a trumpet and foretelling the Last Judgement; Isrā'il, the angel of death (Qur'an 32:2). According to al-Būnī's advices, the latter should have been placed in the corners of pentacles, talismans, and horoscopes (Doutté 1984, 158-159; Spoer 1935, 252).

4.2. Angels Carrying Presents as a Theophany of Sovereignty?

In the mediaeval Islamic world, the structure of Heaven inherited from both Aristotelian and Ptolemaic systems (Jachimowicz 1975; Savage-Smith 1992) was enriched with elements of Neoplatonic and Hermetic philosophies, of which astrological traditions and certain Shi'ite sects were the heirs. This explains why heaven progressively became the reflection of the terrestrial world (Nasr 1976; Nasr 1978; Duhem 1997, 67).

The earth was divided into seven regions; each was ruled by one of the planets according to the principles of the astrological geography developed in the *Tetrabiblos* (Jachimowicz 1975, 146f.). This astrological geography was taken up by Abū Ma'shar in his *Madkhal*, who complemented it with a complex system of planetary correspondences. The planets not only ruled their own spheres; they were also the seats of the archetypes that materialized on earth. In addition, as told in every version of the Prophet's Ascension, each of the seven spheres was endowed with particular characteristics: composition, color, angels, prophets, qualities, and divine theophanies (Corbin 1980, 67-141).

Furthermore, in the Islamic cosmology evoked by the Qur'an, the sun and the moon are distinguished from the other planets according to their importance, but remain subordinated to God. The sun in particular holds the first rank; its light emanates from the 'Arsh, God's own throne, whereas the moon's light only emanates from the pedestal, *al-Kursī* (Fahd 1959, 256-57).

Allāh placed the sun at the center of the Universe in order to transmit the influx of *al-Rūh*, the divine spirit, to men. As a beating heart at the center of the universe or a breath, *al-Qalb* (Marquet 1999, 115), the sun animates

26 Von Le Coq 1959, 101 and 111. Qizil, VIIIth c., pl. 14, and Gray, 1959, cave 6219, early fifth century, 101 and cave 659, 111. On folio 4b of the Yazd *Anthology*, dated rabī' I 810 H./6 August – 5 September 1407, the angels offer presents to the Prophet Muhammad: A sword, a crown, an incense burner, a plate and cup, a jeweled belt, and maybe a cloth? See Stchoukine 1966, pl. 1.

and redistributes the influx because, among the planets, the sun embodies the astrological active intelligence (Jachimowicz 1975, 154). According to the theory of Hermetic correspondences between the celestial and terrestrial worlds developed by Abū Ma'shar²⁷ and al-Bīrūnī in the *Taḥfīm* (al-Bīrūnī 1934), the sun patronizes kings, nobility, and powerful men; furthermore, it symbolizes good government and legitimate power (Marquet 1999, 116-118).

Since a man is the reflection of the stars which protect him, it is essential to establish his horoscope in order to guide this chain of correspondences that extends to inform all he needs for living, eating, residing, or clothing (al-Bīrūnī 1934). Thus, a man is a complete microcosm closely related to the macrocosm. Animated by the divine spirit *al-Rūh* that blows through each of the seven spheres, this soul animates the different parts of the body by analogy (Fahd 1966, 163f.; al-Bīrūnī 1934, 216), thus playing an essential part in the moral and physical health of the sign's native (Tourkin 2004).

The seven planets make it possible for the divine emanation to be expressed on earth through their respective qualities by means of theophanies and by the descent of the spirits which inhabit them and are called "angels" (Marquet 1999; Peters 2004). The sun is the king of the heavenly bodies, and is higher than the other planets; its qualities—in addition to beauty, nobility, and light—provide life, growth, and order, balancing celestial and terrestrial matters (Marquet 1999, 114-118). Saturn, the evil planet par excellence, generates sadness, misfortune, and death, but is also the one who brings quiet and stability (Marquet 1999, 118f.). Jupiter brings harmony, beauty, wisdom, temperance, and also spiritual happiness; it shows the way to God (Marquet 1999, 119f.). Venus conveys joy and beauty, as well as terrestrial happiness and pleasure (Marquet 1999, 121f.). Mercury leads men to fulfillment in the field of knowledge and the intellect, and opens the gates to hidden knowledge (Marquet 1999, 122f.). Finally, the moon is no pale copy of the sun. It plays a crucial role in 'generation and corruption', conveying the emanation from the upper worlds by proceeding as a regulator or as a 'lung' (Marquet 1999, 123-127).

Likewise, the twelve signs of the zodiac play a central role in transmitting the emanations of the planets with which they are associated, increasing or reducing them according to the respective planets and signs (Marquet 1999, 112). Consequently, the horoscope's organization may be interpreted in the following way: the angels carry the planetary influx through signs and houses, and thus inform the destiny of the native who is symbolized by the converging point at the center of the horoscope.

Since they serve the planets and are protective, should we not expect the angels of the horoscope to have a much more obvious mission, namely, to

27 Abū Ma'shar 1995, 3, 552-555: Qawl VIII, Faṣl IX.

govern Prince Iskandar's symbolic establishment? The horoscope was written at the height of Iskandar Sultān's reign, when he became the master of Shiraz during the summer of 1409. In 1410–1411 he tried to seize Isfahān, which was at this time allotted to his brother Rustam. These victories, which led the prince to claim more and more territories and political power, revealed an individual thirsting after power and conscious of his own strength, as the chronicler Mīr Dawlathshāh underlines (Thackston 1989, 30):

On the 4th of Dhu-l-hijja 813: dec 31 1410 the Iskandar power over Fars and Persian Iraq reached its zenith. He was always proud of his splendor and daring and boastfully recited heroic verses, even composing his own: "What importance can the Gog (and Magog) of world events have for me, who am like Alexander's dam in splendor?"

Iskandar considered himself to be the heir of Tīmūr Leng, and the anonymous author of the *Synoptic Account*—written in 1413 and preserved at T. S. M. in *Album B 411*—while celebrating Iskandar's work as patron and his incomparable qualities, reveals his political and territorial ambitions at his uncle Shāh Rūkh's expense: "He (Tīmūr) left his great empire as a legacy to His Highness Sultan Iskandar—may he enjoy long life and great fortune" (Thackston 2001, 90a). Furthermore:

The finest offspring of this house, the cream of this family, is His Highness Sultan Jalaluddin Iskandar. [...] Indeed the reason for the creation of worldlings was the appearance of his noble essence, for regardless of how one looks backward to the time of Adam and searches through past princes, kings and emperors, not one of them "has even a scent of our spring." Just as the Divine Majesty is without equal or peer, so too is he the shadow of that very essence and the manifestation of those very attributes. So exalted is his quality of dominion and so great his felicity [...]. (Thackston 2001, 91)

By reconstructing the biography of Iskandar Sultān, P. Soucek (1996, 74) raised an essential question: can the ambitions of the prince be found in the manuscripts he commissioned? The interpretation of the four angels represented here raises the same question. One notices the accumulation of crowns which decorate the horoscope—crowns that indicate temporal sovereignty in the medieval Muslim world. Of course, crowns are often decorative headgear in the Jalayirid and Timurid miniatures. In the context of the horoscope, however, they are too numerous not to be significant. The crowns both indicate the authority of their holders—crowns carried by angels, planets (the sun, the moon, Saturn, Venus), and signs (Libra)—and they constitute presents offered by angels, planets (Saturn), and signs (Gemini?). There are thirteen crowns in total!

As already emphasized, according to the astrological conception of Isma'ili such as the Ikhwān al-Safā' ("The Brethren of Purity"), many angels accompany the planets, preceding them, raising flags with their colors, carrying their influx and the divine prototypes which have to be incarnated on earth. Also, are crowns not theophanic symbols of sovereignty wished by the

heavens? Sent by God and located beyond the planets and zodiac, do the four messengers not provide divine approval and legitimacy for Iskandar's power? In 1407 Iskandar was ruling Yazd; in 1409 he seized Fars when his brother Pīr Muhammad died, and settled in Shiraz; then, in 1411–1412, Isfahān was subjugated. The horoscope was painted at the peak of his glory and his hegemonic ambitions concerning western Iran.

The two crowns held by Saturn and the angels could respectively symbolize the territorial heritage claimed by Iskandar and the sovereignty designated by the heavenly powers. Power, glory, and wealth: The angels here show the consecration of the prince as acceding to sovereignty, a dynast whose posterity will especially retain the benefits of a patron, as the author of the *Anonymous Synoptic* summarizes it: "May God preserve him for ever and ever—until the disintegration of the world—upon the throne of patronage of the arts through the prophet and his glorious family" (Thackston 2001, 92a). The ambitions of the prince were soon denounced by his uncle Shāh Rūkh, successor of Tīmūr, who, two years after the horoscope, accused him of striking coins and of making the *khutba* pronounced in his own name (Soucek 1996, 74).

Besides the references to astrological texts by authors such as Ptolemy, Dorotheus, Abū Ma'shar al-Balkhī, etc. (Elwell-Sutton 1984, 121), one finally notices in the comments of the horoscope the presence of Qur'anic verses related to the luminaries (7:54; 5:5) and the zodiacal signs (25:61). Are these verses linked to the Horufi beliefs of prince Iskandar developed in the work of Saedin 'Alī Torkeh (Corbin 1972, 233–237), where a particular part is granted to the theosophy of light (Milstein 1986; Khairallah 1997)?

Indeed, if the light refers to the luminaries of the Qur'an, these two stars were the seat of sovereignty and patronized kings and powerful men from time immemorial. Following the long tradition of Assyro-Babylonian astral royalty, the Iranian dynasts invested by Ahura Mazda placed the symbols of the sun and moon on their crowns, as the bas-relief of Tāq-ī-Bustān shows (Azarpay 1968, 113; Lewy, 1949).

That tradition survived thanks to Arab astrology, via the planetary children, by retaining political power for the sun, the lord of kings and nobility (al-Bīrūnī 1934, 252). Both temporal and spiritual royalty, granted by the heavens and aspired to by the prince, thus transformed Iskandar Sultān into the worthy heir of the holders of a cosmic kingship.

5. Conclusion

Iskandar Sultān's horoscope raises many questions which remain partly unanswered due more to uncertainty about the painter's real intentions than to Iskandar's. It belongs to an iconographic tradition of zodiacal signs and planets and should be interpreted within the continuity of Jalayirid forms and the emerging series of Timurid stereotypes; at the same time, it retained a certain originality. Moreover, it shows a representation that was adapted to the configuration of the heavens at a given time, and discreetly articulated a system of politico-religious thought to confirm an ambitious prince's ambitions, one obviously blessed by heaven.

Indeed, if Iskandar Sultān was at the height of his power when the horoscope was constructed, his fall would have been imminent. Suspected of treason by his uncle Shāh Rūkh in July 1413, he was imprisoned, blinded, and lost his throne. He was executed by his brother Rustam during the spring of 1415. The reign of Iskandar was like a shooting star, luminous but transitory, and, as a result of his unbounded ambition, condemned by the men of his own clan (Richard 1996, 46-48; Soucek 1996).

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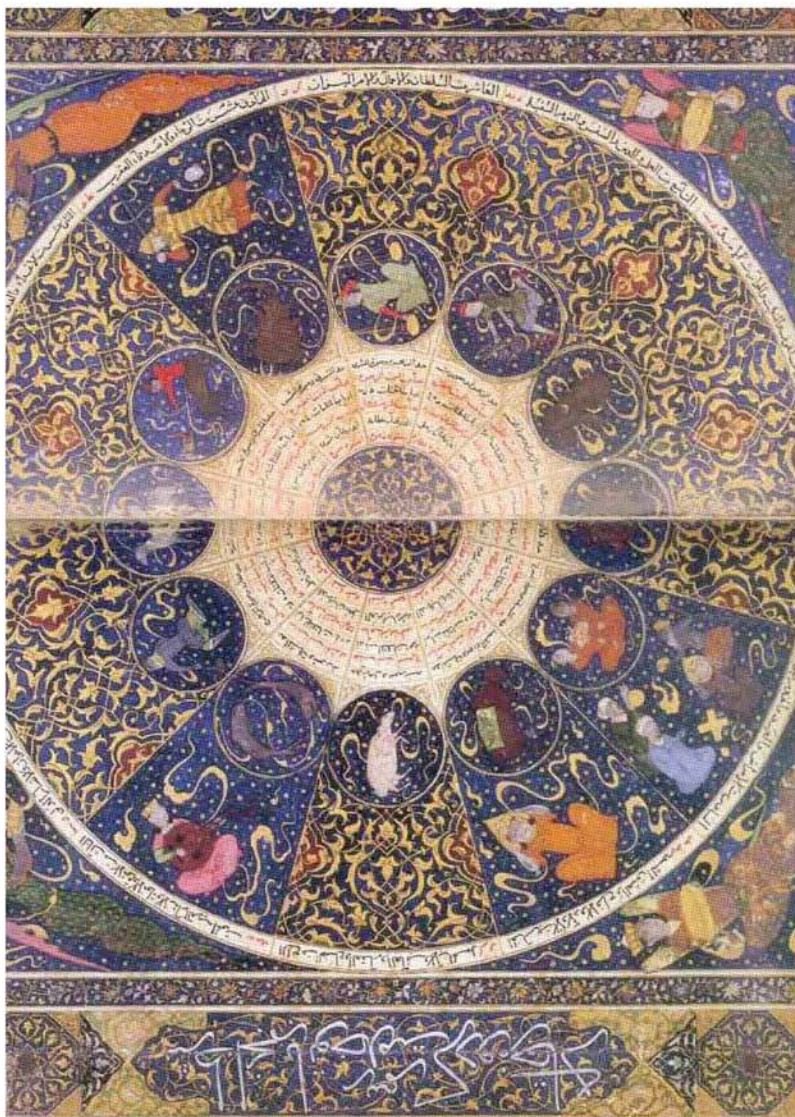


Plate 1: Miniature of Iskandar Sultān's Horoscope



Illustration 1: Folio 164a of the Album Hazine 2153



Illustration 2: Ms. Vat. Graec. 1087

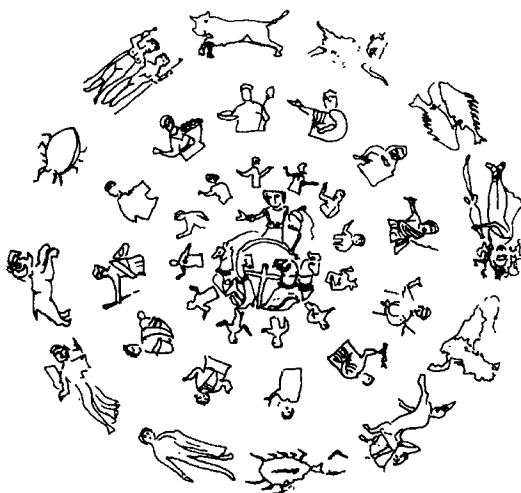


Illustration 3: Ms. Vat. Graec. 1291

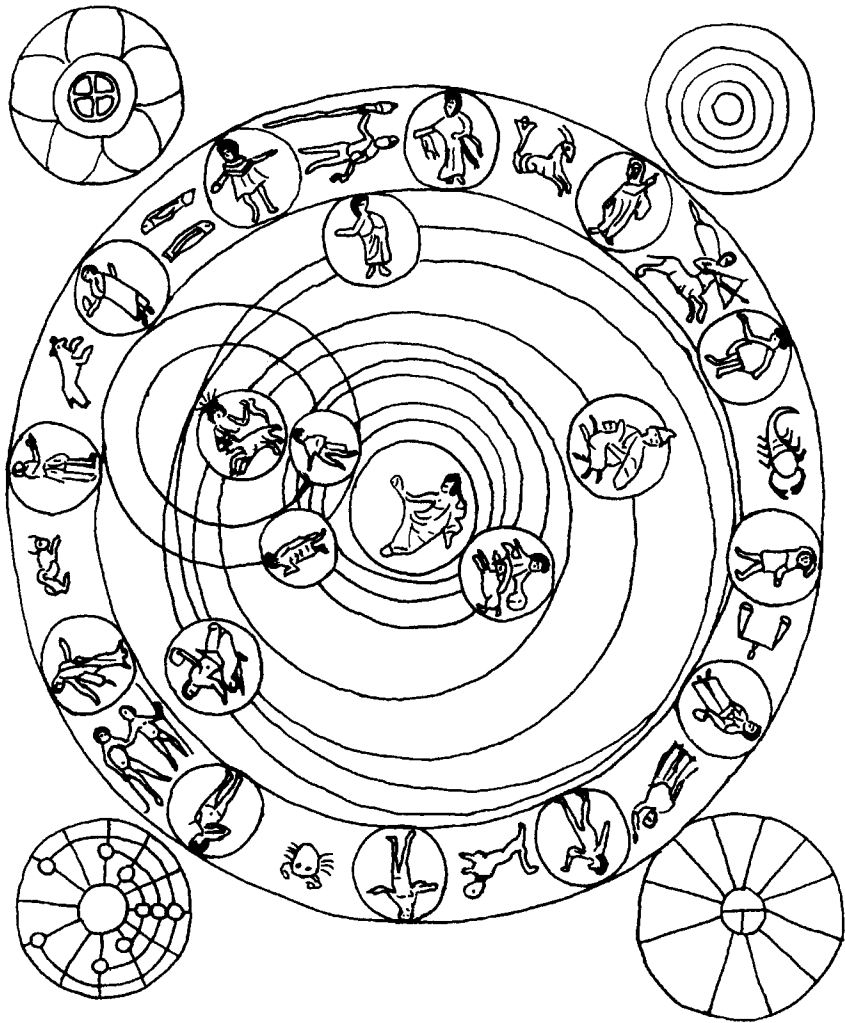


Illustration 4: Planisphere of Boulogne-sur-Mer



Illustration 5: Zubdat al-tawārikh

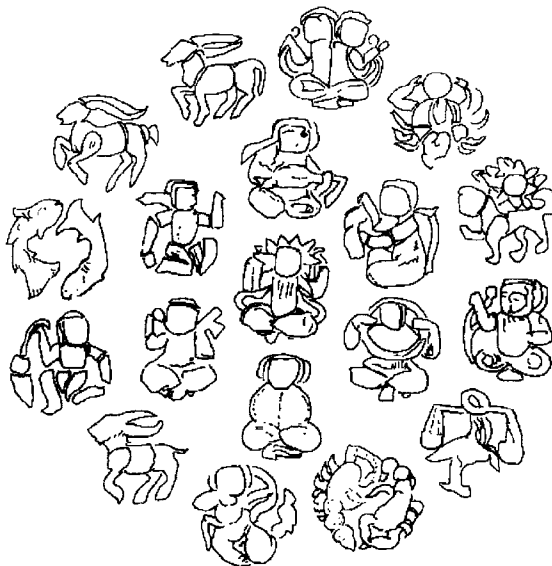


Illustration 6: Bologna Planisphere

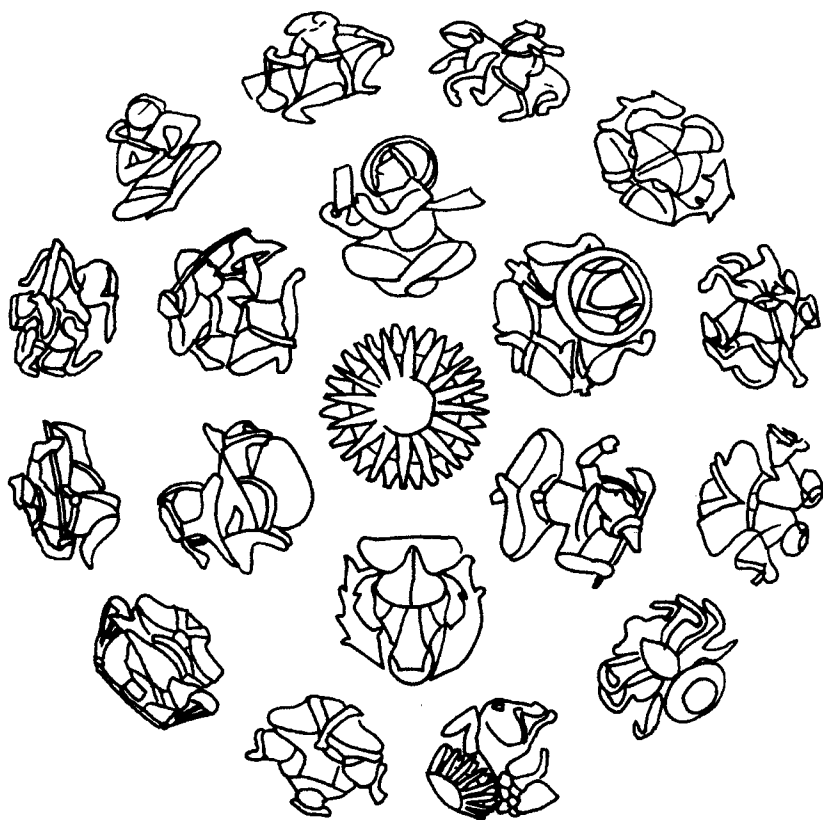


Illustration 7: Mamluk Cauldron

Historical Horoscopes of Israel

Abraham bar Ḥiyya, Abraham ibn Ezra,
and Yosef ben Eliezer*

JOSEFINA RODRÍGUEZ-ARRIBAS

For Seti

The purpose of this article is to show how three Jewish writers of Sepharad—from the eleventh, twelfth, and fourteenth centuries—related astrology to certain key episodes in the history of Israel as they appear in the Torah. The use of astrology was neither an excuse to introduce astronomical knowledge into religious texts, nor a symbolic application of astral theories. On the contrary, as I am going to make clear in this work, for these three writers, biblical chronology was an expression of so-called mundane astrology. My work is a description of some of the horoscopes found in their writings.

1. Abraham bar Ḥiyya: The Kingdom of Israel Conjunction

Bar Ḥiyya was a Jewish philosopher, astronomer, and mathematician who lived in Barcelona (Spain) in the first half of the twelfth century. He worked as a Latin translator with Plato of Tivoli, and is considered together with Abraham ibn Ezra as responsible for the transmission of Islamic science from Al-Andalus (Spain) to the South of France. His astrological works are: *Sefer ḥeshbon mahalakhot ha-kokhabim*, *Ṣurah ha-areṣ*, *Megillat ha-megalleh*, and one letter on elective astrology addressed to the rabbi of Barcelona, Yehudah ben Barzilai. In the *Megillat ha-megalleh* (c. 1120–1129), data for a historical horoscope can be found, the so-called Moses Conjunction or Kingdom of Israel Conjunction, i.e., the moment in which Israel appeared as a people and as the people of God. Given that the horoscope drawn in the manuscript does not match all the astronomical data given in the text, we have considered only

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the data embodied in the text (Poznanski and Guttmann 1968, 119f.).¹ The date Bar Ḥiyya fixes for this horoscope is the year of creation 2365, Adar 25.²

Bar Ḥiyya affirms that the ruler of this year was the sun (Aries 1°), which rules the beginning of the year, in the midheaven (Aries 22°).³ It was in a trine aspect with the rising sign (Leo 2°). Jupiter and Saturn were in conjunction (Aquarius 24°) in the seventh house, and both were also in conjunction with the moon. All three were in a sextile aspect with the sun.⁴

All the stellar positions—Bar Ḥiyya clarifies—are according to the irregular movements of the planets. The horoscope that he proposes shows that:

- All the planets were above the horizon.
- The ruler of the year was the sun (which ruled the rising sign).
- The sun was in the midheaven, according to the equal division, or in the ninth house, according to the uneven division of the horizon.⁵
- Both houses showed the strength of the sun and made its light shine.
- The sun looked at the conjunction of Saturn and Jupiter in the seventh house.⁶
- The moon was in a sextile aspect with the sun.⁷

1 Millás Vallicrosa (1929, XLIX-L) expressed his doubts on the authenticity of the horoscopes drawn in the manuscripts because their uneven presence in the different manuscripts makes him suppose that these are probably later interpolations.

2 Approximately, March 11, 1397 BC. For the conversion of Jewish years into Gregorian years, I have used: Alan D. Corré, University of Wisconsin-Milwaukee, 2002, (www.uwm.edu/cgi-bin/corre/calendar [2 August 2003]). According to the author's warning, the Christian dates that result are only approximate because of historical intercalations, although they are correct according to our present Gregorian calendar.

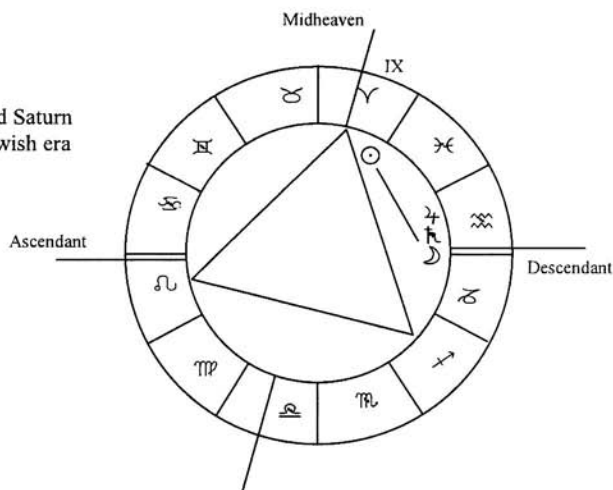
3 Jews had and continue to have a luni-solar calendar. Months follow the lunar cycle and seasons, the solar cycle. To avoid the gap between the lunar year and the solar year, they decided to intercalate a month seven times in a cycle of 19 years, in this way maintaining the Jewish festivals in their original seasons. Months and years both begin with the New Moon (called *molad*). Because of this gap between lunar and solar month, the twelve zodiacal signs did not coincide exactly with the twelve Jewish months, which is visible in some of the horoscopes, like this one of Bar Ḥiyya. For the Hebrew calendar, see Gandz 1954; 1956; 1970; Feldman 1979.

4 It is clear that the values for the aspects are not necessarily exact, which means that the trine aspect is not only a 120 degree angle between two planets, but also angles with a value above or below this. This margin is not explicit in the astrological texts of Bar Ḥiyya, but we know from other medieval texts that it could be very generous.

5 On the division of the horizon in Bar Ḥiyya, see *Sefer heshbon* (Millás Vallicrosa 1959, 96-98 and 103-105).

6 Saturn and Jupiter are in a cyclical conjunction every 960, 240 and 20 years which affects the destiny of peoples, religions and kingdoms; cf. Ibn Ezra's *Sefer ha-olam*. This theory influenced Bar Ḥiyya and Ibn Ezra through the writings of two Arabic astrologers: Māshā'allāh (eighth century) and Abū Ma'shar (ninth century). For these authors, see Kennedy and Pingree 1971; Yamamoto and Burnett 2000.

Illustration 1:
Abraham bar Ḥiyya
Conjunction of Jupiter and Saturn
in the year 2365 of the Jewish era



From the cyclical conjunction of Saturn and Jupiter, Bar Ḥiyya interprets the beginning of a major kingdom in the world. The arrival of this kingdom will bring a new law, which will spread itself to the limits of the world as the sun spreads its light from the midheaven above the horizon at the beginning (*molad*) of this year.

The rising sign is a fixed sign (Leo), a quality that it shares with the sign (Aquarius) in which Saturn and Jupiter are conjoined. In consequence, the kingdom will be long, as many years as the great years of the sun, namely, 1461 years (the number of days of four solar years: $365.25 \times 4 = 1461$).

In addition, the stellar positions warn of the appearance of a great prophet by the following signs:

- The sun, which rules the year, also controls the ninth house (religions), according to the uneven division of the horizon, in the Hebrew text, the division according to calculation (*heshbon*).
- The conjunction of Saturn and Jupiter, according to the regular movement, is in Pisces, eighth sign from the rising sign,⁸ Leo, according to the equal division of the horizon, literally, the division according to the degrees of the zodiacal signs (*ma'alot ha-mazalot*).

7 This affirmation of Bar Ḥiyya makes us suppose that he considered the sun and moon to form this aspect because there are two signs between them, even if the degrees separating them are less than 60, the normal angular separation for a sextile aspect.

8 In the critical edition and the manuscripts it is written *ninth*, which is impossible.

From the fact that the conjunction is, according to the irregular movement, in Aquarius in the seventh house, Bar Ḥiyya deduces that the rule of this prophet will not begin until seven conjunctions of both planets have passed (namely, half the conjunctions of this air-trine).

The sun rules the year together with Mars because this last has its domicile in Aries, the sign in which the sun is. Since Aries is a cardinal sign, it will accelerate the coming of the prophet during this conjunction. Bar Ḥiyya continues explaining that both planets—Saturn and Jupiter—are in conjunction, according to the regular movement, in Pisces. This sign is the domicile of Jupiter and the place of exaltation for Venus. This last was in conjunction in the first degree of Pisces, which belongs to its decan.⁹ Both Jupiter and Venus are connected with Pisces, and they are both favorable and righteous planets.

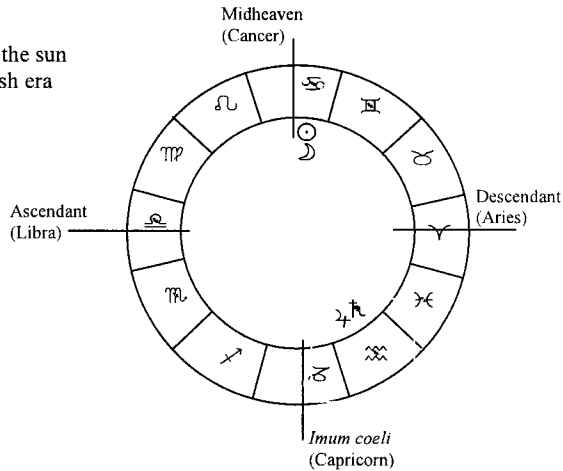
The conjunction according to the irregular movement was in the sign Aquarius, which was called “true sign” among the four fixed signs, and it has a human figure. Therefore, the kingdom to appear should be a kingdom of truth and justice, which would govern with laws of rectitude and truth.

In the first year of this conjunction a solar eclipse occurred at the end of the sixth hour of Siwan 29 (June 22).¹⁰ This eclipse obscured most of the sun (only one eighth of its light would be visible above Egypt). Bar Ḥiyya links the mean length of the eclipse, three hours, with the birth of Aaron, three days after it, and with that of Moses, three years later. He gives the chart of the eclipse:

9 Bar Ḥiyya does not give any definition for the decan, but Ibn Ezra gives one in the first (Fleischer 1951, 41) and second recension (Ben Menahem 1941, 13) of his *Sefer ha-ḥefamim*. There he explains two systems for finding out the ruler of each *panim* or ten-degree division of each zodiacal sign. One system was Egyptian and assigned one ten-degree division to each of the rulers of the triplicity (fire, earth, air, water), beginning with the ruler corresponding to the sign from which the calculation is made (for example, Mars for Aries, sun for Leo, etc.). The second was Indian, and beginning from the ruler of the sign, continues not with the rulers of the triplicity, but with the rulers of the spheres according to their order from the Earth. Cf. Al-Bīrūnī (Wright 1934, [451] 263 and [449] 262), who also distinguishes between these two types of divisions, but calls only the last one *face*.

10 According to Bar Ḥiyya the day of the week was Tuesday.

Illustration 2:
Abraham bar Ḥiyya
Horoscope of the eclipse of the sun
in the year 2365 of the Jewish era



- It took place towards the end of the sixth hour, Tuesday, Siwan 29, in the sign of Cancer, the Tail of the Dragon, i.e. the descending node of the moon.
- The rising sign at the half way point of the eclipse was Libra.
- Saturn and Jupiter were retrograde and in conjunction at the end of Aquarius in the fourth house.
- All the angles of this horoscope were in cardinal signs, which accelerates the birth of the prophet to occur three years later; this is determined by the number of hours that the eclipse lasted.

2. Abraham ibn Ezra: Astrological Exegesis

Abraham ibn Ezra was born in Tudela (Spain) in 1092. During his youth he visited the centers of Islamic learning in Al-Andalus. He divulged the sciences he had learned in many genres of writings: poems, biblical commentaries, scientific monographs, works on Hebrew grammar, etc. In 1140 he left Spain and began a life of wandering, his subsistence depending on the favor of patrons in the Jewish communities of Italy, France, and England, where he taught Arabic science. He died (it is supposed) in England, leaving as a legacy an extensive, varied and polemical set of works, which makes him a prototype of the so-called renaissance of the twelfth century.

Ibn Ezra is the most striking and original of the three writers considered here. Although he did not innovate in astrology or astronomy, he had the audacity to incorporate astrological beliefs into the Jewish creed. In doing so, he did not force either to conform to the other. Thus he found astrological

clues disseminated throughout the Torah: in the order of the Ten Commandments, in the structure of the Temple, and in the organization of the Israelite tribes after the exodus from Egypt. He was certainly very critical of the astronomical and astrological theories of his time. This can be seen in his monographs on the different branches of astrology or in his technical treatises on astronomy and the calendar. His encyclopedic spirit led him to compare doctrines, theories, and data of very different origins. He set out and criticized them, choosing those he considered correct. Mostly he provided reasons, but sometimes (albeit infrequently) he left the question to the reader's discretion.

Ibn Ezra seems to have understood astrology as an ensemble of natural laws stemming from the nature of the stars, but above all from the ordered structure of the universe as it was created by God. Thus he often repeats that the stars are the executors of God's will (he calls them in Hebrew *ha-meshartim*, "the servants"). The influence that they exert on the world of creatures is simply an expression of divine providence, the way in which God looks after each one of His created individuals, because (as Ibn Ezra repeats from time to time) God knows individuals only as universals.¹¹

The clearest case of a horoscope in the heart of a biblical commentary is that of Israel's camp in the desert after the exodus from Egypt.¹² The text of Ibn Ezra is difficult to understand, as usual, and we have to consider four of his excursions in order to grasp the meaning.

In his commentary on Num 2:2 (Weizer 1976, 115), Ibn Ezra presents four of the twelve tribes of Israel, whose banners and places in the camp of Israel are connected with the four fixed signs of Ptolemaic astrology (Robbins 1998, 64-69). The banners of these four tribes were:

- Reuben, a man (Aquarius);
- Judah, a lion (Leo);
- Ephraim, a bull (Taurus);
- Dan, an eagle (Scorpio).

Ibn Ezra links these figures with the four *cherubim* that the prophet Ezekiel saw during his exile in Babylonia, the tetramorphs (Ezek 1:5-28).¹³ Strickman and Silver (1999, 12 note 8) rightly observe that just as the *cherubim* held the Throne of God, these four tribes held God's presence over the Israel-

11 Cf. Ibn Ezra's commentary on Exod 33:21 (Weizer 1977, 215-218).

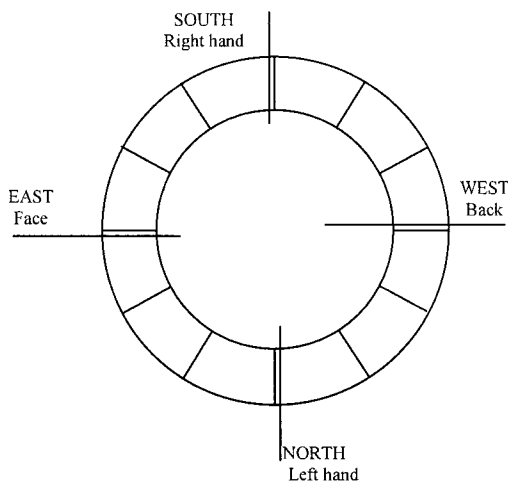
12 This is not the only horoscope in Ibn Ezra's biblical commentaries. He also mentions the horoscope of the deluge and that of the exodus from Egypt.

13 This association is clearly given by the figures of the *cherubim* as well as by the fact that, in the vision of Ezekiel, each tetramorph is associated with a wheel. This wheel evokes the cycle that the sun completes around the zodiac.

ite camp. According to the text of Num 2:2, the four tribes and their banners were placed in the desert camp with the following orientations:

- Right (south): Reuben;
- Left (north): Dan;
- Back (west): Ephraim;
- Face (east): Judah.

Illustration 3:
Abraham ibn Ezra
Anthropomorphic orientation



What is the meaning of such positions? The most important signs are the cardinal signs, because they mark the moments of the solstices and equinoxes (Robbins 1998, [I. 10] 58-65 and [I. 11] 66-69), as Ibn Ezra says in his *Sefer ha-teamim* (Fleischer 1951, 56). However, the signs implied in the biblical text are those following the seasonal changes, the fixed signs, so called, according to our writer, because the weather does not change and is stable in them (*Sefer ha-teamim*, Ben Menahem 1941, 5).

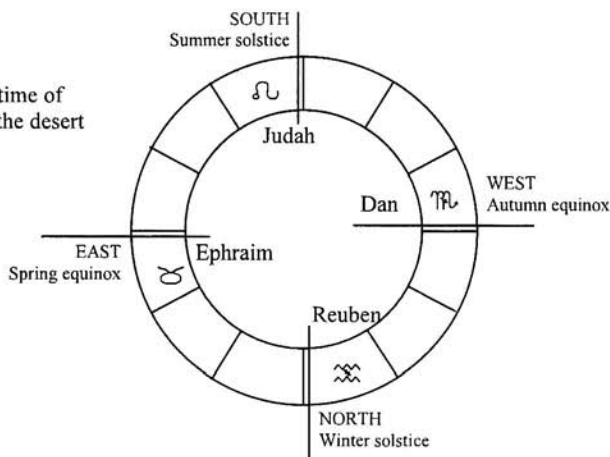
In order to understand the mention of these signs, we have to consider Ibn Ezra's commentary on Amos 5:8 (Simon 1989, 209-215). In it, our writer explains two stellar names that appear in the text of *Amos*: *Kimah* and *Kesil*. Ibn Ezra identifies the first one with the Pleiades (in the constellation of Taurus) and the second one with the constellation of Scorpio, and sometimes with its star Antares. He affirms that these two stars were important in the biblical text because they coincided with the equinoxes in biblical times: the Pleiades with the vernal equinox, and Antares with the autumnal equinox. These referential points have changed from then because of the astronomical phenomenon called the precession of the equinoxes, by which zodiacal constellations and signs coincide only once every (approximately) 26,000 years,

the duration of the cycle of the fixed stars (the eighth sphere in the astronomical system of Ibn Ezra).

From the previous considerations we infer the following correspondences:

- Reuben—Aquarius—winter solstice;
- Judah—Leo—summer solstice;
- Ephraim—Taurus—vernal equinox;
- Dan—Scorpio—autumnal equinox.

Illustration 4:
Abraham ibn Ezra
Cardinal signs at the time of
the Israelite camp in the desert



To specify the angles of the horoscope that Ibn Ezra seems to have had in mind, finally, we have to consider his commentary on Num 1:19 (Weizer 1976, 114f.). Here he briefly explains that Reuben is the head of the camp and Dan its tail, and that they are placed facing south and north, respectively. Recalling that the camp was established on the first day of the second month in the second year after leaving Egypt, Ibn Ezra must have considered what the divisions of the sky (houses or *batim*) were at that exact moment, as he says in his excursus on Num 1:19: “the directions of the world are four and each direction has three [sections].”¹⁴ In this way, a horoscope results in which the south point (midheaven or tenth house) is occupied by the sign of Aquarius, and the north point (fourth house) by Scorpio. The Rising-sign is therefore Taurus (east) and the descendant Leo (seventh house).

¹⁴ See *Sefer ha-ṭeamim* (Fleischer 1951, 55) where Ibn Ezra says that each quadrant of the horoscope is divided into three parts. In the second recension of this treatise (Ben Menahem 1941, 14), he adds that this happens because each quadrant has a beginning, a middle, and an end.

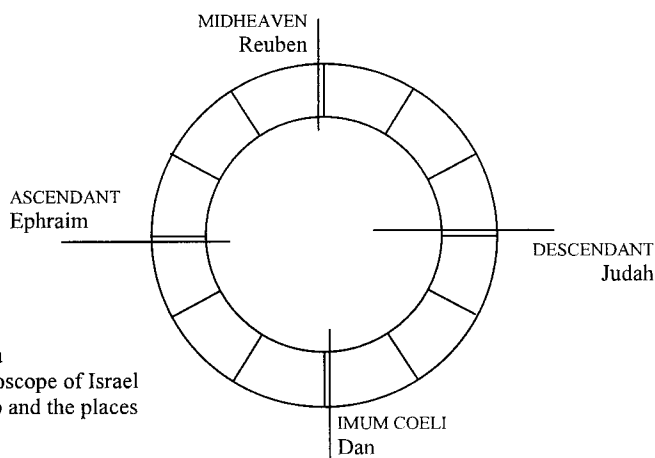


Illustration 5:
Abraham ibn Ezra
Angles in the horoscope of Israel
in the desert camp and the places
of the banners

Such a horoscope could make the four cardinal houses coincide with the solstices and equinoxes at that time, except for the fact that Leo and Scorpio have exchanged their places and the order of the zodiacal signs is therefore broken.¹⁵

Israel appears as a people at the moment Moses made the census and established the order of the tribes. The special position of Reuben (Aquarius, the sign of Israel)¹⁶ in the midheaven, the place of power in the chart, and the place of Ephraim (Taurus) in the ascendant, the spring equinox of that moment, points to the intention of making the people of Israel at that moment a kind of celestial talisman. The stellar and cosmological influence that such a talisman tries to capture is the instrument and expression of God's power.

3. Yosef ben Eliezer: The Horoscope of the Deluge

Ben Eliezer was born in Huesca (Spain) in the second half of the 14th century. He traveled to the Orient, and it is known that he wrote his commentary on Ibn Ezra's commentaries to the Torah in Damascus (1370). He is especially interested in the astrological clues implied in the writings of his master.

The horoscope that he develops more extensively is that of the deluge (Gen 7:4-8:13). Ben Eliezer summarizes the data about the deluge given in the Torah (Herzog 1911–1930, 74–77):

15 Ben Eliezer proposed this same horoscope in his commentary on Ibn Ezra's commentary on this biblical passage (Herzog 1911–1930, 83).

16 See Ibn Ezra's commentary on Exod 31:18, where this is affirmed.

- The deluge began Iyyar 17 (Gen 7:11), second month of the Jewish year (April–May).
- It lasted 40 days until Siwan 27 (Gen 7:4), third month of the year (May–June).
- For 150 days (five months) from the beginning, the deluge's effects were felt, until Tishri 17 (Gen 7:24 and 8:3–4), seventh month (September–October).
- Noah sent the crow on Shebat 17 (Gen 8:7), eleventh month (January–February), nine months from the beginning of the deluge.

Ben Eliezer next references two theories on the relationship of the deluge to stellar positions: one belongs to the sages of Israel, the other, to the astrologers. The astrologers teach that the deluge began on the New Moon of Nisan (beginning of the month and season).¹⁷ But the New Moon (*molad*) is difficult to determine. For this reason he decides to consider the Full Moon, which the sages of Israel used to do.

According to the sages of Israel, the data for the horoscope of the deluge are:

- The deluge began in the spring equinox (but the horoscope is fixed not at the New Moon, the beginning of the season, but at the Full Moon, the middle of the month).
- The sun was at the beginning of Aries, at the descending node (destructive).¹⁸
- The moon was in Scorpio (a water sign; it is harmful because it is the domicile of Mars).

17 All of them (Ben Eliezer, the astrologers, and the sages of Israel) think that the astrological fortune of the year is fixed according to the planetary positions on the first New Moon before the spring equinox, or the first Full Moon of the year.

18 Evidently, the sages of Israel were not following the biblical date, because they changed the beginning of the deluge from the second month (Iyyar) to the first (Nisan); in other words, they were aware that the zodiacal signs did not coincide with their original constellations because of the precession of fixed stars. In this way, the month Iyyar was the equivalent of Nisan (spring equinox) at that period.

Illustration 6:

Yosef ben Eliezer

The sky at the beginning of the deluge
(17 Nisan) according to the sages of Israel



The interpretation of this horoscope was that the moon in Scorpio brought evil (Mars) through water (Scorpio), because the nature of Mars is to get angry (fire). The deluge was “furious water” that caused the destruction of life on earth.

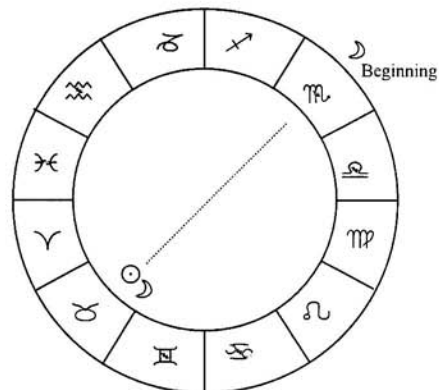
Forty days later, the moon accomplished one turn around the zodiac and progressed seven signs:

- The sun was in the first third of Taurus (earth);
- The moon was also at the beginning of Taurus (sign of its exaltation);
- The sun and the moon were in the aspect of opposition with Scorpio (original place of the moon).

Illustration 7:

Yosef ben Eliezer

The sky forty days after the beginning
of the deluge (c. 10 Iyyar) according to
the sages of Israel



From these positions, the sages interpreted that the element earth of Taurus, where the sun and the moon were, caused the decrease of rain, which was of the same nature as Scorpio. However, both were not conjoined in Taurus, so

the waters were not completely dominated and the rain continued for 110 more days.

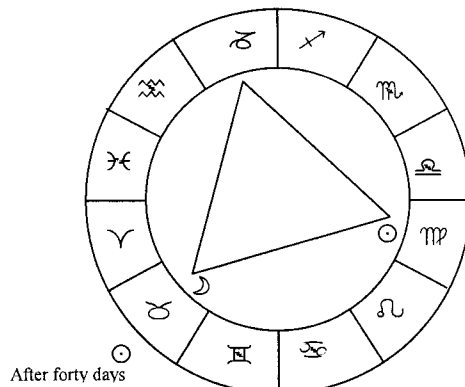
At the end of these 110 days, i.e., 150 days after the beginning of the deluge (five months), they found:

- The sun was at the beginning of Virgo (earth).
- The moon was at the beginning of Taurus (earth), the place of the sun at the 40th day of the deluge.
- Between both positions of the sun there was a trine aspect.
- The sun and the moon were also in a trine aspect.

Illustration 8:

Yosef ben Eliezer

The sky 150 days after the beginning of the deluge (1 Elul) according to the sages of Israel



They interpreted that the sun and moon in earth signs and the good (trine) aspect between them caused the water to stop. From this moment until the tenth month, the water upon the earth receded. Eight months and 13 days from the beginning of the deluge, the first day of the ninth month, the summits of the mountains appeared.

The chart of this moment shows:

- The sun entering the first third of Sagittarius (fire), domicile of Jupiter, a good and favorable planet.
- The moon was in the first third of Aquarius (air), domicile of Saturn, the harmful planet.
- An aspect of sextile existed between the sun and the moon.

Illustration 9:

Yosef ben Eliezer

8 months and 13 days after the beginning of the deluge (Kislev) according to the sages of Israel



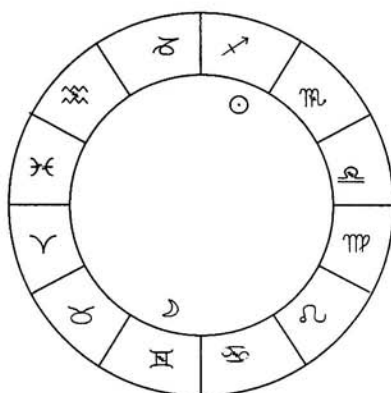
The sages of Israel interpreted that the good influence of the sun and moon was not achieved because of harmful Saturn. The result was that only the tops of the mountains got out of the water. Ten days later:

- The sun entered into the second third of Sagittarius.
- The moon was near the middle of Gemini (air), a sign related to diviners, astrologers, and magicians because it is Mercury's domicile.

Illustration 10:

Yosef ben Eliezer

The tenth day of the ninth month (Kislev), nine months from the beginning of the deluge according to the sages of Israel

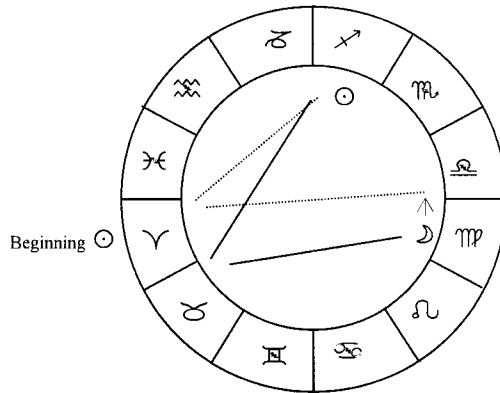


They said that the result of these positions was that Noah sent the crow every seven days until the water lowered (Shevat 17). Nine full months had passed from the beginning of the deluge.

At the beginning of the tenth month:

- The sun was near the beginning of Capricorn (earth).
- The moon was near the middle of Virgo (earth).
- An aspect of trine existed between both and Taurus.

Illustration 11:
Yosef ben Eliezer
The tenth month (Tevet) from
the beginning of the deluge
according to the sages of Israel



The consequence of this positive chart was that Noah sent the dove. The correlative aspects between this horoscope and that of the beginning of the deluge were:

- A square aspect between the sun and Aries (the sun's place in the original horoscope).
- The moon was near the sign of Libra (the sign opposite Aries).

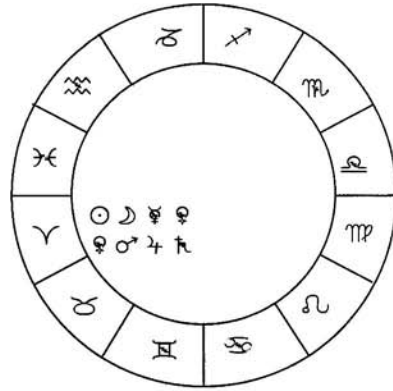
These oppositions between what the planets signified at that moment and what they had signified at the beginning of the deluge determined the end of the cycle. When the sun returned to Aries, the cycle was completed and the world renewed.

According to the astrologers, the second opinion that Ben Eliezer refers to, all the planets, the sun, and moon were in conjunction at the beginning of Aries when the deluge began. In this way, all of them were in the aspect of combustion with the sun, i.e., they were burnt and annihilated by the heat of the sun. They interpreted that, as the moon signified rain, its conjunction with all the planets in bad aspect with the sun caused a heavy and harmful rain that destroyed all life.

Illustration 12:

Yosef ben Eliezer

The sky at the beginning of the deluge
(1 Nisan) according to the astrologers

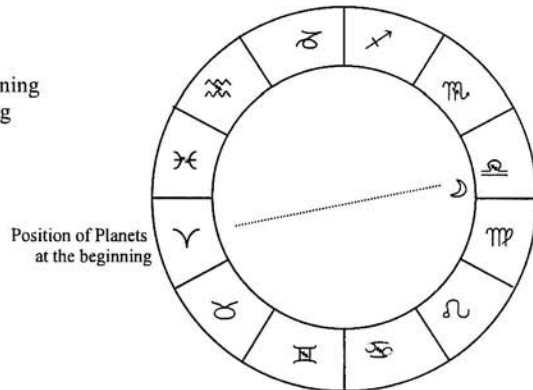


Forty days later, the moon was at the beginning of Libra (air). As the air dried the water, the deluge decreased:

Illustration 13:

Yosef ben Eliezer

The sky forty days from the beginning
of the deluge (c. 1 Iyyar) according
to the astrologers



150 days from the beginning of the deluge, the moon was at the beginning of Aries (hot and dry, a fire sign) and the sun in Virgo (cold and dry, earth).¹⁹

19 From this horoscope and what follows, it is clear that the astrologers mentioned by Ben Eliezer did not use the Jewish calendar or, at least, did not consider the month to begin with the New Moon. It is also possible that there were cases of the gap already mentioned between the Jewish and zodiacal months.

Illustration 14:

Yosef ben Eliezer

The sky 150 days from the beginning
of the deluge (1 Elul)

The astrologers deduced from this chart that both dry signs caused the water to dry and the rain to stop.

In the tenth month, on the first day, the moon entered Cancer (water), its domicile and the sign of the world, because the world was created when the sun was in this sign. The favorable character of the sun in Sagittarius (domicile of Jupiter, the great fortune) ameliorates the bad influence of Cancer (more water), but only the mountain tops appeared.

Illustration 15:

Yosef ben Eliezer

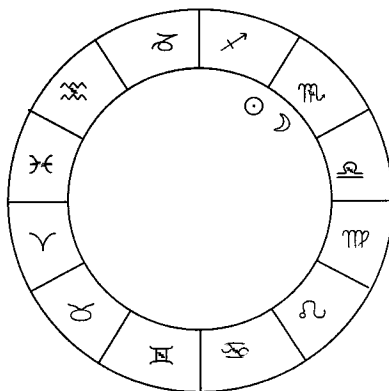
The sky on the first day of the tenth month
from the beginning of the deluge (1 Tevet)
according to the astrologers

Ten days later, the moon is near Sagittarius (fire), then the crow is sent.

Illustration 16:

Yosef ben Eliezer

The sky on the tenth day of the tenth month (Tevet) from the beginning of the deluge according to the astrologers

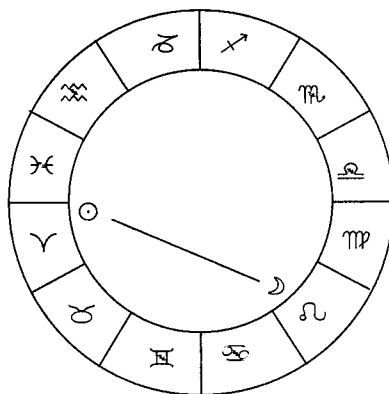


At the end the sun came back to the beginning of Aries and the moon was at the beginning of Leo. Between both an aspect of trine existed. The world was renewed and a new cycle began.

Illustration 17:

Yosef ben Eliezer

The world is renewed after the deluge and a new cycle begins (Nisan)



The most striking feature in Ben Eliezer's horoscopes is the change of the biblical dates given in the Torah (from Iyyar to Nisan for the beginning of the deluge and so on). Such a change is simply an accomplished fact that he does not explain or even mention. He does, however, maintain the time intervals which separate the different phases in the deluge. In this way we can see that he implicitly accepts and applies the precession of the equinoxes to the biblical dates, as we have analyzed in the previous texts of his master, Ibn Ezra, in relation to the Israelite camp.

Since Ben Eliezer refers to the theories of the sages of Israel and the astrologers without arguing with them about the date—both fix the beginning of the deluge in Nisan—he acknowledges that in biblical times the spring

equinox fell in the month following Nisan, Iyyar (Taurus), the month that appears in the Torah as the beginning of the deluge. However, Ben Eliezer's text must have been paradoxical for his readers, because, while explaining the text of the Torah, he apparently strays from it, which must have raised considerable discussion among his contemporaries. Ibn Ezra avoided the risk of controversy, silencing any direct allusion to the precession in almost all his biblical writings.

4. Conclusions

From the horoscopes considered, the difference is evident between Abraham bar Ḥiyya, on the one hand, and Abraham ibn Ezra and his disciple, Yosef ben Eliezer, on the other. This last closely followed his master in casting horoscopes starting from the biblical text and respecting Ibn Ezra's understanding of astrology as an instrument of divine providence. Thus we can say that he did not innovate on the basis of Ibn Ezra's findings, but improved and completed them, as we can see in the horoscope of the deluge, which was developed more extensively by him than by his master.

Unlike Ibn Ezra and Ben Eliezer, Bar Ḥiyya tried to give as much information as possible for his horoscopes. He referred to planetary positions more or less exactly, e.g. in the first third, in the middle, at the beginning of the sign, and sometimes the number of degrees. He also explained his interpretation as founded on the astrological aspects between stars, which he references, especially the cyclical conjunctions of Saturn and Jupiter.²⁰ All this makes his texts clearer and more self-evident than those of Ibn Ezra, and even those of Ben Eliezer. On the contrary, we know that the degree of compromise between religion and astrology is deeper in Ibn Ezra's work than in Bar Ḥiyya's, and that Ibn Ezra returns again and again to this relationship throughout his writings.

If Ibn Ezra makes some astronomical information vanish in the horoscopes under consideration, two reasons can be given:

- He takes this knowledge for granted among his learned readers.

20 Ibn Ezra applies the cyclical conjunctions of Saturn and Jupiter to his exegetical texts, but in such a general way that we cannot construct a chart as we have for Bar Ḥiyya or Ben Eliezer. Ibn Ezra refers to the conjunctions of Saturn and Jupiter in his commentaries on Exod 6:7, Exod 31:18, and Exod 33:21. He links this conjunction with the cycles that control the appearance and extinction of species (commentary on Eccl 1:9), with the exodus from Egypt (commentary on Exod 6:7), and the episode of the golden calf (commentary on Exod 31:18).

- He is trying to avoid controversy with his contemporaries on biblical dates and the acceptance of the precession of the equinoxes.

All three authors had knowledge of the astronomical phenomenon of the precession, and two of them applied it more or less openly in the texts expounded. Its use by Ben Eliezer, however, is the most problematic, and makes us suppose that the Jewish communities of his time (fourteenth century) were more learned and familiar with the sciences than those profiting from Ibn Ezra's works (twelfth century). Ibn Ezra's treatment of the sciences in the heart of his biblical commentaries was a subject of great interest, but also of controversy.

Bar Ḥiyya was the first of them to propose a horoscope on a biblical episode, but given that he did not write biblical commentaries and that he devoted himself to the exposition of Arabic sciences in Hebrew and Latin, his impact on Jewish exegesis is less than that of his near contemporary, Ibn Ezra. Ibn Ezra's reflections on astrology and its relationship with the Jewish creed are more coherent, continuous, and deeper than those of his predecessor. With Ibn Ezra, astrology was part of a coherent system of thought that, even if expressed in a diffuse and fragmentary manner, is found in the entire corpus of his many-sided religious, scientific, and astrological works. Astrology was for him a way of religious knowledge insofar as it reveals God's ways of action in the world (commentaries on Deut 6:7, Deut 32:39, and Exod 20:1).

From the point of view of language, differences also appear in the texts of the three writers. Bar Ḥiyya is very clear in his exposition. His technical vocabulary relies on terms of Arabic origin, most of them translations or transliterations into Hebrew. In contrast, Ibn Ezra's writing is brief and obscure, and he often envelops his words in a mysterious and religious atmosphere. This cryptic and elusive treatment of such a subject must have made his texts very attractive to a certain kind of reader. With respect to technical terms, he carefully chose words that already existed in the Torah, giving them a new meaning, and he avoided the use of foreign words. This procedure is consistent with his idea that all the sciences—astronomy and astrology included—were once the original patrimony of Israel and are alluded to in the text of the Torah.²¹

None of these writers contested the scientific status of astrology, the elements involved in its practice (aspects, cycles, mundane astrology, etc.), or the legitimacy of applying astrology to the interpretation of biblical facts, which are fundamental in the history of the Jewish people.

21 On the choice of biblical words for astronomical technical terms in Ibn Ezra's writings, see Sela 1999, 209-219 and 2003, 104-106, as well as his articles in *Micrologus* (2001) and *Arabic Sciences and Philosophy* (2001).

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Various Uses of Horoscopes

Astrological Practices in Early Modern Europe

H. DARREL RUTKIN

Astrology was still a vital and vibrant part of the European cultural fabric during the first thirty years of the seventeenth century, reaching perhaps its fullest development within the realm of legitimate natural knowledge as well as in socio-political and cultural domains. This was the last period in which the finest natural philosophers and mathematician-astronomers practiced and theorized about—and tried to reform—astrology's natural philosophical, mathematical and astronomical foundations. To be sure, the reform movement continued for another century or so, but the scientific dimension of the tide had already turned, at least as it appears to us in retrospect. This paper seeks to indicate some of astrology's personal, scientific and political applications at this high-water mark by exploring a range of uses to which horoscopes could be put.¹

From 1600 to 1630 many people studied and practiced astrology, employing it over a broad range of the socio-political and cultural spectrum for personal, political and patronage-related purposes, among others. To illustrate and evoke this range of practices, I will present a series of portraits in various landscapes, primarily in Italy, England and the Holy Roman Empire. Most of the *dramatis personae* will be familiar to all: Johannes Kepler, Galileo Galilei, Francis Bacon. Others—Tommaso Campanella, Orazio Morandi, Andrea Argoli—are less so. Of course, astrology was also alive and well in Louis XIII's France, as we can easily see in the striking image of the court astrologer, Jean-Baptiste Morin, attentively waiting, concealed in the royal apartment, to record the precise moment of the dauphin, the future Louis XIV's birth and thus to construct his horoscope (Thorndike 1923–1958, VII: 479).²

In examining various uses of horoscopes during this period, I will explore three primary themes. First, the horoscopes will be identified within the

1 Astrology did not reach its fullest expression in politics until c. 1640–1660 during the civil wars and interregnum in England. See Curry 1989.

2 For astrology in seventeenth-century France, see Drevillon 1996.

four types of astrological praxis, namely, revolutions, nativities, elections, and interrogations. Revolutions are concerned with large-scale changes, primarily of the weather, but also in political affairs. Nativities, on the other hand, study the astrological configuration at a person's birth. Elections determine the most propitious moment to begin an enterprise or perform an activity, such as crowning a ruler, passing the baton of command to a general, or laying the cornerstone of an important building. Interrogations, finally, address questions on any matter of concern, including personal, medical and business-related issues. In this case, horoscopes are constructed for the time the question is asked.³

Second, these astrological practices will be situated within their socio-political and patronage contexts, which often decisively shaped how the horoscopes in question were used. For example, Kepler and Galileo both used central features of their patrons' natal horoscopes—their nativities or genitures—as primary motifs in the dedicatory letters of their respectively epoch-making *Astronomia Nova* (1609) and *Sidereus Nuncius* (1610).⁴ Finally, our protagonists' horoscope usage will be considered in relation to their views on astrological reform, especially for Kepler, Galileo, and Bacon.⁵

I begin with a brief sketch of Johannes Kepler, whose astrological works are fairly well known, beginning to flesh out a typology of uses within various relevant contexts. Then I provide more extensive portraits of Galileo and Francis Bacon, whose astrological practices and reforms are less well known. Finally, I treat Campanella, Morandi and Argoli in Urban VIII's Rome in relation to one of the most politically charged of astrological practices, predicting the pope's death.

1. Johannes Kepler

My first astrologer in a landscape is Johannes Kepler, who used horoscopes in a range of practices over his entire career, from his student days in Tübingen until his death in 1630.⁶ Educated—as was Tycho Brahe—within Philip Melanchthon's deeply astrological reformed educational system, Kepler learned various features of astrological theory and practice within the mathematics and natural philosophy courses while also learning the basic structures

3 Keith Thomas's chapters on astrology (1971, 283-385) are probably still the best introduction to the subject in English. See also chapter four of my dissertation (Rutkin 2002).

4 For an in-depth treatment of these dedicatory letters, see Rutkin 2001.

5 For a fuller treatment, see chapter six of my forthcoming book.

6 For more in-depth research on Kepler's astrology, see Simon 1979 and Field 1984.

of mathematics, mathematical astronomy, and Aristotelian natural philosophy.⁷

Informed by these educational patterns within a Lutheran theological and political context, Kepler used horoscopes for both personal and professional purposes. In the personal domain, Kepler used natal astrology to analyze and understand himself and the most important members of his family, including his parents, for whom we have nativities with an astrological interpretation of their characters (Caspar 1993, 34). Likewise, for understanding himself, Kepler constructed his own nativity, and, for every year of his life, he made a revolution horoscope for that year (many of which are still extant) to help him better understand the year to come (Caspar 1993, 357 [and note 1]).⁸ These horoscopes were not published at the time, thus further indicating that he made them only for his own personal interest.

Moving from the personal and private⁹ to the more public professional and political domains, a context deeply conditioned by patronage demands, Kepler also used a range of horoscopes. In addition to constructing natal horoscopes of patrons and major political figures, Kepler made horoscopes normally called “revolutions of the year.” On this basis he composed annual prognostications, published mostly in German, as a component of the calendars he was required to compile from 1595, when he was appointed district mathematician at Graz (Caspar 1993, 58–60). But these practices were also the subject of his own strong views on how astrological theory and practice should be reformed, as he informs us in several works, including the Latin *De fundamentis astrologiae certioribus* (“On the More Certain Fundaments of Astrology,” 1602), published just after he became imperial mathematician in 1601.¹⁰ It also included a reformed prognostication focused primarily on the weather, but also treating public health and politics. He continued these practices throughout his career.

Unlike normal revolutions of the year, however, Kepler rejected the construction and interpretation of horoscopes for the sun’s annual ingress into Aries, the beginning of the astrological year, or its entrance into the other seasons. In Kepler’s view there is no natural substrate for the weather as there is for nativities, namely, the human soul, which is imprinted at the moment of birth with enduring astrological influences. For this reason, Kepler’s reformed horoscopes for his annual prognostications focused on important planetary configurations during the course of the year, including their astro-

7 For Melancthon’s educational reforms, see Kusakawa 1995 and chapter five of Rutkin (forthcoming).

8 One should compare Kepler’s practice with Girolamo Cardano’s intense self scrutiny in the sixteenth century; see Grafton 1999. See also Kocku von Stuckrad’s and Steven vanden Broecke’s contributions in this volume.

9 Of course, the personal can also be very public, as with Cardano’s published self reflections.

10 This text is discussed and translated in Field 1984.

logically significant angular relations, the planetary aspects, which are then interpreted to illuminate the traditional themes of annual astrological prognostications.¹¹

As imperial mathematician, Kepler also provided private astrologically-informed political counsel for Rudolf II, Holy Roman Emperor, at court in Prague until Rudolf's forced abdication in 1611. Although Kepler never described his personal interviews with the emperor, some of the essays written for him survive, in which Kepler gave Rudolf advice about Venice, the Hungarian question, and the Turk, among other pressing issues (Caspar 1993, 152f.; see also Bauer 1989). Likewise, Kepler provided astrological services for many important persons, including the Chancellor of Bavaria, Herwart von Hohenberg, and the famous general, Count Wallenstein, whose nativity Kepler constructed and interpreted in 1608 and again in 1624.¹² Kepler looked into Wallenstein's future by means of directions of his natal horoscope, an astrological technique Kepler saw no reason to reform. These horoscopes and their interpretations are still extant (Caspar 1993, 338-345). Kepler also made other horoscopes for political and patronage purposes, including horoscopes of historical figures, for example, Augustus Caesar and the prophet Muhammad, and even for the creation of the world (Caspar 1993, 89f.; see also Grafton 1991). Tycho Brahe likewise made nativities for the king of Denmark as well as annual prognostications (Christianson 1979 and Oestmann 2003).

In addition to practicing astrology, Tycho and Kepler were both passionately interested in reforming and improving both sciences of the stars, astronomy and astrology—Tycho by reforming astronomy's observational and cosmological foundations and astrology's mundane house structure (North 1986, 175-177 and vanden Broecke 2003, 263-269; in general, see Thoren 1990). Kepler's astronomical and astrological reforms were even more fundamental, including his rejecting the signs of the zodiac as astrologically significant, and thus planetary rulerships and all associated doctrine, except elemental triplicities, which played such a large part in prognostications based on the Great Conjunctions of Saturn and Jupiter. According to Kepler, elemental triplicities could be retained because they had a natural foundation, namely, the twenty year cycle of Great Conjunctions. Saturn and Jupiter conjoined in the same triplicity—namely, all three signs of the same element—in an interlocking series of triangles (trine aspects) for 240 years before switching to the next element (Field 1984, 199-201). In this respect as in others, he retained the powers of the planets and the importance of their

11 Kepler describes his theory and exemplifies its practice in thesis XLIX of the *De certioribus*. For comparative material on almanacs and their prognostications, see for England, Capp 1979 and for Italy, Casali 2003. For the technical astrological features discussed here, see Eade 1984.

12 Caspar 1993, 90 (Herwart) and 338-342 (Wallenstein); see also Geiger 1983.

changing mutual relationships, the planetary aspects, whose Ptolemaic harmonic foundations he worked strenuously to strengthen.¹³

2. Galileo Galilei

Galileo's use of horoscopes presents a different profile.¹⁴ Although an astrological practitioner during a significant portion of his career, Galileo seems to have had no interest in astrological reform. A further contrast is that Kepler used horoscopes in a much more overtly political manner, as both a political counselor and public prognosticator, but for Galileo there is no evidence of either practice. Indeed, Galileo mainly made nativities for personal, professional, and patronage-related reasons, and he employed the full panoply of technical astrological features for constructing and interpreting horoscopes.

Galileo's two main domains of astrological practice were the personal and the professional. Most of our evidence for Galileo's personal use of horoscopes comes from the time he taught mathematics at the University of Padua (1592–1610). Our main evidence is MS Galileiana 81 at the Biblioteca Nazionale Centrale in Florence, which contains twenty five horoscopes in his own hand, including his own and his two now famous daughters'.¹⁵ Indeed, we even possess his astrological interpretation of his daughters' horoscopes, where he discussed their mental and moral makeup.

There is also rich evidence for Galileo's use of horoscopes within professional and patronage contexts, which will be treated more fully. Although Galileo's astrological practice was not overtly political, it was certainly performed in a patronage context, for which we will first turn to Florence and the milieu of Cosimo II de' Medici, to whom Galileo famously dedicated his epoch-making telescopic discoveries in the *Sidereus Nuncius* (1610; see Biagioli 1993 and Rutkin 2001). It is well known that Galileo personalized his discovery of Jupiter's moons to Cosimo in the dedicatory letter by relating them to Jupiter's exalted position in Cosimo's natal horoscope. Indeed, we find Galileo's rendering of Cosimo's horoscope in two versions on the back of his wash drawings of the moon.¹⁶

13 For useful discussions of Kepler's reforms, see Simon 1979, Field 1984, and Stephenson 1994. His astronomical reforms are too well known to require discussion here; see e.g. Caspar 1993.

14 For a fuller treatment of all these issues, incidents, and characters (plus others), see Rutkin 2005. I know of two other surveys of Galileo's astrological practice, Favaro 1881 and Kollerstrom 2001. See also *Culture and Cosmos* 7 (2004), entitled *Galileo's Astrology*, which is devoted to this topic.

15 For his own horoscope, see now Swerdlow 2004.

16 Righini (1976) describes the two horoscopes that survive, but only publishes the one corresponding to the dedication.

Another important patronage-related use of horoscopes was for Cosimo's parents the previous year. At the very beginning of 1609, the Grand Duke Ferdinand, Cristina's husband and Cosimo's father, was gravely ill. We have Galileo's response to Grand Duchess Cristina's urgent request for him to establish the accurate date of the grand duke's birth—between the two competing dates, a year apart—so that an accurate horoscope for the grand duke could be constructed and, thus, a fully accurate understanding of his malady astrologically discovered. Galileo used the technique of rectification, deciding on the earlier date based on its better astrological correspondence with the events (accidents) of the grand duke's life (Galilei 1890–1909, X: 226f.).¹⁷

Galileo's correspondence provides further evidence for his use of horoscopes in a patronage context. A splendid example is Cardinal Alessandro d'Este's request of Galileo to construct and interpret his nativity—in 1618—in recompense for which the good cardinal offered to help Galileo any way he could, forever, in any matter. Although we apparently do not possess this horoscope, it is extremely unlikely that Galileo would have refused such a request from the Este cardinal.¹⁸

Although the use of horoscopes for patronage purposes could occasionally be spectacularly successful (as with the *Sidereus Nuncius*), constructing and interpreting horoscopes even in a purely professional context could sometimes be fraught with danger. Antonino Poppi (1993) recently discovered some interesting documents related to Galileo's little known early brush with the Venetian Inquisition. We learn that Galileo had been denounced to the Inquisition in Padua in 1604 for practicing a deterministic astrology; that he was denounced by his former amanuensis, Silvestro Pagnoni (from Pesaro), who had lived in Galileo's house for eighteen months;¹⁹ and that the authorities in Venice reviewed and summarily dismissed the charges.²⁰ Most interesting is the light the accuser's testimony throws on Galileo's practice of astrology in the earliest years of the seventeenth century, while he was professor of mathematics at Padua, and during the very time he drew up the horoscopes in MS 81. The value in Pagnoni's testimony comes from his being an eye-witness who actually lived in Galileo's house. We learn that Galileo drew up natal horoscopes for a variety of people. I quote from Pagnoni's official denunciation:²¹

17 Letter 204, Galileo to Cristina di Lorena in Florence, Padua, 16 Jan 1609.

18 Biagioli (1993, 43) refers to this letter in a discussion of gift giving.

19 This is Poppi's very probable conjecture (1993, 19 f.).

20 This is recorded in document VI: "Il governo veneziano valuta l'inconsistenza delle denunce contro Cremonini e Galilei" (1993, 55f.). Poppi's note (1) is very informative.

21 Document V: "La Denuncia contro il Galileo." It is dated April 21, 1604 (Poppi 1993, 51–54). All translations are mine unless otherwise indicated.

For the discharge of my conscience and by the commandment of my father confessor, I have come forward to the Holy Office to denounce Signor Galileo Galilei public *mathematicus* at the University of Padua, because I saw him, in his office (*camara sua*), make numerous nativities for numerous persons, upon which he made his judgment. He made one judgment on one nativity, where he said that the person had twenty more years to live, and he held it as firm and indubitable that that judgment would follow. He spoke one day with a gentleman from beyond the Alps, a German, named Giovanni Svainim, for whom he had made a nativity [...].

There are two points to be made here. First, no one is disputing that Galileo had an astrological practice, which in the early seventeenth century was still considered a normal professional activity for a *mathematicus*. At issue is only whether Galileo practiced a problematic deterministic astrology. The other point is that this evidence, which clearly indicates that Galileo had an office in Padua where he constructed and interpreted horoscopes, can then be used to flesh out evidence from one of Galileo's notebooks which recorded money he received in various contexts, but primarily for private teaching and for supplying instruments (Favaro 1883, II, 147ff.).²² In addition to payments received for lectures on *De sphaera*, mechanics, perspective and fortification, there are also five notices for payments received *per sortem*, one of which is dated January 1, 1603: *dall'illustre signor Sweinitz per sortem*, for which Galileo received 60 Venetian lire. This is the same person mentioned in Pagnoni's accusation of the following year. Two others are recorded together for October 22, 1603: *Sig. Massimiliano in nome dei signori Cristoforo e Marco Stettner per sortes* (153). The horoscope for Christoforo Stettner exists in MS 81 (f. 36).

3. Francis Bacon

Galileo is also indirectly implicated in the political use of horoscopes conducted by Orazio Morandi's astrological political research institute at Rome during the 1620s, but we should first head over to London to explore Francis Bacon's proposal for astrological reform, with its own striking political implications, as found in his *De augmentis scientiarum*, the 1623 Latinized expansion of his *Advancement of Learning* (1605). Indeed, Bacon composed it in the immediate aftermath of his impeachment as England's Lord High Chancellor, which directly constellates his proposal within a highly charged public political context at the highest levels, in which he himself had until recently been an active participant (Marwil 1976; Jardine and Stewart 1999). But, like Galileo soon after, he had precipitously fallen out of favor at court.²³

22 Poppi discusses this in detail (1993, 56f. [n. 3]).

23 Biagioli's chapter on the fall of the courtier is illuminating on this topic (1993).

Although I know of no evidence for Bacon's practice of astrology, his proposal, which is wholly an addition to the *Advancement of Learning*, sheds light on his very interesting views, in which, like Kepler, he tried to ground astrological practice on a sound natural foundation.²⁴ Thus he promoted the reform, not rejection, of astrology in relation to his areas of greatest concern, natural knowledge and politics.

Bacon proposed a reform of astrological theory and practice in Book III, Chapter 4 of the *De augmentis scientiarum* (Bacon 1963, I: 554-560). Discussing astrology as a part of natural philosophy, Bacon hopes to reform astrology as an *astrologia sana* based explicitly on physical principles. He begins by indicating the superstitions and lies to be removed from astrology, including the individual planetary rulership of each hour of the day, and the astrological figure constructed for precise points of time. Bacon then discusses what parts of astrology should be retained. He begins by noting that unlike nativities, elections and interrogations, which he previously said have little if any foundation, revolutions have much more soundness (*sanitas*). We will recall that these are the four primary divisions of astrological praxis, with revolutions concerned with large-scale changes, primarily of the weather, but also state affairs. Revolutions are the primary feature of annual prognostications.

To make revolutions optimal in practice, Bacon prescribes five general rules, including that every operation of the heavens extends more to the mass of things than to individuals, and that no operation of the heavens flows down into and rules points of time or precise minutes, only larger spaces of time. In describing the basic elements of his reformed astrology, Bacon also retains the normal doctrine of astrological aspects, and the traditional natures and inclinations of the planets and fixed stars, which he thought should not be lightly rejected because of the tradition's great agreement. On this reformed basis, he concludes, figures of the heavens, horoscopes, should be constructed and interpreted.

What, then, can Bacon's reformed astrology reasonably predict? Given that these are his considered views after a lifetime as courtier and politician, the implications for his actual practice of astrology (or for the use of skilled astrologers in his employ) are striking. I present this section in the 1640 English translation, interspersed with comments and glosses (Bacon 1640). He begins with a brief introduction: "Sound Astrologie is likewise applied and referred with more confidence to Predictions; to Elections, with more Caution, within due limits to both." First, predictions:

Predictions may be made of future Comets, which as we conjecture may be foretold; and of all sorts of Meteors; of Deluges, Draughts; Heats; Conglaciations; Earth-quakes; ore flowing of waters; breaking out of Fires; Windes; great Raines; divers Tempests; and strange seasons

24 For a discussion of Bacon's astrological reform and its influence, see Bowden 1975.

of the Year; Pestilences, Epidemicall diseases; Plenty, and dearth of Graine; Warres, Seditions, Sects, Plantations of new Colonies; lastly of all commotions and greater Innovations, either in Nature, or in State-Government [...]. (153)

According to Bacon, astrology may be used to make predictions related to many vital natural and political concerns, the normal subjects of annual prognostications.

He next discusses how specific such predictions can be:

[S]o these predictions may be drawn downe [deduced] (though not with like certainty) to more speciall occurrences, and perchance to singularities; if the generall inclinations of such times and seasons, being first discovered and found out, these be applied by a sharpe piercing judgment Philosophicall or Politicall, to speciall or more particular events, which may be most subject to such Accidents. As for example, a man shall found out from foresight of the seasons of the yeare, such temperatures of weather, as are propitious or pernicious rather to Olives, than to Vines [...]. Or if one from the knowledge he hath of the influence, the Heavens have over the spirits of men, should find out a man to be of such a complexion and disposition; to affect or distast rather the people then Princes; rather learned and curious, than courageous and warlike dispositions; rather sensuall and voluptuous, than active and politique nature. Such instances as these are infinite, but (as we have said) they require not only that generall knowledge, taken from the starres, which are Active; but also a particular knowledge of Subjects which are Passive. (153f.)

Bacon ends this section with two important points: one, that the domain in which astrological predictions may be applied is virtually infinite, and two, that a knowledge of the celestial configuration (the active causes) alone does not suffice, following Ptolemy (Ptolemy 1940, I, 2f.). One must also have a deep knowledge of the subjects at issue, the recipients of the active planetary influences. This knowledge seems to be precisely what his broader scientific research program was intended to produce. He also states explicitly that these astrological predictions concern not only generalities, but also specific circumstances and individuals, albeit with less certainty.

Let us now turn to Bacon's views on elections, which are concerned with choosing the most propitious times to begin any sort of venture:

Nor are Elections altogether to be rejected but more sparingly to be credited, than Predictions. For we see in Planting and in Sowing and in Grafting, that the observation of the [phase] of the Moone is a matter, not altogether vaine and frivolous. But these Elections, are by our rules more restrained than Predictions: and this must ever be observed, that Elections are of force, in such cases alone, where both the Influxe of the Heavens is such, as doth not sodainly passe over; and likewise the Action of Inferior Bodies such, as is not presently perfected: for neither the Encreases of the Moone, nor of the Planets are accomlisht in an instant: but Punctuality of time, is by all means to be rejected. There are found many of the like precise observations (which one would hardly believe) in Elections about Civile affaires. (154)

Bacon thus plainly states that there are significant realms in which astrological elections may legitimately be applied within the framework of a sound astrology. He also strongly implies his own personal experience with elec-

tions concerning political affairs, which could also be construed as an advertisement for his expertise and thus for his services. In this respect, the *De augmentis scientiarum* may be profitably compared with his distant compatriot Roger Bacon's similar appeal for patronage in his three *Opera* during the 1260s, which also offered astrologically informed knowledge and services at the highest levels of politics and patronage.²⁵

In the final section, Bacon responds to a hypothetical challenge by indicating how a multifaceted research program should be instituted to clarify and develop the claims made in the preceding discussion. He is most interested in a historically oriented program:

Astrologians (if they be not wanting to their Profession) may make a collection from the faithfull reports of History, of all greater contingences; as Inundations, Pestilences, Warres; Seditions; and (if the state so require) the deaths of Kings: and may contemplate the situation of the Heavens, not according to the subtiltie of Figures; but according to those general rules which we have already set downe; to know in what postures the Heavens were, at those times, when such effects came to passe; that so [where] there is a cleere, and evident consent, and concurrence of events; there a probable rule of Prediction may be inferred. (154f.)

Bacon here suggests an empirically-based inductively-structured historical research program to investigate precisely those topics which he had just mentioned as legitimate subjects of astrological prediction and election. Thus Bacon retains two of the four types of astrological praxis, revolutions and elections, although he rejects a formerly fundamental feature of horoscopes, namely, their being made for precise moments of time.

The *De augmentis scientiarum*'s astrological reform of 1623 is Bacon's mature statement; there is nothing like it in the *Advancement of Learning*. Given the tenor of his statements, his ever precarious situation at court, and his passionate political ambitions, it seems very likely that he would have pursued this avenue of possible insight—and thus advantage—in the many areas in which he himself actively participated. It also seems likely that he would have at least ventured his own historical investigation of these matters so clearly and forcefully advocated.

For Kepler (and Tycho), then, we have discussions of astrological theory and practice, including their ideas for astrological reform. For Galileo, the only evidence we have concerns his practice. For Bacon, in contrast, we only have a theoretical discussion which is deeply concerned with reform. Although there are strong implications of practice, no such evidence has yet been found.

25 See David C. Lindberg's biography of Roger Bacon in Lindberg 1983.

4. Astrology in Urban VIII's Rome

Our last examples of highly politically-charged horoscope usage require us to return to Italy later in the 1620s, to Rome in fact, in order to observe a very dramatic—and curious—set of incidents surrounding Pope Urban VIII and the expected timing of his demise. Indeed, Urban himself was quite interested in astrology, to such an extent that he was in the peculiar habit of casting the horoscopes of cardinals resident in Rome, and of predicting their deaths. But by 1626, Urban had himself become the target of such predictions, which became increasingly persistent by 1628. These rumors were apparently being stirred up by pro-Spanish factions who were trying to scare the pope to death. The two most dangerous years were 1628, when there was an eclipse of the moon in January and of the sun in December, and 1630, with a solar eclipse in June (Walker 1958, 205f.).

During this time, the philosopher, prophet, and currently-imprisoned heretic Tommaso Campanella's reputation came to the pope's attention in relation to these menacing predictions of maleficent celestial influences (Ernst 1991, 263ff.). Not wanting to sit idly by, Urban transferred Campanella to prison in Rome and ultimately released him to implement a Ficinian program of prophylactic astrological magic. He formulated it in late 1626 soon after arriving in Rome; it was later published in an unauthorized edition as the *De fato siderali vitando*.²⁶ Here is a scene from D. P. Walker's classic description:

First they sealed the room against outside air, sprinkled it with rose-vinegar and other aromatic substances, and burnt laurel, myrtle, rosemary and cypress. They hung the room with white silken cloths and decorated it with branches. Then two candles and five torches were lit, representing the seven planets; since the heavens, owing to the eclipse, were defective, these were to provide an undefective substitute, as one lights a lamp when the sun sets. (207)

It seems likely that Campanella developed his apotropaic astrological magic for precisely this important occasion, since there is no evidence for anything like it before in his writings (Walker 1958, 209). During the summer of 1628, both the Florentine and the Venetian ambassadors reported on the frequent secret meetings between Urban and Campanella (Walker 1958, 206; see also Headley 1997, 108). When the pope's brother Carlo died in Feb 1630, Urban was relieved to think that the malign influence intended for him had instead expended itself on his brother (Ernst 1991, 266). The pope had Campanella assist him once more in 1630 to protect his nephew (Walker 1958, 209).

26 For an evocative account of Campanella's procedure, see Walker 1958, 206-208. For Campanella's dependence on Ficino, *ibid.* 210ff. For a convenient edition with an extensive introduction, Latin text and Italian translation, see now Campanella 2003.

It was into this context that Galileo arrived in Rome in May 1630 with his completed manuscript of the *Dialogo* to secure its imprimatur and publication.²⁷ Upon arrival, Galileo was invited to dine with his old friend, Orazio Morandi, abbot of the Vallambrosan monastery, Santa Prassede.²⁸ Unbeknownst to Galileo, however, and just before he arrived in Rome, Morandi had published in newssheets astrological prognostications of Pope Urban's and his nephew's deaths. Furthermore, *after* Galileo's arrival in Rome, but *before* dinner with Morandi on the 24th, Galileo himself somehow became associated with these predictions. I quote from a passage in a contemporary Roman *avviso* of 18 May 1630:

Galileo, the famous mathematician and astrologer, is here [in Rome] to try to publish a book in which he attacks many opinions held by the Jesuits. He has been understood to say that D[onna] Anna [that is, Anna Colonna, the wife of Taddeo Barberini, the pope's nephew] will give birth to a son, that we shall have peace in Italy at the end of June, and that shortly thereafter Taddeo and the pope will die. This last point is confirmed by the Neapolitan Caracioli, by Father Campanella and by several writings that discuss the election of the new Pontiff as if the Holy See were already vacant.²⁹

Galileo was so concerned about these rumors that he had his friend Michaelangelo Buonarroti (the painter's nephew) inquire directly of the papal nephew, Cardinal Francesco Barberini, how these rumors were perceived by those who matter, and to explain that he was innocent of any astrological foul play. Galileo was relieved to find out in early June that the cardinal did not believe these rumors for a moment (see esp. letters 2022 and 2030).

Galileo left Rome 26 June 1630. Soon after, in mid-July, Morandi was summoned to the Holy Office and thrown into prison. Galileo, greatly concerned, requested information from a mutual friend. He was informed that the Morandi case was very big. Many people were involved, and information related to it was tightly controlled. Apparently Santa Prassede had been an important center for producing astrological information on the major political figures of the day—a sort of astrological political research institute. Indeed, dozens of nativities were discovered when the church was searched after Morandi's arrest (Ernst 1991, 267f.). There were horoscopes of popes and cardinals; and the cardinals who were most likely to become pope had judgments drawn up on their nativities, thus indicating their respective astrological strengths and weaknesses. Indeed, Galileo's and Campanella's horoscopes were also found in this cache (Fiorani 1978, 104). Further, Raffaello Visconti reported during the course of Morandi's trial that he, Morandi,

27 Most of this story is well known and requires no retelling here. See e.g. Westfall 1989 and Biagioli 1993, 313–352.

28 For Morandi and this episode, see Shea 1983; Ernst 1991, 265–271, and 1993; Fiorani 1978; and Bertolotti 1878. See also most recently, Dooley 1999 and 2002.

29 Shea's translation (slightly modified), 1983, 284. The *avviso* is printed in Galilei 1890–1909, XIV, 103 (letter 2009).

and Galileo had spoken recently, and on an astrological topic, perhaps at the dinner mentioned above (Fiorani 1978, 102 [n. 8]). Over 2800 folios of evidence relating to this case are extant at the Archivio di Stato in Rome, including the cache of horoscopes, many letters, a catalogue of the library at Santa Prassede and depositions from the trial.³⁰

As an aftermath to the Morandi case, Urban promulgated the papal bull *Inscrutabilis* against astrology in April 1631, which basically repeated the content of Sixtus V's similar bull of 1586.³¹ Although Urban's bull was directed against astrology overall and its practitioners, it was mainly concerned with those who predicted the death of the pope and his kin to the third degree of consanguinity, as we saw was the case with Morandi's prediction. By the way, Morandi died in prison later in 1630; poison was widely rumored to be the cause (Ernst 1991, 270). There is rich evidence here for a fully textured study of this extremely interesting and extensively documented episode which still very much remains to be done.³²

As noted, among the 2800 folios of evidence were dozens of horoscopes. We also find an extensive collection of horoscopes of the powerful in a medical textbook with political overtones composed by a frequenter of Morandi's library at Santa Prassede, Andrea Argoli, who later became professor of mathematics at the University of Padua (Ernst 1993, 240).³³ Indeed, Morandi favorably reviewed the first edition of Argoli's extremely influential ephemerides—with an extensive astrological introduction—for its official Roman imprimatur in 1628 (see Rutkin 2003, 230).

We shall cast a brief and parting glance at Argoli's textbook, the *De criticis diebus*: first edition, 1639; second edition, 1652.³⁴ The structure of the horoscope collections in each edition is the same, namely, there are two horoscopes for each individual: first, a nativity, the astrological configuration at birth; the other is for the onset of the final sickness which led to death. We have, then, an extensive medico-astrological casebook (significantly augmented in its second edition) for investigating the death of important people, including popes, cardinals and kings, a highly illegal activity, but one of passionate interest in this intensely competitive culture. Indeed, with this horoscope collection we possess the raw material for a historical research program—à la Bacon—which even, ironically, included Urban VIII's horo-

30 See especially Ernst 1993 for a rich discussion of Morandi and his library, with a transcription of its contents from the trial records.

31 For these bulls, see now Germana Ernst's informative introduction and the texts in Campanella 2003.

32 Dooley's recent book-length study (2002) is disappointing in that he does not sufficiently rely on the extensive evidence for his account.

33 For more on Argoli, see his biography by M. Gliozzi in *DBI* 4 (1962): 132-134.

34 For further discussion of this text and its context, see Steven vanden Broecke's contribution to this volume. For discussion of the medical theory of critical days, see Monica Azzolini's contribution to this volume.

scope in its second edition after he had died. Perhaps Argoli even knew Bacon's *De augmentis scientiarum*, which we know was in Morandi's library (see Ernst 1993, 251 [entry 128]).

5. Conclusion

We have now surveyed a small sample of the many and varied uses of horoscopes in the early modern culture-historical landscape. We found mainly nativities and revolutions, to be sure, but also elections within various relevant contexts, personal, political and patronage related, among others. We found no interrogations among the horoscopes surveyed, but they were certainly still practiced. We also examined certain features of astrological reform. There is much more work to be done, of discovery, analysis, and integration, before we will fully understand the complex roles astrology played in early modern Europe during this period of profound and multifold transformation.

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Reading Health in the Stars

Politics and Medical Astrology in Renaissance Milan*

MONICA AZZOLINI

In fifteenth-century Italy (much as now) the election of a Pope was a momentous event, one that could be predicted with the help of one of the most common prognostic practices of the time: horary astrology. On 20 July 1492 Ludovico il Moro, then the acting duke of Milan, wrote to his most prominent court astrologer to make inquiries regarding the health of Innocent VIII, a Genoese pope unsympathetic to the Milanese Duchy. Ludovico wrote to his personal astrologer Ambrogio Varesi da Rosate asking him to foretell if the Pope's illness would result in death or not. For want of a nativity chart (*genitura*), Varesi cast a horoscope for the time of the inquiry, and reported to Ludovico that the position of the planets in the sky indicated that Innocent VIII was likely to die either on August 3, or sometime between August 10 and 11.¹

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1 Archivio di Stato, Milano (henceforth indicated as ASMi), Autografi, Medici, cart. 219, Ambrogio Varesi da Rosate to Ludovico, Milan, 20 July 1492: *Illustrissimo et Excellentissimo Signore, per satifsare ala domanda del pontefice quale la excellentia vostra per una soa me fece e fume presentata heri circa 21 hora, dale quale in qua con piu dilligentia et studio ho saputo, ho considerato et revoltato il sito de li corpi celesti in cello e loro influxo alhora de la domanda, che fu laltro heri a doe hore de note quando g[i]onseno le lettere et insiema examinato la interrogatione sua perche me ignota la nativitate de es[s]o pontefice, rivoltando insiema ancora el signatore grande del pastore e principale dela fede christiana in la revolutione de li anni del mondo, quali secondo alchuni astrologi sono il Sole con Marte, et secondo altri Mercurio con Iove et il Sole, insoma ritrovo, si havendo respe[c]to alhora de la interrogatione de la excellentissima signoria vostra, in la quale Marte fu significatore cum Iove per essere Marte in el caso suo et Iove ancora sotto li rag[g]i del Sole, la Luna sotto Terra, congiuncta per generale aspetto al sole signore del la casa de la infirmitade et Iove signore de lo as[c]endente adusto, et fra 25 di congiuncto cum Marte in la interrogatione signore de la casa de*

Innocent VIII died on July 25, earlier than predicted, but neither Ludovico nor his brother, Cardinal Ascanio, questioned the reliability of their source. Rather, Ludovico relied on Varesi's reassurances in the same letter that the next Pope would be favorable to the Sforzas.² A week later, however, Ludovico was far more cautious. He reported to Ascanio that Varesi's further investigations at the time of Innocent VIII's death suggested that their plans for the election of the new Pope could be jeopardized because of avarice or disloyalty.³ Accordingly, he encouraged his brother to be liberal towards

la morte, es[s]o pontefice dovere morire. Il medesimo si denota per la interrogatione per essere stato Venere sua significatrice alhora de la revolutione combusta et coniuncta con lo significatore dela morte, quale in el presente anno che denotava la morte. Il medesimo ritrovo per la revolutione de li anni del mondo quale incominzo ad 10 de marzo, in la quale fu il significatore del pastore dela fede christiana insieme con Venere damnati per adustione del Sole in la casa de infermitade, per la quale cossa si denotava la morte del pastore de la fede chiristiana. Il quando mo debia morire, ritrovo per la presente interrogatione che debe sequire la morte aut fra 22 di che sara ad 10 o 11 de Auosto [i.e. Agosto] per la coniunctione de Marte con Iove in la domanda, aut fra 15 di per il quarto aspe[c]to dela Luna ad Venera signora in la domanda dela casa dela morte, in modo che per via dela domanda me si dimostra non possa pervenire insino ala fine de Auosto, che cosi el nostro signore dio per la soa clementia permetta et conceda si per il bene publico chomeo per il privato. (Transcription mine, with some additions and modernized punctuation for ease of reading.) This letter is also transcribed in full in Gabotto 1889, 382f. (with some minor differences in the transcription of the original). Gabotto interprets the astrological prognostication as having been requested by the Pope himself. Given the often tense relationship between Milan and the Papacy, the delicate nature of astrological prognostications of this kind, and the reference to the fact that Varesi could not draw the nativity chart of the Pope (and thus did not have essential information for the accurate prognostication of his death) it is obvious that what Ascanio and Ludovico were doing was to probe the stars in the hope of anticipating the Pope's death, a highly illicit practice. For the more famous case of the prognostication of Pope Urban VIII's death, and the trial that ensued, see Dooley 2002. As is well known, in 1631 Urban VIII issued a long bull against astrological prediction later published under the title *Inscrutabilis*. On Varesi, see Cuomo 1987, and Azzolini 2004.

2 Ibid.: *Quanto ad la intelligentia et amicitia, quale ha ad seguitare con lo succesor del pontefice, respondo che la Illustrissima Signoria Vostra sara bene amata et gli parturera comodo pero che partendosse la Luna ultimamente da Iove, fu recepta dal Sole da sestile aspetto da casa propria del Sole, che denota la Excellentia Vostra dal successore essere amato chomo uno amico o vero parente quale alloggiasse in casa uno altro per farli conzo et servitio. Et questo e quanto in questo poco tempo ho potuto cavare per la virtute del celo et corpi celesti in queste cosse inferiore. De quale natura et quale conditione habia ad essere questo successore per la brevitade del tempo non ho ancora potuto comprendere; non perdero tempo per considerare et intendere questa parte, et trovato habia alcuna cossa, subito daro avviso ala Illustrissima Signoria Vostra a la quale humiliter me richomando.* (Transcription mine, as are all translations in this article, unless otherwise noted.)

3 ASMi, Sforzesco, Potenze Estere, Roma, cart. 106, Ludovico to Ascanio, Vigevano, 28 July 1492: *ne l' hora in la quale è scripto che 'l pontefice è manchato ascendeva*

other cardinals and cautious in choosing his allies. Confident in the influence of the stars, Ascanio exerted his political power among the Roman curia and succeeded in getting Rodrigo Borgia elected as Pope Alexander VI.

Varesi's prognostication is only one of many examples of astrological practice that can be traced in contemporary sources. Such stories reveal a worldview in many ways alien to our own, and reveal much more besides.⁴ They show how in the Renaissance politics was played at various levels, not only by making alliances and strengthening diplomatic ties, but also by using predictive arts such as judicial astrology (of which horary astrology was one mode of practice), which were believed to rest on sound 'scientific' principles.⁵ Among other things, therefore, this account is a story of the role of astrology in fifteenth-century political life. Varesi's interrogation reveals how horary astrology was skillfully exploited in political circles and suggests that, far from being irrelevant to our understanding of Renaissance Italy, astrology played an important role in shaping its history. This paper explores some of the ways astrology played a political role in the lives of early modern elites.

Judicial astrology was not the only branch of astrology employed to investigate somebody's health by studying the position of the stars and the planets in the heavens. Different competing astrological practices intersected in the Renaissance, all of which were employed to varying degrees in fifteenth-century Italy. The link between medicine and astrology had been established in classical times, and physicians since had relied on medical

Cancro, quale è ascendente de la Reverendissima Signoria Vostra, e che in la revolutione de li anni del mundo el medesimo Cancro era in mezo del celo, che è la casa regia; le quale due cose portendeno felicità alla Reverendissima Signoria Vostra in questa creatione. È vero che ne l'hora de la interrogatione mia dice che Saturno era in aspecti col significatore de la Reverendissima Signoria Vostra; la quale cosa fa che si possa dubitare che la Signoria vostra possa essere offesa o per avaricia o per infedeltà. For the context of this letter and the events surrounding the election of Cesare Borgia as Pope Alexander VI, see Pellegrini 2002, esp. I: 375-403. I rely here on Marco Pellegrini's transcription. Ludovico's letter is quoted at p. 376.

4 On the *long durée* of astrology as a body of knowledge, and qualifications as to its relevance in contemporary society, see the perceptive remarks of Anthony Grafton in Grafton 2000, 70-83.

5 Judicial astrology comprised natal, horary, and electional astrology. Natal astrology included the practice of 'annual revolutions' in which the astrologer calculated the client's prospects for the coming year on the basis of their birth chart; see Thomas 1973, 338f. In the Middle Ages and the Renaissance there was considerable confusion between interrogations and elections. The two were originally interrelated but distinct practices. Interrogations were used to determine the outcome of specific questions in terms of a figure (horoscope) drawn up for the moment when the question was formulated. Elections, on the other hand, studied the planetary positions in order to establish the most suitable time for beginning an activity. See Page 2002, 30-35, and Burnett 1996, 369-382, esp. 375f.

astrology to treat their patients.⁶ This is true also of Renaissance physicians, who turned to astrology in order to offer both a prognosis of a patient's illness and a remedy for their malady, as well as to explain the disease causally.

Although not all rulers and doctors embraced the practice of astrology uncritically or to the same degree, the existence of contemporary critiques of astrological practice and medical astrology does not seem to have convinced many physicians and their patients to reject medical astrology.⁷ This essay seeks to explore the way in which Renaissance elites relied upon astrological prognostication in matters of health. In doing so, it seeks to illuminate the role of medical astrology within the private and political spheres of Italian Renaissance courts, and put renewed emphasis on the vitality and importance of this tradition.

My analysis will concentrate on the practice of astrological medicine among one of the most important fifteenth-century European political elites: the Sforzas. I will approach this question within the context of ideas concerning the relationship between the stars and the human body that had emerged in the period 1200–1500. In attempting to explore this complex topic, I will first offer a concise overview of the major tenets of medical astrology and a brief outline of some of its key texts. I will then investigate this tradition by comparing university learning and court culture in Renaissance Milan. This comparison will reveal similarities and continuities between the university curriculum and the theoretical body of knowledge in the possession of the court physician-astrologer. I will then conclude my essay with a case study of

6 The first important ancient author to draw attention to the analogies between medicine and astrology was Ptolemy: in representing astrology as a stochastic *technē*, that is, an art which had carefully developed rules of conjecture, he said that it was like medicine. See Ptolemy 1940, I.2, especially pp. 13–19.

7 As Anthony Grafton and Nancy Siraisi warn, generalizations about medical astrology in the Renaissance are hazardous. See Grafton and Siraisi 2001, 110. Only further research on court astrology will be able to establish *to what extent* the Italian elites and their doctors relied on medical astrology. The fact that in the late fifteenth century there were a number of authors who openly contested the reliability of medical astrology seem to suggest that medical astrology was reasonably popular. This seems also testified by the rich manuscript and printed tradition. The most powerful critique of medical astrology was arguably that of Pico della Mirandola in his *Disputationes adversus astrologiam divinatricem*, first published in 1496, which dedicated a number of chapters to the topic. See Pico della Mirandola 1946, especially pp. 322–363. The debate generated by Pico's work certainly contributed to the renewal of medical astrology and engendered debate over the Galenic theory of the critical days. In relation to Pico, see Bellanti 1498, quest. 14, art. IV (*An critici dies a luna sint*). For an example of later debates see Fracastoro 1538 and Turini 1542. Turini was the *archiatra* of Pope Paul III. See also Steven vanden Broecke's essay in this volume for two seventeenth-century examples: Giovanni Antonio Magini and Andrea Argoli. For a useful discussion of some of the medical literature of the time and some ensuing debates, see also Grafton and Siraisi 2001, 69–131, esp. 77–92.

Gian Galeazzo Maria Sforza's illness that will illuminate the practice of medical astrology at court. My analysis will exemplify the uses to which astrological medicine could be put among leading elites. But before discussing the specific case of Milan, I will provide a general overview of the classical and medieval background to Renaissance medical astrology.

1. The Long Life of Medical Astrology

The literature on medical astrology has a venerable tradition that cannot be fully explored in the space of a short essay.⁸ This medical literature formed part of the flowering of astrology in Renaissance Italy more generally, and has been transmitted down to us in hundreds of different manuscripts and printed sources. The basic principle behind medical astrology was that the stars and planets exerted a noticeable influence on everything on earth, including plants and stones (Grant 1987; North 1987). A corollary to this theory was the principle that each part of the human body was influenced by a different sign of the zodiac and that each of the 'openings' of the body were influenced by one of the planets (Burnett 1996, 376). This theory was often visualized in medieval and Renaissance texts through drawings such as the "zodiac man" and the "microcosmic man."⁹ Theories of influence were particularly significant for the practice of phlebotomy as well as surgery, and could be extended to the administration of medicaments. As medication was composed of herbs and minerals, the relative influence of the signs of the zodiac and the planets on the medication's ingredients was another factor for the physician to consider when administering the treatment.

8 To the best of my knowledge there are no studies in English that address systematically the genre of medical astrology. Although single texts, or groups of texts, have been studied to some degree, medical historians have paid relatively little attention to this genre, and both the manuscript and printed traditions of the late Middle Ages and the Renaissance still await a major study. For illuminating studies on specific aspects of the topic (largely restricted to England), see Mooney 1984; Carey 1994; French 1994; French 1996; O'Boyle 1991; Grafton and Siraisi 2001. Ficino's *De vita libri tres* is arguably one of the most significant works of medical astrology of the Italian Renaissance. The literature in German is more extensive. See Weisser 1981; Weisser 1982; Müller-Jahncke 1985; Schadewaldt 1988; Welker 1988.

9 A survey of the iconographic tradition goes beyond the scope of this study. For a very popular example of a zodiac man, see Ketham 1491. The vernacular edition of Sebastiano Manilio is printed in Ketham 1493. For an example of microcosmic man see Page 2002, 52. See also Clark 1979.

One last aspect that pertained to medical astrology was the theory of critical days, which was related to solar and lunar cycles.¹⁰ It was believed that these cycles determined the days when crises would occur in an illness; for this reason, the manifestation of certain symptoms on certain days would allow the physician to make a more accurate prognosis as to the outcome of the illness. Because it was related to predictable cycles and cohered with the main tenets of astronomy, natural philosophy, and humoral theory, the theory of critical days proved particularly popular, and as such can be traced in medical and non-medical writings alike.

As a specific genre of medical writing, the literature on critical days can be further subdivided into two categories: one includes texts that are solely devoted to the theory of critical days; the other comprises texts where the authors embrace elements of this theory in their treatment of specific illnesses. As a classical example of the first category, one can mention the numerous commentaries or texts based closely on Galen's *De diebus criticis*, one of the most important and popular texts of medical astrology. Pertaining to the second category, one can look, for instance, at the numerous treatises on fevers that employ the theory of critical days in prognostication, as well as medieval and Renaissance commentaries on Hippocrates's *Prognostica*, ps-Hippocrates's *De medicorum astrologia*, and some of the aphorisms included in ps-Ptolemy's *Centiloquium*.¹¹

In addition to the transmission of these texts from classical antiquity, the Middle Ages inherited a rich tradition of Arabic and Jewish medicine that incorporated the theories of critical days within its theory and practice. Among the most influential Arabic works that propounded the theory of critical days, one should mention Avicenna's *Canon*, Averroes's *Colliget*, and Arabic commentaries on ps-Ptolemy's *Centiloquium*, while significant contributions were also offered by the Jewish tradition of the *De luminaribus et de diebus criticis* of Abraham ibn Ezra, and the *Liber de febribus* of Isaac Israeli.¹²

10 The study of the phases of the moon seems to have predated classical times and is common in popular lore. *Lunaria*, namely predictions or recommended activities for each day of the moon, as well as *zodiologia*, namely predictions based on the sign of the zodiac in which the moon falls at a given time, had wide circulation. For the Latin tradition, see Svenburg 1963. For the medieval tradition see Means 1993.

11 For an excellent survey of some of these texts, see dell'Anna 1999, I: 9–11. The ps-Hippocratic *De medicorum astrologia* was widely available in Pietro d'Abano's translation. For a printed edition, see d'Abano 1485. On this text, see Thorndike 1960; and Kibre 1978. On medical prognosis in the Middle Ages see also the recent article by Demaitre 2003. Demaitre, however, questionably argues for the minor role of astrology in medical prognostication.

12 See Avicenna 1555, Liber IV, fen. 2, tract. 2 (*De diebus crisi et horis eius*), cap. 1–10, fols. 449r–451r; and Averroës 1574, Liber IV, cap. 40 (*De diebus criticis*), fols. 76v–77r. For an extensive treatment of the Arabic tradition of the critical days see dell'Anna 1999, I: 10 [n. 15–16], and 83–153. Abraham ibn Ezra and Isaac Israeli

Despite the striking variations between authors and within different medical traditions (classical, Arabic, and Jewish), some elements of these astrological theories remained common to all. For instance, the passage of time as determined by the position of the planets in the heavens was an essential element of medical prognosis. The theory of critical days hinged on the relationship between the macrocosm (the heavens) and the microcosm (human beings), expressing a close connection between illness, time, and the position of the luminaries and planets. According to one of its basic principles, for example, acute fevers were due to the movements of the moon, while chronic fevers were due to those of the sun.¹³ The popularity and longevity of these theories within medical circles is attested not only by the numerous extant medical manuscripts, but also by the fact that the theory of critical days became one of the favorite topics of seventeenth-century academic prolusions and disputations (dell'Anna 1999, I:11).

Having offered a brief overview of medical astrology's main tenets, I shall now move to the investigation of its study at university and its use at court.

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- draw more extensive connections between astrology and the theory of the critical days. See Ibn Ezra 1507, fols. 71v-75v (with the title *Liber luminarium et est de cognitione diei critici seu de cognitione cause crisis*), and Israeli 1515, fols. 203v-226. For the manuscript tradition of Isaac's treatise on fevers see also Richards 1984. Isaac's *Theorica* in the same volume contains further references to the theory of the critical days and astrological medicine (Isaac 1515, Liber X, cap. 1-13).
- 13 Avicenna 1555, IV, fen 2, tract. 2, cap. 2 (*De causa dierum crisis et periodorum eius*), fol. 112vb states: *Plures quidem homines posuerunt causam in mensuratione temporum crisiū egritudinum acutarum ex parte lunae, et quod virtus eius est virtus incedens in humiditates mundi causans in ea species alterationis & adiuvans ad maturandum & digerendum: aut ad contrarium secundum praeparationem materiei [sic]. Et significant in hoc per dispositionem fluxus aquarum & refluxus & augmentationem cerebrorum cum augmentatione luminis in luna & velocitate maturationis fructuum, arborum & herbarum cum plenilunio eius, seu apparitione eius. Et dicunt quod humiditates corporis patiuntur a luna quare diversificantur dispositiones earum secundum diversitatem dispositionum lune.* Haly's commentary to verbum 60 of ps-Ptolomey's *Centiloquium* notes that: [*Ptolomeus*] *dixit quod esse solis in morbis prolixis sit sicut esse lune in acutis: quorum maius tempus erit orbis lune et in prolixis orbis solis.* On the action of the sun and moon in relation to the theory of critical days, see also Ysaac 1515, *Theorica*, Liber X, cap. ix, fols. 54r-55r (*De diversitate diei cretice secundum numerum et cursum lune*). See also dell'Anna 1999, I:124.

2. Reading Health in the Stars: From the University to the Courtly Library

In Italian universities, the teaching of *astrologia* (by which we should understand both astronomy and astrology) seems to have been foundational for the three major disciplinary areas in which the university curriculum of a student in *ars et medicinae* was structured: mathematics, natural philosophy, and medicine.¹⁴ Lectures in astrology were certainly part of the curriculum at Pavia, the *Studium* of the Duchy of Milan, and the *Rotuli* of the university generally indicate at least two teachers of astrology in any given year.¹⁵

2.1. Astrological Medicine at Pavia

Although we have a reasonably complete list of the names of the professors who taught at Pavia, unlike those of Bologna, the Pavia statutes of the College of Arts and Medicine do not provide much information regarding the texts studied. From the high mobility of the students and professors at Pavia, we can presume, however, that their course of study must have been similar to that of other universities such as Bologna, Padua, Pisa, and, to some extent, Paris.¹⁶ Before the *Studium* at Pavia was established, the citizens of the Duchy of Milan who wanted to pursue a university degree had no choice but to study ‘abroad,’ often choosing Bologna and Paris as their preferred institu-

14 For a discussion of the importance of astronomy/astrology in these areas, see Rutkin 2002, 1f.; ch. 2 (on astrology and natural philosophy); and ch. 3 (on astrology, medicine, and mathematics).

15 To give only some random examples: the *Rotuli* of 1399–1400 indicate the following: *M. Blazio de Parma legenti Philosophiam moralem, naturalem et Astrologiam*, *Magistro Iohanni de Catelonia legenti Astrologiam*, and *M. Francisco de Crispis legenti Astrologiam*. See Majocchi 1905–1915, I: 421f. The *Rotuli* of 1425 report under the rubric “Ad lecturam Astrologie”: *M. Petrus de Montalcino, legat in diebus festis*, and *M. Antonius de Bernadigio, legat astrologiam cum salario flor. XL*. Bernadiggio appears also on the same *Rotuli* as teacher of *phisica*, while Pietro da Montalcino also taught *ad lecturam extraordinariam Prattice*. See Majocchi, II/1, 221f. By 1439 Bernadiggio had risen considerably within the academic ranks and received 300 florins for his teaching *ad lecturam ordinariam Medicine*, but he was also still teaching *astrologia*. Pietro da Montalcino does not appear in the *Rotuli*, whereas a *Stephanus da Faventia* also taught *astrologia* together with Bernadiggio; Majocchi 1905–1915, II/1, 395.

16 It would be a mistake, of course, to assume uncritically that these universities did not have their own specificities. This, however, should not prevent us from assuming that the basic teachings were similar. One should also mention that despite the regular bans issued by most cities forbidding their citizens from studying at other *Studia*, this ban was often ignored or circumvented, at least partially. Often students spent time at another university before returning to Pavia to graduate, as in the case of the physician-historian Paolo Giovio; see Zimmerman 1995.

tions (Pesenti 1990, esp. 460f., and 467-470).¹⁷ Considering that in its early days some of the most influential professors of medicine had previously trained at Bologna, it seems safe to assume that the curriculum at Pavia was modeled to some extent on that of Bologna.

For our purposes, it is particularly significant that the Bolognese medical students had to study all three books of Galen's *De diebus criticis* during their first three years, and that as part of their training in astrology in their third and fourth year they studied medico-astrological texts such as Ptolemy's *Centiloquium* with Haly's commentary and Guillelmus Anglicus's *De urina non visa*.¹⁸ Although we cannot compare the Pavia and Bologna curricula in their entirety, at least for astrology there is substantial evidence that the curriculum at Pavia may not have differed considerably from that of Bologna.¹⁹ Evidence in support of this thesis can be gained by examining the

17 In the initial pages of this article, Tiziana Pesenti examines the early teaching at the University through two prominent teachers: Albertino Rinaldi da Salso and Giovanni Capitani da Vittuone. Here Pesenti argues that from Albertino da Salso onwards, because of his training at the University of Bologna, the University of Pavia showed a marked non-astrological character: "Da Albertino in poi la fisica soppiantò decisamente, nella produzione dei maestri pavesi, l'astrologia. Questa rimase la scienza della corte, mentre i professori dello Studio cominciarono da allora ad affiancare agli autori medici testi di filosofia naturale." And later, "L'interesse di Albertino per problemi di una fisica del tutto aliena da valenze astrologiche derivava dalla sua formazione bolognese ed anche la tendenza che egli esercitò sulla scuola pavese, isolando la tendenza astrologica rappresentata da Maino [Maineri], va inquadrata in un ambito più generale di relazioni tra Pavia e Bologna" (Pesenti 1990, 468f.). Although Nancy Siraisi (quoted by Pesenti) has drawn attention to the different medical models offered by Pietro d'Abano and Taddeo Alderotti, respectively the two most significant representatives of the universities of Padua and Bologna in the Middle Ages, one should be cautious to draw the conclusion that these medical models were mutually exclusive. Furthermore, Pesenti seems to see astrology as one monolithic practice, a concept that fails to recognize the complexities of this discipline, and ignores its profound relationship with medicine in the theory of the critical days. As I will discuss below, one could hardly argue that astrology was not part of the Bolognese curriculum. On Bologna, see Federici Vescovini 1998, I: 193-223. On Paris, see Jacquart 1992, 121-134. The astrological teachings in the Bolognese curriculum have been recently contextualized in Rutkin 2002, ch. 3. Rutkin presents a cogent and persuasive argument in favor of the centrality of astrology within the Bolognese curriculum. Although he does not address the issue of medical astrology in detail, his argument reaffirms the centrality of astrology within the Bolognese curriculum. On Astrology in the curriculum of Italian Renaissance universities, see now Grendler 2002, 415-426.

18 For the medical curriculum of Bologna, see Malagola 1888, 274-276.

19 "In astronomia primo anno legantur algorismi de minutis et integris, quibus lectis, legatur primus geometriae Euclidis cum commento Campani. Quo lecto, legantur tabulae Alfonsi cum canonibus. Quibus lectis legatur theórica planetarum. In secundo anno primo legatur tractatus de sphaera, quo lecto legatur secundus geometriae Euclidis, quo lecto legantur canones super tabulis de linerijs. Quibus lectis, legantur tractatus astrolabij Mes[s]a[chale] [sic]. In tertio anno primo legatur

notebook of Giovanni Battista Boeri, a medical student who also studied astrology at Pavia in the years around 1484.²⁰

Among other things, his notebook contains passages from a number of Arabic astrological texts, including Mesahalah's (Māshā'allāh's) *De revolutione anni mundi* and Haly Abenragel's *Tractatus de electionibus*; a *prognostico* by the Milanese court physician Gabriele Pirovano for the year 1484;²¹ a hypothetical exercise on how to cast a nativity; some unidentified medical rubrics of clearly practical orientation, such as "Electio pro sanguine missione" and "Electio pro pharmacis recipiendis"; drawings of the division of the phases of the moon after Sacrobosco's *Sphera*; Johannes de Lineriis's *Canones* (*Canones primi mobilis Johannis de Lineriis*); a treatise on physiognomics; Guillelmus Anglicus's *De urina non visa* (*De urina non visa et de concordia astrologiae et medicine et caeterae*); a rubric entitled "De prognosticatione morborum per crisim et alia signa"; a section that illustrates astrological aphorisms from the *Liber Almansoris* in the translation of Plato of Tivoli (*Explicantur amporismi in astrologia ab almansore saracenorum rege editi de arabico in latinum a platone tiburtio translati*);²² some other nativities, and some medical recipes.

Sacrobosco's *Sphera*, John de Lineriis's canons on the Alphonsine tables, and *De urina non visa* correspond to texts set for the second and fourth year in the four-year astrology course at Bologna.²³ From this manuscript we can infer that these astrological and medical texts were studied at Pavia. We can also speculate that Arabic texts such as Almansor's *Aphorisms*, Mesaha-

Alkabicuis, quo lecto legatur Centiloquium Ptolomei cum commento haly [sic]. Quo lecto legatur tertius geometriae, quo lecto, legatur tractatus quadrantis. In quarto anno primo legatur quadripartitus totus, quo lecto legatur liber de urina non visa. Quo lecto legatur dictio tertia almagestj" (Malagola 1888, 276).

20 British Library (henceforth BL), Arundel 88. On this manuscript, see also Thorndike 1923–1958, IV: 542, and Kristeller 1963–1996, IV, 127a. I plan to discuss this and other astrological manuscripts extensively in a forthcoming study on medicine and astrology at the court of Milan.

21 BL Arundel 88, fol. 29v: *Explicitus iudicium de 1484 editum a clarissimo artium et medicine doctore Ducali medico scriptum autem ab originali primo per me Johannes Baptistam Boerium artium et medicine studentem, nec non etiam astrologiam audientem*. At fol. 39v repeats a similar explicit adding that he is from Tabia (most likely modern Taggia, a small Ligurian town) and the son of "doctor domino Leonardus". The manuscript was compiled largely in 1484. Elsewhere in the manuscript he says that he is "profugus a Papie" because of the plague and resided in the Ligurian city of Valenza.

22 This section seems to correspond loosely to BNF Ms. Lat. 7307. *Capitula d'Almansor*, Latin trans. of Plato of Tivoli (XIII sec), fols. 18r–21v. This manuscript was in the possession of the duke of Milan; see discussion below.

23 "In secundo anno primo legatur tractatus de sphaera, quo lecto, legatur secundus geometrie Euclidis, quo lecto legantur canones super tabulis de linerijs. [...] In quarto anno primo legatur quadripartitus totus, quo lecto, legatur liber de urina non visa" (Malagola 1888, 376).

lah's *De revolutione anni mundi*, and Haly Abenragel's *Tractatus de electionibus* may have found their way into the curriculum of medieval universities. A number of these texts, furthermore, had obvious practical applications in medicine proper. Texts like the *De urina non visa* and other anonymous rubrics such as the "Electio pro sanguine missione," the "Electio pro pharmacis recipiendis," and the "De prognosticatione morborum per crisim et alia signa" are all clearly related to the practice of medical astrology, and were therefore particularly significant for Boeri.

So far I have illustrated the kind of astrological medicine that in all likelihood was taught at Pavia, and indicated that some of these texts coincided with those in the Bolognese curriculum. This in itself can help us gain a clearer understanding of the training of a Lombard physician after concluding his studies at the *Studium* of Pavia. In order to gain further insight into the intellectual and professional background of Lombard physicians, I wish to turn now to the duke's private library.

2.2. The Duke's Private Library

A comparison of the texts listed in the Bologna statutes with the astrological and medico-astrological texts housed in the ducal library at the Castle of Pavia shows a significant overlap. Among the texts listed in the Bolognese astrology curriculum,²⁴ the following volumes also appear in the inventories of the ducal library: one copy of Johannes de Sacrobosco's *Algoritmus minutis et integris*;²⁵ two copies of Campanus's commentary on Euclid's *Ge-*

24 See note 19 above.

25 Pellegrin 1955, 166. Bibliothèque Nationale de France (henceforth BNF), Ms Lat. 7363, *Consignatio* A, n. 409. Pellegrin's study is based on three inventories, dated 1426 (*Consignatio* A), 1459 (*Consignatio* B), and 1469 (*Consignatio* C, which includes only the texts owned by Galeazzo Maria Sforza that were added to the ducal library). Two other inventories have recently been discovered in the notarial archives at Pavia. These two inventories date to 1488 (inventory D) and 1490 (inventory E). On these inventories, see Albertini Ottolenghi 1991; and Cerrini 1991. Inventory D and E both list 947 items. Inventory A, which lists 988 books, offers a very detailed description of the books, often describing the colour and material of the cover, the kind of supporting materials (parchment or paper), their size and other precious details (damaged binding, illuminations, etc). It also includes, quite unusually for the time, both incipits and explicits of most of the books. All these details have contributed to the identification of a number of books in French and European libraries. Unless stated otherwise, I refer only to Inventory A in this article. It is interesting to compare this manuscript's content with Ms A. 51, sec. XIV, in the Biblioteca Comunale Archiginnasio, Bologna, which includes: Sacrobosco's *Tractatus de algorismo*, *Tractatus de sphere*, and *Tractatus de arte quadrantis*; Robert Grosseteste's *Tractatus de computo*; the anonymous *Cautelae in divinationum computatione* and *Tabulae de computo*, and ps-Boetius's *Tractatus de doctrina scholarium*.

ometry;²⁶ The Toledan Tables;²⁷ multiple copies of Johannes de Sacrobosco's *Sphaera*;²⁸ a copy of Robertus Anglicus's *Tractatus quadrantis*;²⁹ a commentary on Alcabitius's *Liber introductorius ad magisterium iudiciorum astrorum*;³⁰ a copy of ps-Ptolemy's *Centiloquium*;³¹ and a copy of Ptolemy's *Almagest* in the translation of Gerard of Cremona.³² Among the texts expounding the theory of critical days in the ducal library at the Castle of Pavia we can count an *Isagoge Ioannini et de diebus cresitis* [sic],³³ and a text by Galen entitled *Super de crisi* (that could have contained either Galen's *De crisibus* or the *De diebus criticis*, or possibly both).³⁴ Additional works relevant to the practice of medical astrology include: *Tabula medicorum ad inveniendam lunam in signis gradibus et minutis mediocris voluminis coperti*

- 26 Pellegrin 1955, 130. A n. 255 and n. 256, respectively *Campanus super geometria Euclidis copertus corio pavonacio levi ad modum parisinum*, and *Euclidis geometria cum planisphero Tholomei copertus corio rubeo levi* (now BNF, Ms Lat. 7214). This second manuscript not only contains Euclid's *Geometry* with Campanus's commentary, but also Messahala's *Libellus interpretationum de interrogationibus*, Thebit ben Corat's *De motu octave sphere*, and Ptolomey's *Planispherium*.
- 27 Pellegrin 1955, 166. A n. 410 (BNF, Ms Lat. 7409: *Liber tabularum tolemtinarum parvus copertus assidibus cum fondo rubeo*).
- 28 Pellegrin 1955, 136f., 166, 287. A n. 290 (BNF, Ms Lat. 7267); n. 409 (BNF, Ms Lat. 7363); n. 971 (BNF, Ms Lat. 7400).
- 29 Pellegrin 1955, 137. This text is also part of A 290, BNF, Ms Lat. 7267, entitled *Alfreganus cum tractatu in spera et Alberto de mineralibus copertus corio rubeo*. Other astrological texts included in this manuscript include an anonymous *Liber de iudiciis in astrologia* (possibly Haly's text); *Canones in motibus super celestium corpora* (possibly De Lineriis's *Canon*); Thebit ben Corat's *De recta imaginatione sphaerae coelestis*; and Alfraganus's *Liber de aggregationibus scientiae stellarum*.
- 30 See Pellegrin 1955, 136. A n. 287: *Scriptum super Alchibizio cum quibusdam tabulis astrologie in papiro forme magne non ligat. cum assibus*. The inventory of 1459 (*Consignatio B*) adds the name of the commentator John of Saxony, leaving no doubt that we are dealing with Alcabitius's *Introductorius* and not any other work by the same author.
- 31 Pellegrin 1955, 129. A n. 251 (BNF Ms. Lat. 7307). The *Centiloquium* with the commentary of Haly (Ali Ibn Ridwan, ca. 998-1067) became one of the most influential texts within this tradition. For a list of manuscripts in the major European libraries, see dell'Anna 1999, 137 [n.2]. For the first incunabulum, see *Opera astrologica varia* (Venetiis, 1493), which contains the *Centiloquium* together with other Arabic and Jewish astronomical texts. This printed edition, whose contents mirror to some extent Ms 7307, must have been based on a manuscript of the kind analyzed in Pesenti Marangon 1978. For a discussion of this manuscript, see also Rutkin 2002, ch. 3, 139f. For a modern critical edition of the Greek text, see *Pseudo-Ptolomei fructus sive centiloquium*, in Boer 1952.
- 32 Pellegrin 1955, 138. A n. 292 (Ms Lat. 7258). *Almagestum Tolomei copertum corio rubeo levi*.
- 33 Pellegrin 1955, 170. A n. 431. Possibly now BNF, Ms Lat. 7038, a manuscript version of Taddeo Alderotti's commentary on the *Isagoge*. On its content, see dell'Anna 1999, 17f.
- 34 In the Middle Ages the main tenets of these two texts are often combined in the *Aggregationes de crisi et ceticis diebus*; see O'Boyle 1991.

carta,³⁵ *Tabule pulcherrime pro contemptu de sole et luna*,³⁶ and *Tabula quedam de luna*,³⁷ together with numerous other Arabic and medieval texts that included medico-astrological concepts such as Avicenna's *Canon*, Averroes's *Colliget*, and Razes's *Liber Almansoris*.³⁸

The ducal library obviously constitutes a privileged source of information on texts the court physicians may have consulted. The comparison with the Bolognese curriculum, however, reveals much more. It indicates those texts that in all likelihood were also at the core of the curriculum of medicine and astrology at Pavia.

The correspondence between the holdings in the ducal library and texts studied and taught at Northern Italian *Studia* should not be surprising. Some of the most esteemed court physicians held positions at the University of Pavia. Furthermore, the duke himself heavily influenced the politics of the *Studium*. The constant intervention of the ducal authority in the life of the *Studium* is well documented, not only regarding the appointment of professors to the *Studium*, but also in relation to litigation between members of the university, regular impositions upon a *collegium* to accept a new member, or upon the *Studium* to confer a degree.³⁹ Additionally, during Ludovico il Moro's rule, Ambrogio Varesi da Rosate, his most famous court astrologer, was put in charge of university hires, most likely strengthening any astrological leaning at the *Studium* (Cuomo 1987, 28). Clearly there was no sharp separation between university and court medicine, and there is substantial evidence demonstrating that a number of prominent physicians moved comfortably between these two spheres.⁴⁰

3. Physicians at the Bedside: The Practice of Prognostication

So far I have examined the perceived importance of astrological medicine within the university curriculum of Pavia as well as at the Sforza court. It was in everyday practice, however, that the full political implications of medical

35 Pellegrin 1955, 136. A n. 288.

36 Pellegrin 1955, 294. B n. 103.

37 Pellegrin 1955, 294. B n. 105.

38 See Pellegrin, 1955. There were multiple copies of all these texts: Avicenna's *Liber Canonis*, A 481, 487, 489 (?), 491, 801, 802; Averroes's *Colliget*, A 436, 484; Razes's *Liber Almansoris*, A 455, 490.

39 The University of Pavia is the sole Italian university to maintain a collegiate system to the present day. For the intervention of the duke, see Sottili 1994, 146f., and *passim*; and Sottili 1982.

40 See Azzolini 2001. See also Crisciani 2003, and, on Italian physicians more generally, Palmer 1981 and Pesenti 1997.

astrology emerged. It is therefore time to turn to private correspondence that bears witness to the practice of medical astrology in fifteenth-century Milan.

As noted before, one of the staples of astrological medicine was the theory of critical days. In what follows I will concentrate on one particular incident, in which we can observe the practical application of the theory of critical days and other types of medical astrology. My case study centers on the illness and death of Gian Galeazzo Maria Sforza (1469–1494), duke of Milan from 1476–1494. The various phases of the illness were characterized by persistent fevers that eventually led to his death in 1494. In reading the thick web of correspondence between the physicians and courtiers attending the duke, his wife Isabella d'Aragona, and his uncle Ludovico, we can gauge the personal and political implications of the duke's health. Only at his death in 1494 did Gian Galeazzo's uncle and custodian, Ludovico il Moro, officially receive the title of duke of Milan. And it seems no coincidence that it was in 1494 that France, with the support of Ludovico, invaded Italy, occupied Naples, and finally—in an unexpected turn of events—attacked its erstwhile ally Ludovico.⁴¹

From the correspondence it is evident that the disease, which never fully abandoned the young duke from an early age, followed a regular cycle. References to the day of the illness are very common in the correspondence. In addition, the fevers alternated between cold and hot. Furthermore, while the disease was progressing, reference was often made to the expulsion of excess humors. All these elements are present in the treatment of fevers in Galen's *De diebus criticis*. Additionally, one can presume that Gian Galeazzo's physicians erected a celestial figure (or horoscope) at the time of the onset of the disease, its decumbiture.⁴² It is therefore worth following some of this correspondence.

Gian Galeazzo often wrote personally to his uncles Ludovico and Ascanio to inform them about the progress of his illness. In the fall of 1483, for example, Gian Galeazzo himself informed his uncle Ascanio of his poor health with the following words:

As I wrote to you in other letters, today—which is the *fourth day*—a certain alteration (*alteratione*) appeared, which was accompanied by cold and hot fever. All day yesterday and tonight we felt very sick and unwell until the 9th hour, to the point that it was too much for our *complexion* and young age. Nonetheless, around the 9th hour it started to get better and we have been feeling quite well for the remaining part of the day. For this reason we rest our hopes in the divine clemency that we will sail to a safe harbor and be free from this condition. And to reassure you we wanted to inform you, so that if you have read otherwise you

41 On the events preceding the invasion of Italy, see the numerous essays in Abulafia 1995a. The full political implication of Gian Galeazzo's death and his relationship with Ludovico (including Ludovico's alleged poisoning of Gian Galeazzo) are explored fully in a forthcoming article.

42 For an illuminating analysis of this practice in the late sixteenth century, see Grafton and Siraisi 2001, esp. 69–72.

can have some peace of mind and you can communicate this to the illustrious duke of Calabria [Alphonso of Calabria, later Alfonso II, King of Naples; father of Gian Galeazzo's future wife Isabella].⁴³

The following day Ludovico wrote to his brother Ascanio with more news on the health of their nephew. Gian Galeazzo was still sick, but the physicians were hopeful he would soon recover:

Around the 17th hour this Illustrious Lord started feeling cold, and then hot, and this condition persists up to now, the 24th hour. The *paroxysm* has been much less significant than that of the day before yesterday and although the *matter expelled* (*materia peccante*) is of such a nature that shows the illness to last a few more days, nonetheless the doctors hope to bring His Excellence to a safe port. They have not yet ordered to give him the remedy as they are waiting for Nature to take its course, which so far has been very successful, and *to let the present conjunction pass*, because, as the moon is [in conjunction] with Mars, this would negatively affect the remedy (*faria furere la medicina*).⁴⁴

As noted earlier, astrological medicine was also associated with the administration of herbal treatments. Within this framework, some medications needed to be administered at certain times and not others so as to ensure maximum efficacy and the positive influence of the stars. The unfavorable conjunction of the moon with Mars would have had a negative effect on Gian Galeazzo's health and therefore the doctors had suggested waiting a few days before administering it.

The disease was explicitly set within an astrological framework on other significant occasions. For instance, on 2 October 1483 Gian Galeazzo himself wrote as follows to his uncle Ascanio:

43 ASMi, Sforzesco, Potenze Sovrane (henceforth SPS), cart. 1464, n. 329. Gian Galeazzo Maria Sforza to Ascanio Sforza, Milan, 28 September 1483: *Come per altre ve scripsimo essendoci sopravvenuta hoggi el quarto giorno certa alteratione cum la febre freda et calda in vero tutto heri et questa nocte passata fin ad le nove hore ci dede grande ambastia et passione in tanto che ne pariva pur troppo alla compressione [sic] et età nostra de adolescentia. Nondimeno circa le nove hore commenzo ad fare miglioramento et cusi per tutto hoggi siamo stati assay bene. <Per la ta> cosa speramo in la divina clementia reuscirne ad bono porto et presto remanere libero. Et pero ad vostra consolatione vi ne havemo voluto dare noticia advio se fusse stato scripto altramente ne possiati remanere cum lanimo reposito et de cio ne comunicarere cum lo Illustrissimo Signor Duca de Calabria.* (Transcription and emphasis mine.)

44 ASMi, SPS, cart. 1464, s.n. Ludovico il Moro to Ascanio, Milan, 29 September 1483: *Circa le xvij hore sopragiunse el freddo ad questo Ill.mo Signore et poy el caldo el quale gli dura ancora ad questhora 24. El parocismo e stato asay minore de quello de lalterheri et benché la materia peccante sia de natura che dimostra dovere protrahere el male qualchi di, nondimeno sperano li medici ridurre la excellentia sua ad bon porto. Non se e ordinato ancora darli medicina per expectare quello possi fare la natura da se la quale fin qua se e aiutata asay bene et etiam per lassare passare la presente coniunctione in la quale trovandosi la luna con marte faria furere la medicina.* (Transcription and emphasis mine.)

In reply to what you wrote in your letters of the second-last day of the previous month, expressing your sympathy for our *alteration and fever*, we say that we are absolutely certain that your Highness and the illustrious lord the duke of Calabria our father were very upset. In the beginning [this illness] caused us much pain and discomfort, but since Sunday we have felt much better and we are now without fever. Since yesterday we have had a few lines, and we believe the reason is the *combustion of the moon*. Thank God around the 22nd hour it went away and we hope in His clemency that we will soon be free from it as it has been much more moderate than in the beginning.⁴⁵

The terms *alteratione*, *compressione*, *parocismo*, and *materia peccante* in the correspondence are all part of a specialized technical vocabulary used to explain the theory of critical days (dell'Anna 1991, I: *passim*). The combustion of the moon refers to the moon's position in relation to the sun: if it is within eight and a half degrees, it is *combusta* (i.e. burnt), an aspect that often leads to complications (Burnett 1996, 376).

Far from presenting a technical and lucid medical explanation, however, these letters use a lightly textured medical jargon. While they do include medical theories and terminology, they do not discuss it in the same lucid and compact prose that one finds in the medical treatises; but this is hardly surprising. As the record of oral conversation, and the result of a medical discourse aimed at people with no medical training, these stylistic and rhetorical features are to be expected (cf. Crisciani 2001, 695f.).⁴⁶

Gian Galeazzo's illness fits the mould of Galenic fevers. According to the Galenic tradition, the cycle of a patient's pathology started from the moment the fever appeared. The cycle lasted twenty days, and it could be repeated numerous times.⁴⁷ Gian Galeazzo told Ascanio that his *alteratione* appeared on the fourth day of the cycle. According to the theory of critical

45 ASMi, SPS, cart. 1464, n. 332, Gian Galeazzo to Ascanio, Milan, 2 October, 1483: *Respondendo ad quanto me scrive la signoria vostra per le soe del penultimo del passato condolendose de la alteratione nostra de la febre dicemo che siamo certissimi che sua signoria insieme con quello Illustrissimo signore Duca di Calabria nostro patre ne habino havuto displacentia et in vero al principio la ce dede grande affano et ambastia. Pur da domenica in qua semo stati assai meglio et infine tutto martedi continuamente facessemo miglioramento et se troviamo in tutto mondi de febre. Da heri in qua ne havimo pur sentita uno pocho delche credemo sia stato casone la combustione dela luna. Pur per gratia del nostro Signore dio circa le xxii hore hogi ne fumo remasti necti et speramo in la sua clementia che ne remaneremo presto liberi perche la e stata molto piu legere che non fu in li principij.* (Transcription and emphasis mine.)

46 Crisciani's argument that theory does not appear in this type of correspondence is based on a small sample of correspondence from the Milanese archives. A larger study reveals variations of the kind examined here that complicate the picture.

47 Galen makes a distinction between the *mensis medicinalis* and the *mensis lunaris*. See dell'Anna 1999, ch. I; and Galen, *De diebus decretoriis*, 3.9, in Kühn 1964–1965, IX, 928–933. Galen's treatment of this theory did not receive a sustained critique until the sixteenth century, when the Milanese physician Gerolamo Cardano openly challenged Galen's 'medicinal month'; see Grafton and Siraisi 2001, 89f.

days, the fourth day was considered a *dies indicativus*, namely a day when the symptoms of the disease appear and allow the physician to establish the illness's progression.⁴⁸ In the *De diebus criticis* Galen establishes a complex set of relations between the progression of the illness and the signs that appear on the patient's body. The signs can be positive or negative, and this will establish the final outcome of the illness.

Galen's theory of critical days incorporates Greek humoral theory and semiotics within a mathematical framework, indicating a primary developmental factor of the illness and its manifestation in the *concoctio* of the humors. The sooner the patient shows the *signa concoctionis* the better, as the illness will be shorter.⁴⁹ Hence, Gian Galeazzo's allusion to *compressione* (by which he probably meant *complexione*) and his uncle's reference to *materia peccante* are explicit references to humoral theory and to the idea that, according to the theory of critical days, the early expulsion of excess humors was an essential part of the illness's progress toward recovery.

According to the tenets of classical astrology, the moon was associated with the element of water, and, as a consequence, with all the liquid elements of the human body, namely its humors.⁵⁰ Despite the strong relationship between the position of the moon and the progression of the illness, other factors could intervene and upset this delicate balance. Among these factors, ps-Ptolemy mentioned food (*cibus*), anger (*ira*), and physical exercise (*labor*), but also, significantly, the position of the other planets.⁵¹ The

48 According to this theory, the *dies indicativi* are the fourth, eleventh, and seventeenth day of the cycle (which, as noted, starts at the appearance of fever). The seventh, fourteenth and twentieth days are the *dies iudicativi*, namely those days when the doctor will be able to determine the outcome of the illness (these are, in effect, the critical days, the *dies critici*). If the cycle were protracted beyond 120 days, the fever would be declared chronic; otherwise it was considered acute. For a treatment of these complex aspects of the theory, see dell'Anna 1999, 48-76. See also *Aphorisms* 2.24 in Hippocrates 1979, Bk 4, 115; and Galen, *De diebus decretoriis* 2.3, in Kühn 1964-1965, IX, 848-852.

49 Galen, *De diebus decretoriis*, 1.11 in Kühn 1964-1965, IX, 818-831, esp. 818-820.

50 For the influence of the moon, see Galen, *De diebus decretoriis*, 3, esp. 2-7 in Kühn 1964-1965, IX, 901-913, and note 13 above.

51 Ps-Ptolemy 1493, fol. 112rb-va, Verbum 60. *dierum creticorum et determinabilium egri: Albaharim sane et certe sunt hore quibus declarantur mutationes morborum ad bonum vel ad malum velociter. Et sunt loca lune in angulis quadrati conclusi a circulo directo. Alterationes vero que precedunt has et indicant sunt loca lune in angulis habentibus XVI latera et hoc postquam precesserit esse egritudinis, secundum equalitatem sine interpretatione, et non acciderit aliquid exterius quod conturbet infirmum, destruat vel noceat ut cibus, ira, labor et huiuscemodi. Cum igitur invenerimus huic fortunam scilicet in predictis angulis, hora principii egritudinis tam de fixis quam de erraticis significabit alterationem prosperam. Si vero infortunam alterationem adversam nisi fuerit egritudini ipsa infortuna contraria in suo hain [sic] scilicet infortuna. Luna vero in his angulis significat*

conjunction between the moon and Mars mentioned in Ludovico's letter was not deemed a positive one: Mars's excessive dryness would have exerted an influence opposite to the moon's positive effect on the humors.⁵²

Many more letters on Gian Galeazzo's health followed over the years until he died in 1494. Always prone to poor health, he fell seriously ill in 1492 and a wealth of correspondence offers invaluable insight into the progress of the illness that ultimately led to his death. From 1492 until the moment of his death, his health never improved. According to the ducal physicians Gabriele Pirovano and Nicolò Cusano, who took care of Gian Galeazzo in the years and months preceding his death, this was due both to the influence of the heavens and the concurrent eclipse, but also to Gian Galeazzo's own ill-fated nativity:

Illustrious and Excellent Lord most Distinguished, after the notice [we sent] at the 17th hour, the Illustrious Duke woke up again at about the 18th hour and we think he did not look restored as we expected after his meal and some sleep. Rather, he looked very weak, and, having given him a bit of broth, soon after he had a violent jump and a tremor in his stomach and he let off some air from his mouth; this was accompanied by some noise of water that one could hear moving. Further, he had a twinge and a sense of suffocation that affected the liver and the spleen with a rather sharp pain in the liver if pressed. But it stopped, and the noise appeared to descend to the intestines, which is a worrying sign in medicine for we have very few remedies [for it.] But we will carry on [caring for him], especially because of the *terrible influence of the heavens*, both because of the *eclipse and the direction of his nativity* as his Highness knows from past experience because "etiam in medicina solus casus virtutis est per se signum malum." We will continue with the proper and necessary remedies for as long as we can, and we won't fail to inform you of that which ensues and make provisions for that which happens and may occur easily in these circumstances. And if this happens, it is not in our power to restore his health, but he will be in clear danger of dying immediately—God forbid.⁵³

morbos acutos. Sol vero prolixos. Et similiter omnis planeta secundum mores proprios significat. (Emphasis mine.)

52 See Ptolemy 1940, I, 5: "[...] because two of the four humours are fertile and active, the hot and the moist (for all things are brought together and increased by them), and two are destructive and passive, the dry and the cold, through which all things, again, are separated and destroyed, the ancients accepted two of the planets, Jupiter and Venus, together with the moon, as beneficent because of their tempered nature and because they abound in the hot and the moist, and Saturn and Mars as producing the effects of the opposite nature, one because of his excessive cold and the other for his excessive dryness". Also, Ptolemy 1940, III, 10-12. See also Galen, *De diebus decretoris*, 3. 6 (in Kühn 1964–1965, IX, 911f.): *Si enim ad planetas temperatos steterit, quos jam nominant, salutare faustos ac bonos dies producere, si ad intemperatos, graves molestosque*. On the influence of the moon in different signs of the zodiac, see Galen, *De diebus decretoris*, 3. 5-6 in Kühn 1964–1965, IX, 908-913.

53 ASMi, SPS 1464, n. 195, Pavia, 20 October, 21 hour, 1494. Nicolò Cusano and Gabriele Pirovano to Ludovico: *Illustrissime et excellentissime domine nostre colendissime, dopo lo avviso de hore 17 lo Illustrissimo duca se resveglio circa hore 18 et ad noy non ce parso redonato alla virtute secundo che speravamo dovesse fare dopo tale refectiione et sompno [sic] ma ne pariva quodammodo*

The stars were not with Gian Galeazzo (and probably never had been). On October 21 a series of letters to Ludovico announced his death. On the following day Ludovico proclaimed himself duke of Milan and took official control of the duchy at a crucial point in the history of the Italian peninsula. The disastrous results of his rule, most notably the French invasion of Italy in 1494, can hardly be overestimated (Abulafia 1995b). Milan was occupied by the French army in 1499 and Ludovico was forced to flee. Finally captured while trying to cross the mountains and seek refuge with the emperor, he died in the Castle of Loches in 1508 (Abulafia 1995b, 24). It seems that neither Ludovico nor his astrologers and physicians could predict the events that had ensued.

4. Conclusion

As this essay illustrates, astrology could be employed in many different ways in the Renaissance. At court, however, astrology was often closely connected to both political practices and the health of the ruler. Without a doubt, medical astrology retained a certain prominence in both the curricula of Northern Italian universities, and in cities, as well as in the daily practice of Italian physicians. Far from being solely a theoretical body of knowledge, medical astrology was regularly employed in the treatment of illness and in medical prognostication. Its conjectural nature was disguised by fashioning astrological medicine in the language of astronomy and mathematical computation. At the same time, the complex nature of the art allowed the physician significant flexibility for adjusting the course of his prognostication and hence of his treatment. For this reason, medical astrology offered more reassurance than other branches of medicine. By determining the influence of the planets on the human body and thus resorting to different astrological practices, the phy-

opressa piu la virtute et multo debile et havendoli dato uno pocho de stilato fra pocho li sopravene uno salto et moto tremulo nel stomaco cum una gurgitatie di ventositatie et strepito di aqua che sensibilmente se sentiva muovere et li faceva dolore et suffugatione che comunicava al fidago et ala milsa cum dolore maggiore nel fidago al tohare; pur cessava et pariva descendesse tale rugito ad le intestine, cosse che sono di grande timore in medicina, et che haveriemo poche o nulle medicine. Continuaremo maxime stando etiam lo influxu horribile di celo et per ecclipse et per directione di la nativitate cum se vostra excellentia per il passato perche etiam in medicina solus casus virtutis est per se signum malum noy continuaremo li remedij apportuni et necessarij quanto poteramo et non li mancharemo di previsione ali casi futuri et provedere ad quello poria accadere continue et sopravvenire di novo facelmente in tale caso che poy accadendo non saria in nostra libertate la reductione ma seria in manifesto periculo di manchare subito che dio non voglia. (Transcription and emphasis mine.)

sician-astrologer could both foretell the progression of an illness and offer the more risky life or death prognostications. It was only political acumen, however, that could have saved Ludovico from his fate.

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Evidence and Conjecture in Cardano's Horoscope Collections

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1. Introduction

Sometime around 1540, the Nuremberg publisher Johann Petreius approached Girolamo Cardano to prepare a new edition of two astrological treatises by the Milanese polymath.¹ The first of these tracts, *De supplemento almanach*, called for greater sophistication in the use of planetary ephemerides by teaching practitioners to inspect the heavens for themselves.² Its complement, entitled *De temporum et motuum erraticarum restitutione*, focused on the observational correction of planetary parameters. Cardano was out of his depth in accomplishing this last goal, but the new German editions of these works brought him great fame anyway.³ This success derived in no small part from his decision to append a series of remarkable genitures to his booklet. By 1543, a sizeable collection of 67 birth charts had begun to dwarf the original content of the *libelli duo*.

Cardano's German horoscope collection benefited strongly from two local developments: on the one hand, a preoccupation with the collecting of celebrity genitures in the volatile diplomatic context of the Holy Roman Empire; on the other, Philip Melanchthon's promotion of astrology as a key component of Lutheran higher education.⁴ At the same time, Cardano de-

1 On the publication history and content of Cardano's *Libelli duo*, see Grafton 1999, 57-70 and 77-87. I would like to thank Patrick Curry and H. Darrel Rutkin for their stimulating comments on an earlier version of this paper.

2 Cardano 1663, vol. 5, 587a: *Si locus Planetæ certus habetur, locum fixæ hic in tabula cognosce, ac eius latitudinem: deinde considera in Almanach, quando planeta talem gradum & minutum adipiscetur, quo tempore etiam stella illi coniungetur.*

3 For Cardano's limitations in the observational improvement of mathematical astronomy, see Cardano 1663, vol. 5, 11: *Vtinam nobis ex superis aliquis reuelaret exactam motuum coelestium vicissitudinem: at postquam id fieri minime contingit, tentabimus per proximiores accedere coniecturas.* (My emphasis.)

4 See Warburg 1920; Kusukawa 1995, 124-173. Cardano's views on astrology are sometimes reminiscent of Melanchthon. See, for instance, Cardano 1663, vol. 5, 93:

fended his decision to publish his horoscope collections with a pedagogical position that was far removed from standard academic ideals in as far as it favoured practical judgment over disciplined theory:

Without boasting, it can be claimed that anyone who does not understand the future with this brief yet packed booklet, will also fail to understand it with a multitude of books. Since the art is infinite, it must be taught through judgment, not discipline.⁵

This quote has been adopted as a motto in Kocku von Stuckrad's masterly synthesis of the history of astrology. According to von Stuckrad, Cardano realized that astrology is more of a hermeneutic than a mathematical practice, which seeks to generate a convincing image of one's personality through a dialogue with the client. This interpretation attributes the credibility of astrology to the social dimension of judgments, and questions the relevance of categories like 'true' or 'false' (von Stuckrad 2003, 366-368). Patrick Curry has recently defended a similar view, which also turns to recent work in science studies for inspiration (Willis and Curry 2004, 118). Curry proposes an interpretation of astrology as cunning knowledge (*mêtis*), in which the ritual of preparing and interpreting an astrological map *constitutes* the meaning of the different factors in that map. Accordingly, "metic truth" cannot be measured, explained, universally applied, nor taught (Willis and Curry 2004, 97 and 104-106).

Cardano is thus appropriated as one who anticipated the most recent views on the epistemology and scientific status of astrology. It is the purpose of this paper to examine this operation by studying Cardano's offhand remark within the original context of the published horoscope collections. Were these collections symptomatic of a Renaissance revaluation of hermeneutics over mathematics, of therapy over theory? Were two millennia of astrological theory- and truth-seeking exposed as window dressing and divergence from a *prisca astrologia* where divinatory rituals reigned supreme? In other words, do these texts (written in an era when the academic status of the art shifted from a rational to an irrational pursuit) justify the aforementioned views on astrology?

Est autem ars haec Philosophiae pars prognostica & praecognoscere docens, unde non uerè scientia, sed ut ad medicinam se habet liber praedictionum Hippocratis aut Galeni, ita hic ad totam Philosophiam.

- 5 Cardano 1543, fol. A3v: *Atque illud citra iactantiam dictum sit, qui huius libelli compendiosa breuitate futura non intellexerit, neque ea quàm numerosa librorum multitudine intelliget. Nam cum infinita sit ars, iuditio non disciplina doceri potest.* All translations are mine unless otherwise noted.

2. Experiment and the Challenges of an Infinite Art

In the aforementioned quote, Cardano emphasized the practice of judgment as a solution to the problem that “the [astrological] art is infinite.” What was Cardano’s understanding of an ‘infinite art’ and its specific challenges? Two passages in his collected works are particularly helpful to elucidate this question. The first *locus* is Cardano’s commentary on the famous opening phrase of the first Hippocratic aphorism, “Life is short, science [*ars*] is long; opportunity is elusive, experiment is dangerous, judgment is difficult.” Cardano interpreted this as a warning that time was not on the rational physician’s side, because of the ever-changing conditions of disease and the limited life-span of the physician. The solution to this problem, he added, was to privilege the composition and study of aphorisms (Cardano 1663, vol. 8, 217f.). The second passage occurs in Cardano’s commentary on Ptolemy’s astrological manual *Tetrabiblos*, where Cardano distinguishes two ways of interpreting a natal chart. The first mode, practiced by the Egyptians and Arabs, proceeds by combining specific signs into a syndrome that can be retrieved in an authoritative textbook.⁶ According to Cardano, Ptolemy was right to call this procedure “infinite.” In the alternative mode, the astrologer combines specific signs into an original syndrome, on the basis of a specific point in the natal chart, rather than the textbook (Cardano 1663, vol. 5, 246a).

This highlights two crucial dimensions of Cardano’s understanding of an ‘infinite art.’ The second passage suggests that the infinity of the astrological art was linked with a specific (“Arabic”) interpretive practice, which proceeded on the basis of a myriad number of available syndromes and corresponding ‘ready-made textbook probabilities.’ The (“Ptolemaic”) solution consisted in allowing the interpreter to ‘invent’ his own syndromes and corresponding probabilities from a more restricted textual repertoire. The first passage adds a second dimension by suggesting that these solutions are most efficiently embodied in aphorisms.

A shift in the structure of Cardano’s horoscope collections documents the genesis of this view. In the first German edition of the horoscope collection, the *Libelli duo* (1543), Cardano started out by identifying a single, extraordinary trait in each of the 67 people whose horoscopes he published and interpreted.⁷ For instance, the natal chart of Charles de Bourbon-Montpensier

6 ‘Syndrome’ here denotes a collection of signs that can help us to infer a hidden cause. For the meaning of related technical terms like ‘signs’ and ‘probability,’ see Maclean 2002, 149.

7 See Cardano 1543, fols. A2r-A3r (table of content), and fols. A3v-A4r: [...] *nempe in his primo omnis mortis uarietas expressa est, ueneni, fulguris, aquae, publicae animaduersionis, ferri, casuum, morborum: tum & circa illa tempora diuturna, breuia, media: tum uariae nascendi formae geminorum, monstruosorum, posthumorum, spuriorum, eorumque quibus in puerperio materia extincta est: tum etiam*

was announced in the index to the collection as “belonging to one who was killed and deserted his king.”⁸ This specific biographical focus allowed Cardano’s interpretation to proceed from specific astrological elements in the chart, such as the seventh house, the ‘terms’ of maleficent planets, and maleficent directions. In doing so, Cardano effectively selected his own syndromes of signs and relevant probabilities. On the level of astrological teaching, Cardano interspersed specific pieces of his repertoire of astrological *doctrina* throughout the horoscope collection. The interpretation of Bourbon-Montpensier’s fate, for instance, provided the occasion to insert a didactic poem explaining the distribution of planetary terms in the zodiac (Cardano 1543, genitures 27 and 28). In other words, the “teaching *through* judgment” of which Cardano spoke in our initial quote was still equivalent to a teaching *of* disciplined doctrine. The 1543 collection ‘invented’ specific interpretations of horoscopes, but taught a fairly traditional textual repertoire, albeit one that exchanged a “multitude of books” for a “brief yet packed booklet” in the best Ptolemaic tradition. In other words, Cardano stuck to the first dimension of the ‘infinite art.’

But when Cardano published a new, expanded version, called *Libelli quinque* (1547), he substantially modified the relation between invention and teaching. This happened when he announced the existence of ten books *De iudiciis astrorum* that contained his complete astrological teachings.⁹ This announcement enabled Cardano to explain the genesis of the *Libelli quinque*: “Thus I believe to have followed a unique mode of both discovering and teaching the discipline [of astrology]; that is, linking its principles with the principles of philosophy, and its decrees (*decreta*) with experiments.”¹⁰ Cardano’s attitude of 1543 can still be recognized in the notion that astrological teaching should proceed by linking its “decrees” with the practical experience of judgment. But a notable expansion occurs in the statement that this also

morum, timidi, temerarij, prudentis, stulti, daemoniaci, fallacis, simplicis, haereticorum, furum, siccariorum, pediconum, cinaedorum, meretricum, adulterorum: atque etiam circa disciplinas, rhetorum, iureconsultorum, philosophorum, quique archiatri, & diuinatores, artificesque clari, tum etiam contemptores uirtutum sint. Eandem circa casuum uitae differentiam secuti, docuimus quales fuerint, qui uxores occiderint, qui exilio, carcere, perpetuaque ualetudine uexati, qui ex lege in legem transierint, aut ex supremis honoribus in humilem statum, contrà qui ex humili fortuna in regnum aut potentiam perueniunt: inter quos trium Pontificum hac ratione geniturae explicantur.

8 Cardano 1543, geniture 28: *Ducis Bourbonij biothanati, & qui à Rege desciiuit.*

9 Other references to the unpublished *De iudiciis astrorum* can be found in the various versions of Cardano’s *De libris propriis*. See Cardano 2004, 53-55; 118; 127f., 159; 178; 208f.; 240. See also the reference in Cardano 1663, vol. 5, 134a.

10 Cardano 1547, fol. 3r: *Quibus factum est, ut qui unicus erat tum inueniendi, tum tradendi disciplinam modus, ut scilicet illius principia philosophiae principijs, eius decreta cum experimentis annecterem, eum me assecutum existimem.* Cf. *De supplemento almanach*, ch. 25: Cardano 1663, vol. 5, 591.

pertains to the invention of the discipline as such. Cardano claimed that he had secretly re-invented the *entire* astrological art. Another new element is Cardano's revelation that his "unique mode" for doing this in fact consists of a double strategy: philosophy for its principles, experiment for its decrees.

This raises two obvious questions with respect to the horoscope collection. First of all, what was the precise role of the 'experiments of judgment' in the discovery of the art? Second, how did philosophy fit into all this? The first question will be answered in the next two sections, but at least one preliminary remark can be made. Cardano's emphasis on the separate role of philosophy suggests that we should not approach this as a Baconian process of induction from singular experiences to universal principles. But then what is the case here? As we will see, the answer to this further question revolves around the second dimension of 'infinite art.'

3. Doctrine, Aphorism, Judgment

Although the *Libelli duo* and *Libelli quinque* were presented as excerpts from the larger *De iudiciis astrorum*, Cardano remained unwilling to publish the latter work, "so that no intolerable sacrifice of private property would ruin me".¹¹ But, as we have seen, Cardano's reference to the astrological *magnum opus* did enable him to lay down the novel claim that it substantially overhauled the art. Moreover, this ambitious claim was embodied in the structure of the new *Libelli quinque*. By 1547, the horoscope collection had become a separate book, which no longer carried the task of teaching astrological *doctrina*. Various theoretical topics that were previously revealed as Cardano's readers worked their way through the horoscopes were now relegated to two textbooks on revolutions and on the judgment of genitures. Last but not least, Cardano added a new book of astrological aphorisms, containing the most important inventions of the *De iudiciis astrorum*.¹² Apparently, the dichotomy between doctrine and judgment that was fundamental to the *Libelli duo*, was now replaced by a tripartite structure where aphorisms occupied a middle ground in the order of teaching *and* invention. Thus Cardano made the second dimension of his 'infinite art' operational.

11 Cardano 1547, fol. 3r: [...] *nec tamen intollerabilis iactura rei familiaris me pessundaret.*

12 Cardano 1547, fol. 3r: *Scripseram haec omnia decem libris ab initio, uerum cum nulla in re maiorem rei familiaris iacturam fecissem, non fide, non studio, sed fortuna temporum aut mea, te deserere coactus sum. At nec omnino deserui, sed quae diffuse scripta erant, in dissectas, breuesque sententias (Graeci ἀφορισμούς uocant) redegi, sic ut nihil omnino praeceptorum in arte desiderari posset, [...].*

In order to understand the nature and composition of these astrological aphorisms, we may turn to a later example of the interpretation of natal charts, taken from Cardano's commentary on Ptolemy's *Tetrabiblos*. In his commentary on a passage in chapter IV.9, "On the Quality of Death," Cardano introduced a natal chart that he received from the Louvain mathematician Reinier Gemma Frisius (1508–1555) while passing through the Spanish Netherlands on his voyage to Scotland in 1552.¹³ This chart belonged to "Laurentius of Louvain," a "heretic" who was burned alive in 1547. While interpreting this extraordinary event, Cardano soon found that the relative positions of the sun and Saturn agreed with the actual year of death. But Ptolemy's apodictic statement, "If Mars is quartile or in opposition to the sun or the moon, [...] at mid-heaven or the opposite point, [indicates a death] by being set up on the stakes," proved more difficult to reconcile. While the sun and Mars were indeed in quartile aspect at the time of Laurentius's birth, Mars was placed in the first house, not the tenth or the fourth houses as required by Ptolemy's rule. The solution to this riddle, Cardano added, lay in the relationship between the astrologer and his books:

One should heed Ptolemy's warning, here and in the next chapter, that it is necessary to know this art perfectly. Someone who has not studied Ptolemy's book effectively and for a long time cannot teach the art. For instead of these two missing conditions, there are five others which are not necessary but increase the effect anyway.¹⁴

Having said this, Cardano provided five other aphoristic statements to explain why Laurentius died in the fire after all. In doing so, he claimed that using and teaching the art depends on an intimate relationship between the astrologer and the *Tetrabiblos*. Selecting, composing, and teaching aphorisms in turn testified to the success of this relationship. Aphorisms, in other words, embodied the effective appropriation of astrological doctrine. They offered a powerful means to steer through difficult texts, tried in the practice of difficult judgments. Aphorisms were now the tangible 'invention' that resulted from "teaching through judgment."¹⁵ They were what held Cardano's public discovery of the art together.¹⁶

13 See Cardano 1663, vol. 5, 353f. The original passage can be found in Ptolemy 1940, 434f.

14 Cardano 1663, vol. 5, 354a: [...] *oportet animaduvertere, quod Ptolemaeus docuit, & in sequente capite, docebit, quod oportet ipsam artem perfectè cognoscere. Et istud non potest doceri, nisi ei qui diu & efficaci studio in libro suo versatus fuerit. Nam loco harum duarum conditionum deficientium, sunt aliae quinque, quae non erant necessariae, & tamen augent effectum.*

15 Even within Cardano's collection of astrological aphorisms, horoscope judgments frequently appear as *fiducia* of the aphorisms. See Cardano 1663, vol. 5, 84a.

16 These elements were not lost on at least some of Cardano's readers. In an apparent attempt to recover more of Cardano's "tacit knowledge," one unknown reader eagerly quarried the *Libelli duo* (1543) for predictive aphorisms, while another used

4. Renaissance Medicine and Giovanni Pico's Critique of Astrology

Cardano thus succeeded in restoring the finite, doctrinal nature of the astrological art by embedding it within an infinite process of reading texts, judging horoscopes, and producing aphorisms. How was this possible? Ian Maclean has provided an important clue by pointing out that Renaissance physicians also viewed the medical art as a “finite doctrine of infinite things” (Maclean 2000a). This basic attitude was supported by specific logical, metaphysical, and ethical convictions. In the realm of logic, Renaissance physicians were remarkably tolerant towards non-contradictory contraries. On a metaphysical level, they often assumed that the natural and the preternatural, the ordinary and the exceptional, were commensurable in the order of being. From an ethical perspective, they generally opted for strongly individual, patient-oriented practices (Maclean 2000a, 238-241). This situation also had an important epistemological component, insofar as medicine habitually operated with much more relaxed notions of knowledge and empirical proof (Maclean 2002). The medical art distinguished the medical use of evidence, governed by conjectural *magna ex parte* logic, from the rules and precepts that were implemented, and which were held to be universally valid.

The similarities between the case of medicine and that of Cardano's astrology are striking. Consider the opinions and terminology of the dedicatory letter of *Libelli quinque* (1547):

[...] Natural causes, such as we hold the stars to be, can also be frustrated by natural reasons. And the arts do not achieve their ends of necessity, but only for the most part (*magna ex parte*), which is also the case in the science of the stars.¹⁷

Such similarities should not surprise us. Cardano, after all, was an academically trained physician who held prestigious posts at the medical faculties of Pavia and Bologna. Moreover, Nancy Siraisi has shown that Cardano viewed the Hippocratic *Epidemics* as a methodological model for medical invention. More specifically, he believed that Hippocrates had derived the principles of the art of prediction by collecting and comparing similar “experiments” (*experimenta*) (Siraisi 1997, 128). Likewise, Cardano claimed that both Ptolemy

the horoscope collection as study material to hone his own astrological skills. See National Library of Medicine (Bethesda MD, USA), shelf marks WZ 240 C266L 1543 and WZ 240 C266Lq 1547.

- 17 Cardano 1547, fol. 2v: [...] *naturales causae, qualia nos sydera esse supponimus, naturali etiam ratione frustrari possint: & finem assequi artes non semper sit necessarium, uerum magna ex parte solum, quod & in syderali scientia euenit*. It is difficult to extract a uniform view on the factors affecting uniform celestial causality from Cardano's work. A ‘minimalist’ stance can be found in Cardano 1663, vol. 5, 107b-108a. Also see Maclean 2002, 166 note 73.

and himself had discovered a reliable astrology by deducing causes from similar effects following upon similar celestial configurations.¹⁸

While the impact of Cardano's medical training on his astrological attitudes cannot be doubted, I believe the latter must also be understood against the background of the history of Renaissance astrology itself. An important clue appears at the end of Cardano's commentary on the natal chart of his brother Cornelius:

Even if Pico della Mirandola himself would come to life again, this one clearly shows that astrology is not doubtful, unless someone would care to pursue minutely, as in a trial on gold, things that are ambiguous, fortuitous, and completely hidden from the senses.¹⁹

It is well known that Giovanni Pico's *Disputations against divinatory astrology* (1495) (possibly the most devastating critique of astrology ever written) had a tremendous impact on Renaissance practitioners like Cardano (see Allen 1941; Westman 1993; vanden Broecke 2003). Less well known, however, is the fact that Pico's systematic attack on astrology relied almost exclusively on the twin categories of reason and authority. In doing so, Pico largely followed the late medieval academic astrologers whom he attacked. A good example of this appears in the dedicatory letter of Girolamo Salio's edition of Ptolemy's *Tetrabiblos* (1493), which appeared while Pico was composing his *Disputations* (Ptolemy 1493 [ISTC ip01089000]). Salio described *astronomia* as a science that elaborated upon the natural-philosophical premise that the virtues and motions of the stars are the cause of generation and corruption in this world.²⁰ *Astronomia* then distributed its study of generation and corruption over a "science of motions" (its "demonstrative" part) and a science of judgment. Salio acknowledged that the latter part proceeded from effect to cause, but emphasized how this happened by the strict standards of Aristotelian *inductio*: many memories build an experience, many experiences build knowledge. Moreover, Salio described astrological judgments as fully demonstrative, reasoning from cause to effect by means of a syllogism. In his *De astrologica veritate* (1498), Lucio Bellanti even provided an example of such an astrological syllogism:

Anyone with a geniture having Mercury in the house of Mars, and Aries in the ascendant, is loquacious;

18 Cardano 1663, vol. 5, 94 and 591. At the same time, Cardano deplored the fact that Ptolemy—unlike Hippocrates—had not bequeathed his data to posterity: the brevity of the *Tetrabiblos* made it much more akin to the Hippocratic *Aphorisms*.

19 Cardano 1663, vol. 5, 473a: *Ex hoc palam est, etiam si Mirandula reuiuiscat, non dubiam esse Astrologiam, nisi quis minutim concidens, velut in auri experimento ea prosequi curet, quae ambigua & casui subiecta, & sensui pene abscondita sunt.*

20 This liberal interpretation of Aristotle's *On Generation and Corruption* was fairly widespread among late medieval mathematicians and natural philosophers. See North 1986; Rutkin 2002.

Sortes has this sort of geniture;
Hence, Sortes will be loquacious. (Ibid., f. a4v)

Bellantini pre-empted the objection that many people with a similar geniture were in fact not loquacious, by qualifying his judgments as reasoning *ceteris paribus* or “ex suppositione” (the supposition being that no material, fortuitous, or voluntaristic impediments would intervene).²¹ It should be clear that this approach, strongly inspired by the logic and natural philosophy of the arts faculty, was very different from Cardano's choice to approach his defense of the art through empirical singulars, about which he readily admitted that they were to some extent conjectural and concerned with objects that are “ambiguous, fortuitous, and completely hidden from the senses.”

This is confirmed in chapter II.9 of the *Disputations*, where Pico does employ a few ‘experimental’ arguments. He recounts having observed the weather conditions for 130 days during a single winter, finding them to match astrologer's predictions on no more than 6 or 7 days. What is most stunning about Pico's experiments from a modern perspective is their overall irrelevance to his case. The anecdotes appear almost casually, and I have not been able to find similar arguments in the rest of the *Disputations* (Pico della Mirandola 1946–1952, vol. 1, 162–166). Once again, this reflects the foundational role of late medieval Aristotelian natural philosophy and epistemology in Pico's final work, which precluded the direct use of historical events as a legitimate basis for valid knowledge claims (Dear 1995).

By assigning a central role to horoscope collections, Cardano thus took advantage of a strategy that Pico had left untouched. And it was medicine that taught him exactly how to do this.

5. Horoscope Collections in Later Medical Astrology

Not surprisingly, the publication of horoscope collections was most eagerly emulated among writers on medical astrology. The first astrologer to follow Cardano's example was Thomas Bodier, whose *De ratione et usu dierum criticorum* was published in Paris in 1555.²² As its title suggests, Bodier's treatise sought to prove that “astrology is entirely necessary for the physician,” and to illustrate the *praxis* of the astrological theory of critical days (Bodier 1555, fols. 5r and 16v). These were challenging claims: although

21 Ibid., ff. a5r and b1v. On reasoning ‘ex suppositione’ and Renaissance science, see Wallace 1981.

22 This work was first commented upon in Sudhoff 1902, 58f. Bodier dedicated his treatise to the famous French mathematician Oronce Finé. For more information on the astrological scene at Paris in this period, see Dupébe 1999.

astrology was commonly accepted as a prognostic tool among academic physicians, critics like Giovanni Mainardi had tried to outlaw the practice or severely restrict its scope (see Clarke 1986, 109-116).

Once again, Bodier confronts us with the primacy of the relation between practitioner and text. The entire treatise, including its horoscope collection, was presented as a commentary on the obscure aphorism 60 of ps.-Ptolemy's *Centiloquium*, one of the standard texts in academic astrological teaching.²³ Following a discussion of theoretical principles, Bodier devoted 70 percent of his booklet to the systematic investigation of 55 horoscopes, each illustrating a specific case history from Bodier's own practice. In the introduction to this second part, we read:

In an oft-cited passage, Galen states that the critical days should be observed from a very young age, so that one may consider their disagreements. Therefore, one should not make haste in proposing a judgment on these days until one has accurately observed many sick people for a long time. This is why I hope that the following charts, confirmed by art and use, will please you in procuring an able judgment.²⁴

This emphasis on the variability of singular events was equally typical of Renaissance astrology and medicine. For precisely astrologers and physicians were able to accept these anomalous events *within* the confines of their art by a variety of logical, metaphysical, and ethical strategies (Maclean 2000b, 337-338). Not surprisingly, Bodier's horoscope analyses often highlighted the presence of significant anomalies by dramatizing professional and epistemic showdowns around the patient's sickbed. On 22 November 1549, Bodier was called upon by a nobleman whose sides were swollen from the navel down to the groin, and had to prove his mettle against a midwife (Bodier 1555, fol. 25r/v). On 12 January 1549 and 2 October 1553, Bodier arrived just in time to confirm the doubts of his patients about their physician's advice to undergo venesection (Bodier 1555, fols. 26v and 36v). Several patients were erroneously diagnosed with pleurisy.²⁵ Each of these cases promoted astrology as an important tool for medical diagnosis and prognosis, to be neglected at one's own peril.

23 Bodier 1555, fol. 5v. For the medieval Latin text of *Centiloquium* 60 and standard commentary, see Ptolemy 1493, fols. 112r/v.

24 Bodier 1555, fol. 17r: *Galenus loco saepissime allegato fatetur dies decretorios ab adolescentulo obseruasse, ut de ipsorum dissensione diiudicaret, idcirco de dictis diebus minimè iudicium properandum est, donec in multis aegris diuturno tempore quis accurate obseruauit. Quapropter spero nostra schemata subscribenda arte & vsu explorata tibi fore criticae diiudicationi conquirendae grata, [...]*

25 Bodier 1555, fols. 28r and 36v. Since pleurisy was a *locus classicus* for the harmony of medical syndromes of signs, Bodier's examples may have been specifically chosen to reinforce the superiority of astrological medicine. See Maclean 2002, 289f.

The status of these *experimenta* as legitimate knowledge was confirmed by Bodier's decision to organize his 55 horoscopes in 14 *observationes*, each of which yielded several aphorisms from the specific cases under consideration. Once again, these aphorisms operated in a *textual* universe: Bodier always claimed that the lessons "that Ptolemy, Abraham Ibn Ezra, and our other masters remind us of," supported his personal experiences. His examples thus made no clear distinction between the interpretation of these texts and his singular "experimenta."²⁶

Bodier's public extraction of aphorisms from his horoscope collection received further elaboration by the two most famous Italian professors of astrology of the late Renaissance: Giovanni Antonio Magini and Andrea Argoli. Magini, who taught mathematics at the University of Bologna, published *De astrologica ratione, ac vsu dierum Criticorum* in 1607.²⁷ Its contents were equally distributed over a commentary on Galen's treatise on critical days, two treatises on medical astrology and astrological directions, and a collection of 30 genitures. No less than fourteen of Magini's horoscopes were borrowed from Bodier, while Cardano's collections contributed another three; all were recalculated using Copernican parameters. Magini's friend Girolamo Rossi provided another four, while the remaining nine came from his own practice.²⁸

The structure and use of Magini's horoscope collection was very similar to that of Bodier. Detailed case histories were offered as the evidential basis for a set of aphorisms that constituted chapters 21 and 22 of Magini's introduction to medical astrology. Throughout, the central task for Magini's aphorisms was to provide some measure of explanation for unexpected natural deaths. Not surprisingly, such explanations were heavily cloaked in medical language. Magini used the term *indicationes* as a synonym for aphorisms, and described their relation to the case histories as a *proruptio*, a "rushing forth"; although these aphorisms were not certain, "several combined offer certain testimony of either death or a serious illness."²⁹ Such notions were a central feature of medical semiology, which played an equally dominant role in Cardano and Bodier: indications constituted a persuasive "prompting to follow a certain course or to act," successful only for the most part.³⁰

26 Bodier 1555, fol. 51r: [...] *documentis quae commemorant Ptolemaeus, & Abrahamus Auenesra caeterique nostri vates, alienum comperient*. For other instances where Bodier's interpretive work was guided by previous authoritative rules, see Bodier 1555, fols. 17v, 20r, 26v, 29r, 35r, 36r.

27 For a general discussion of this work, see Clarke 1986, 117-132.

28 For Magini's own case histories, see Clarke 1986, 127-129.

29 Magini 1607, p. 71a: [...] *ex sola figura ad morbi initium constructa prorumpentes*; p. 70a: [...] *nihilominus plures concurrentes certum testimonium, vel mortis, vel grauissimae aegritudinis adferunt*.

30 On indications in Renaissance medicine, see Maclean 2002, 307-315. Maclean notes: "[...] the learned doctor becomes the embodiment of indication, which is nec-

These attitudes are equally easy to discern in the massive horoscope collection that Magini's pupil and the later professor of astrology at Padua, Andrea Argoli, published in his two books *De diebus criticis et de aegrorum decubitu* (1639, second edition 1652). In his first book, Argoli covered the *norma* and *disciplina* of the doctrine of critical days.³¹ The second book provided *prognostica* that allowed an astrologer to tell whether a disease would be curable, long, or chronic, based on "aphorisms, observed by the ancients, and the state of patients with respect to the daily course of the moon."³² Argoli's 113 case histories (in the 1652 edition) were appended as evidence for these *prognostica*. Arguing for the superiority of astrological prognosis through the Italianate image of the lynx, Argoli claimed that the medical art could offer no more than "raw and imperfect conjecture."³³ This makes it only more apparent that the astrological *prognostica* in the second book were also announced with qualifiers like "a most important conjecture" or "a conjecture that depends on several things."³⁴ Indeed, conjecture even marked the very content of Argoli's aphorisms, sometimes explicitly ("for the most part [*ut plurimum*]"), but usually through the qualifications, modalities, and empirical accretions that characterized the narrative structure of such aphorisms.

6. Natural Philosophy and Life Writing

Nevertheless, there is one feature of Cardano's horoscope collection that was not taken up by his Italianate followers. This feature pertains to the second question that was raised at the end of section 2: how did philosophy fit into all this?

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- essarily a performative and contingent act even if performed on the basis of past training in the art of medicine, in the same way that he becomes the embodiment of the art of medicine and its precepts at the bedside of his patients" (p. 314).
- 31 Argoli 1639, introduction to book II [no pagination]: *Apposui itaque primo Tomo quae ad Dierum Criticorum normam facere videbantur singula; & Medicorum, qui Patres facultatis sunt, loculos, placitaque omnia ad disciplinae virgulas pensitatim excussi.*
- 32 Ibidem: *In secundo Prognostica disposui, an morbi curabiles sint, longi, chronicique, an ne, ex obseruatis Veterum aphorismis, & statu aegroti ex Lunae peragratione per dies decubitus exarato.*
- 33 Argoli 1639, book I, 45: *Ex arte enim Medica rudis est coniectatio, & imperfecta: quis enim nisi sit Lynceus, qui trans robora, quercusque perspiciebat, intestina, quaeque viscera, in quibus morbi saepè latet vis quae partes ideò nigrae appellantur à Graecis, quod in tenebris quodammodò, ac in absidio sint.*
- 34 Argoli 1652, 113 (*Principalissima coniectura de aegritudinis saeuitia, ac magnitudine, & an fuerit curabilis*) and 116 (*An aegritudines futurae sint chronicae, an breues, & breui terminandae, ex pluribus dependet coniectura*).

Cardano freely admitted that all divination is conjectural, both *per se* and in practice. More specifically, he held that different forms of divination were often 'subaltern' to specific arts like medicine, agriculture, navigation, or jurisprudence: the latter were certain *per se*, but became conjectural when implemented in prognostication (Cardano 1663, vol. 6, 360 and vol. 5, 94). This view raised important problems for the epistemological status of astrology. As Cardano explained in his commentary on the *Tetrabiblos*:

Ptolemy proceeded by distinguishing and deducing causes from similar effects, and bringing several of these together again. Indeed, this art is conjectural and not an accurate science, because the causes are known from the effects.³⁵

Where Ptolemy had claimed that astrology was entirely similar to medicine because only its *praxis* was conjectural, Cardano suggested that uncertainty was lodged at the very heart of the discipline.³⁶ Fortunately, he had a solution: "This art is the prognostic part of philosophy [...] this one is to the whole of philosophy what the books on prediction of Hippocrates or Galen are to medicine."³⁷ Having promoted astrology to a 'subaltern' position with respect to natural philosophy, Cardano added that the essence of astrology resided in its systematic comparisons between cause and effect.³⁸ Only the *accident* of time made it different from natural philosophy.³⁹ But to the extent that astrology drew upon the causal principles of natural philosophy, it took part in a body of certain, rather than conjectural knowledge. Many studies have carefully documented Cardano's project in natural philosophy, which received its most extensive, if not most systematic, expression in the widely read *De subtilitate* (1550) (Bianchi 1994; Schütze 2000). Interestingly, some of the key ideas of this work made their way into Cardano's commentary on Ptolemy's *Tetrabiblos* (1554). Following *De subtilitate*, Cardano's astrological commentary evicted fire from the sublunary realm, and differentiated the

35 Cardano 1663, vol. 5, 94: *Procedit autem Ptolemaeus diuidendo, & deducendo ex similibus causarum & compositione plurium, causae uerò ab effectibus cognoscuntur, ob id coniecturalis est haec ars non exquisita scientia.*

36 Ptolemy 1940, 25-27. See also Taub 1997, 83-87.

37 Cardano 1663, vol. 5, 93: *Est autem ars haec Philosophiae pars prognostica [...] ut ad medicinam se habet liber praedictionum Hippocratis aut Galeni, ita hic ad totam Philosophiam.*

38 The notion of "subaltern" disciplines was a common way to characterize the mathematical *mediae scientiae* in the late Middle Ages and Renaissance periods. See Mandosio 1994.

39 Cardano 1663, vol. 5, 93 and 97. For a different take on the latter passage, see Graf-ton 1999, 142.

remaining three elements in terms of their relative amount of moisture, upon which celestial heat acted through the intermediary of air.⁴⁰

Having claimed that he discovered and taught the astrological art by linking its principles with those of philosophy, Cardano practiced what he preached. Moreover, this procedure shared the same overall goal as the aphorisms: to restore the finite nature of the astrological art itself. In this respect, Cardano's approach was very similar to his views on traditional biography, where he questioned the Renaissance pursuit of exemplary history and preferred to investigate the mechanisms underlying fame and reputation instead. When Cardano isolated ability, power, and piety as the main parameters of fame, he also emphasized that their specific attribution to a person depended on historical context. Even apparent monsters like the Roman emperor Nero embodied a finite set of attributes in an infinite historical continuum.⁴¹ Not surprisingly, Cardano explicitly compared this situation to astrological life writing:

Just as several recurring, constant, and regular motions in the stars produce a great variety that seems alien from all equality, similarity, or constancy; so we would believe that everything happens by chance and fortune when they seem varied, unequal, and inconstant.⁴²

7. Conclusion

We have seen that Cardano attached great weight to the personal skill and experience of the practicing astrologer. He even codified such qualities under the banner of "subtlety", which *De subtilitate* (1550) famously defined as: "A specific reason why sensible things are comprehended by the senses, and intelligible things by the intellect, with difficulty."⁴³ As this definition clearly shows, subtlety would become a key component in Cardano's program to expand the realms of the knowable. Cardano located it at once in substances, accidents, and representations, and even went so far as to present it as a qual-

40 For Cardano's view on these matters in *De subtilitate*, see Schütze 2000, 100-109. For its adoption in the *Tetrabiblos* commentary, see Cardano 1663, vol. 5, 109a and 119b.

41 Siraisi 1999. On Renaissance life writing, see Anderson 1984; Lyons 1989; Mayer and Woolf 1995; Taylor 1989; see also K. von Stuckrad's chapter in the present volume.

42 Cardano 1663, vol. 10, 564: *Sed velut in astris, ex pluribus motibus vndequeque similibus, ac regularibus, constantibusque tanta varietas apparet, vt nihil magis alienum ab his videatur aequalitate, aut similitudine, vel constantia: ita omnia varia inaequalia inconstantiâque videntur, vt casu & fortuitò omnia contingere credamus.*

43 Cardano 1663, vol. 3, 357: *Subtilitas est ratio quaedam, qua sensibilia a sensibus, intelligibilia ab intellectu, difficilè comprahenduntur.* On the notion of subtlety, see Maclean 1984; Magnard 1999; Schütze 2000, 28-38.

ity of specially gifted people like Ptolemy, Hippocrates, Plotinus, and undoubtedly himself (Siraisi 1997, 7 and 119).

Within astrology, the practitioner's relation with his books offered important testimony of subtlety. Cardano, Bodier, Magini, and Argoli believed that these books contained finite knowledge *and* that they should be subjected to an infinite series of tactical operations, with astrological aphorisms as one particularly tangible result. Following the example of most Renaissance physicians, Cardano and his followers self-consciously distinguished between universally valid doctrine and conjectural dealings with clients.

In our introduction, we pointed out that recent studies of astrology have a tendency to interpret the art as a (social) operation that cannot be justified using classic epistemic notions like 'true' or 'false'; this view has also been attributed to Cardano. Doing so obliges us to overlook the fact that Cardano and his followers did claim truth for their astrological knowledge, even if this was a truth that was valid "for the most part." It also forces us to overlook the wish of their clients to see such epistemic categories applied to extraordinary events, in order to extend the order of their world. In other words, astrological practitioners and their clients are at risk of being denied the right to provide a rational account of their actions in their own terms. And by dismissing the relevance of classic epistemology for astrology, we may ourselves run the risk of underestimating its flexibility.

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The Function of Horoscopes in Biographical Narrative

Cardano and After

KOCKU VON STUCKRAD

1. Setting the Stage: Girolamo Cardano's *De vita propria liber*

"Although various abortive medicines—as I have heard—were tried in vain, I was normally born on the 24th day of September in the year 1500, when the first hour of the night was more than half run, but less than two-thirds" (Cardano 2002 [1653], 5). With this remarkable sentence, sixteenth-century astrologer, physician, scientist, alchemist, and gambler, Girolamo Cardano (1501–1576),¹ opens the second chapter of his autobiography, *De vita propria*. Often the book's title is translated simply as "The Book of My Life," but there is more in *propria*: This is the story of an "extraordinary life" or a "life of his own" with all its peculiarities, ups, and downs. Cardano leaves no doubt about the troubling circumstances of his nativity:

I have taken into consideration [...] that both luminaries were falling in the angles, and neither was applying to the ascendant, inasmuch as they were posited in the sixth and twelfth houses. They might have been in the eighth house, subject to the same condition, for the latter house descends and is not an angular house; a planet therein could rather be said to be falling from the angle. And although the malefics were not within the angles, nevertheless Mars was casting an evil influence on each luminary because of the incompatibility of their positions, and its aspect was square to the moon.

Therefore I could easily have been a monster, except for the fact that the place of the preceding conjunction had been 29° in Virgo, over which Mercury is the ruler. And neither this planet nor the position of the moon or of the ascendant is the same, nor does it apply to the second decanate of Virgo; consequently I ought to have been a monster, and indeed was so near it that I came forth literally torn from my mother's womb.

1 In *De Consolatione* (Liber III, Opera, Tom. I, p. 619), Cardano mentions 24 September 1501 as his date of birth. All editions of the *Vita* give 1500. In his horoscope, however, Cardano gives the date and hour of his birth as 24 September 1501, at 6:40, the *hora noctis prima* being six o'clock according to the old Italian method of reckoning; see note 1 in Cardano 2002 [1653], 258.

So I was born, or rather taken by violent means from my mother; I was almost dead. My hair was black and curly. I was revived in a bath of warm wine, which might have been fatal to any other child. My mother had been in labor for three entire days, and yet I survived.

Besides, to return to the horoscope, since the sun, both malefics, and Venus and Mercury were in the human signs, I did not deviate from the human form. Since Jupiter was in the ascendant and Venus ruled the horoscope, I was not maimed, save in the genitals, so that from my twenty-first to my thirty-first year I was unable to lie with women, and many a time I lamented my fate, envying every other man his own good fortune. Although Venus was, as I have said, ruler of the whole nativity, and Jupiter in the ascendant, unfortunate indeed was my destiny; I was endowed with a stuttering tongue and a disposition midway between the cold and the harpocratic—using Ptolemy's classification—that is to say, gifted with a kind of intense and instinctive desire to prophesy. In this sort of thing—it is called prescience, to use a better expression—as well as in other methods of divining the future, I have been clearly successful at times.

[...] I could [...] have escaped some of the consequences of entering my existence with a genesis—as Ptolemy calls it—so wretched and luckless, had the sun itself not been directly in its fall, cadent in the sixth house and removed from its own exaltation. I was gifted, therefore, with a certain cunning only, and a mind by no means at liberty; my every judgment is, in truth, either too harsh or too forbidding.

In a word, I shall say that I am a man bereft of bodily strength, with few friends, small means, many enemies—a very large part of whom I recognize neither by name nor by face—a man without ordinary human wisdom, inclined to be faulty of memory, though rather better in the matter of foreseeing events. Yet withal, my condition in life, to be deemed lowly if one considers my family and my betters, is, for some unknown reason, regarded as honorable and worthy of emulation among these same. (Cardano 2002 [1653], 5-7)

I quoted this introduction at length because it gives a very good impression of the particular style of Cardano's self-description. He wrote down his autobiography in 1575 and 1576 in Rome, but it was published only in 1643. Along with Benvenuto Cellini's famous *Vita*, Cardano's *De vita propria* is usually regarded as the most important autobiography of the Renaissance.² But while Cellini sketched his adventurous life with a focus on the outward aspects of his career (see Cervigni 1979; Goldberg 1974; Hösle 1975), Cardano transformed the autobiographical genre into an in-depth study of his own personality, his character and feelings. In the words of Roy Pascal: "In Cellini and Cardano we have two extremes of autobiography: Cellini presents himself, Cardano analyses himself" (Pascal 1960, 31). Cardano does not describe his life in a chronological way but structures his account according to questions like "My Health," "Customs, Vices, and Errors," "Virtues and Constancy," or "Concerning my Enemies and Rivals." He tackles "My Will" and the

2 See, for others, Cervigni 1979, 22; Sturrock 1993, 64-81. One of the earliest Italian autobiographies is Francesco Petrarca's *De studiorum suorum successibus ad posteritatem epistola* ("Letter to posterity", c. 1370). Petrarca notes that he was the first to write such a report of his life (*quod ante me, ut arbitror, fecit nemo*, Petr. epp. var. 25). On Petrarca, see Misch 1969, 577-582; Guglielminetti 1977, 101-158; Sturrock 1993, 60-63. On Cellini, see Misch 1969, 631-640; Guglielminetti 1977, 292-386; on Cardano, see particularly Misch 1969, 657-738 ("Die Formen reflektierter Selbstdarstellung. Entstehung und Form der Autobiographie bei Cardano").

“Guardian Angels” as well as the “Successes in My Practice” and “Those Things in Which I Take Pleasure.”

His own psyche was the most interesting object of study for Cardano. In fact, we can say that this scholar stands at the beginning of psychological astrology (see von Stuckrad 2003, 228-232). And what is more, his is one of the earliest examples of a modern autobiography. Jonathan Goldberg concludes: “whereas modern autobiography unveils a unique, personal and private self, early autobiography presents a universal, depersonalized and public version of the self” (Goldberg 1974, 71). Cardano, the physician, “feels his own pulse,” as Jacob Burckhardt said in his Romantic praise of Cardano,³ and in so doing Cardano does not shrink from a minute analysis of his psychological shortcomings. His intention is not a heroic presentation of a representative life such as the ancient self-fashioning of Marcus Aurelius with its Stoic virtues—a model Cardano looked up to—but a precise analysis of his character in the light of astrological scrutiny.⁴

While these characteristics have frequently been noted in secondary literature, interestingly enough most interpreters do not comment on the use of astrological interpretation in this autobiography.⁵ In fact, I have found very little indication that historians were interested at all in the relationship between the analysis of one’s birth-chart and the presentation of one’s life. This is surprising, because for Cardano—and also for others to be discussed later—the horoscope served as a powerful instrument of analysis. Whereas in earlier discourses publishing horoscopes was often a means to mythologize one’s own destiny—the Roman emperors and the Florentine Medici are prominent examples—for Cardano it was an instrument of *demythologiza-*

3 Burckhardt 1922 [1860], 247. Burckhardt’s nineteenth-century audience was so well acquainted with *De vita propria* that the author found it inappropriate to recall its content: “Doch ist es uns hier nicht erlaubt, ein so stark verbreitetes, in jeder Bibliothek vorhandenes Buch zu exzerpieren” (p. 248). Anthony Grafton notes: “Though Burckhardt was fascinated by some of the forms that astrological practice and theory took in medieval and early modern Italy, he did not see the art as an integral part of Renaissance culture. For the most part, in fact, he treated it as an obstacle to the free development of individuality. But he recognized, as later historians sometimes have not, that a practitioner of this ancient discipline could describe the condition of modernity” (1999, 198).

4 On ancient autobiographies, see Misch 1950; Pascal 1960, 21-26. On Cardano’s relation to Marcus Aurelius, see Misch 1969, 710; Grafton 1999, 195f.

5 Goldberg, for instance, talks of “providence” and “mystery” instead of astrology: “Cardan’s account reveals a belief in the role of providence. Accompanied by an attendant spirit, Cardan receives mysterious signs and tokens” (1974, 75). Notable exceptions to this neglect of astrology are Georg Misch who treats Cardano’s “Astrologie und Anthropologie” in a chapter of its own (Misch 1969, 700-709), and Anthony Grafton in his seminal work on Cardano (Grafton 1999, see particularly pp. 178-198).

tion.⁶ He seems to tell the reader: “Look at this nativity; there is nothing splendid in it. The importance of my life is that I made it *despite* this horoscope. I accepted my fate, not heroically but with a certain sense of humor, with support of my guardian angel, and with respect for the rulings of fate.” I am inclined to call this position a playful Stoic attitude, a Stoicism stripped of its severe gravity.⁷

2. Broadening the Perspective: Horoscopes and Narratives in the Seventeenth Century

Important as it was, Cardano’s *De vita propria* was by no means an isolated phenomenon in sixteenth- and seventeenth-century Europe. It was part of Renaissance culture’s ongoing interest in biographical narratives, and this at all levels of society. While the learned “humanists forced the facts of their subject’s life to fit the often inconvenient outlines of existing literary lasts” (Grafton 1999, 181) and the well-known rhetorics from antiquity, recent scholarship reveals that there also existed many so-called ‘ego-documents,’ stretching from private family sagas to interrogation protocols in early modern Europe (see Mayer and Woolf 1995; Schulze 1996). In order to contextualize Cardano’s autobiography, two related issues seem particularly interesting here—the genre of astrologically informed biographies and the use of astrology in empiric medicine.

2.1. Astrological Biographies

Steven vanden Broecke has pointed out that collections of horoscopes were extremely prominent in early modern Europe.⁸ These collections were often set up not only for reasons of private curiosity, but also for empirical research to test and improve astrological theory and prediction. This is true for Car-

6 See Hösle 1975. Helmut Pfeiffer calls this the “melancholy of writing”: “There is no better formulation for the genesis of his marginality and his written relationship to himself than the description of the deformities predicted by his horoscope, a description retrospectively providing a clear example of his social dysfunction” (Pfeiffer 1994, 235).

7 In his treatment of Cardano’s Stoicism, Misch (1969, 707–709) correctly observes that although much of ancient philosophy is found in *De vita propria*, something new was taking form because “das entscheidende Prinzip der Erhebung über Natur und Schicksal war für Cardano nicht in der abstrakten Vernunftregel gelegen. Etwas Neues bereitete sich in ihm vor, eine auf erfahrungsmäßige Erkenntnis des eigenen Ich und des Weltwesens gegründete *Methode bewußter Lebensführung*” (p. 709).

8 See his contribution to the present volume.

dano's and Gaurico's horoscope collections (see Grafton 1999, 194 and 199-202), but also for less famous collections which have only recently been discovered. They eventually provided material for biographies, as the following three examples reveal.

An obsessive reader of Cardano and Gaurico, Sir Thomas Smith, who eventually became a royal secretary and ambassador to France under Elizabeth, studied the horoscope collections of his famous teachers after 1555 and subsequently came up with an astrological biography of his own. He gave a detailed account of his illnesses, his ups and downs, and related these to his natal horoscope; in addition, he also speculated about the future of others, including his illegitimate son's highly depressing prospects.⁹

The Englishman John Aubrey (1625–1697)¹⁰ spent the better part of his later life collecting nativities of famous and less famous people, subsequently comparing these with the respective events of their lives. For, as he wrote, “[t]he Transits of the Planets by their Radicall places & Aspects are worth any gentl^eman's serious observation.”¹¹ From the 1670s onwards, Aubrey used astrological techniques as a corner-stone of his research. The horoscopic predictions were mainly made by his friend Henry Coley,¹² one of the most important astrologers of Restoration England, and the adopted son of the famous William Lilly (1602–1681; see von Stuckrad 2003, 270-274). The result was an impressive collection of *Brief Lives* that gives an outline of over one hundred biographies.¹³ Hence, we have here a hybrid of astrological almanacs and biographical research. “The biographies in the *Brief Lives* manuscripts are often written around horoscopes, showing that these were more than mere appendages to his narrative, and another of Aubrey's manuscripts, his *Collectio Geniturarum*, compiled in the 1670s, is merely a series of horoscopes” (Hunter 1975, 121).

9 On Smith and his similarly interesting protégé and relative, Gabriel Harvey, friend and counselor to Philip Sidney and Edmund Spencer, see Grafton 1999, 103f., 185f., and 191f. (with the references given there); see also his critical remark about Dewar 1964 on p. 258 note 67 (interestingly enough, both “astrology” and “horoscopes” are lacking in the index to Dewar 1964).

10 According to his own account, he was born on “March the 12 (St. Gregorie's day) A.D. 1625, about Sun-riseing, being very weake and like to dye that he was Christened before morning prayer” (Dick 1958, xviii).

11 MS A 23, 66; quoted from Hunter 1975, 117. On the development of astrology in early modern England, see Curry 1989 and 1991.

12 Coley became famous with his two astrological handbooks *Clavis Astrologiae* (London, 1669) and *Clavis Astrologiae elimata* (London, 1676).

13 That these biographies originate from a horoscope collection is not acknowledged by the editor, O. L. Dick, who plays down Aubrey's astrological interests (see Dick 1958, lxxv). Anthony Grafton (1999, 194) correctly notes that this is due to the “typical disdain for astrology” by modern editors; see also Hunter 1975 who strongly emphasizes the astrological element in Aubrey's life and works.

A similarly fascinating document was recovered by Michael Hunter and Annabel Gregory twenty years ago. The *Astrological Diary* of the Rye merchant Samuel Jeake (1652–1699) diligently notes every aspect of his life—stretching from illnesses he suffered and personal events to political and economic developments in England—and links these in a fully empirical way¹⁴ to the particular astrological configuration on the respective days.¹⁵ Quite contrary to common views in historiography, “the way in which Jeake’s account juxtaposes astrology with the new aspirations of late Stuart England should illustrate the dangers of uncritically presuming that all the progressive forces of his day were equally antithetic to astrology” (Hunter and Gregory 1988, 76).¹⁶

2.2. Medical Narratives

From the examples given so far it has become apparent already that health in general and medical issues in particular form a crucial element of these biographical accounts. This is not by chance. In a culture where medicine and astrology were closely related disciplines, the empirical scrutiny of illnesses and their development in time quite naturally had its impact on astrologically informed biographies.¹⁷ In her seminal analysis, *Girolamo Cardano and Renaissance Medicine*, Nancy G. Siraisi recently showed that Cardano and his contemporaries used astrology in their biographical accounts

to understand the relation between particular instance and general rule. [Cardano] often pursued this goal by way of retroactive analysis of narrated examples. This procedure is consonant with his entire approach to mastering knowledge and exactly parallels uses he made of two other narrative disciplines with which he was engaged, astrology and history. But he was also, simultaneously, participating in what may be thought of (not entirely accurately) as the Renaissance prehistory of the case history; his accounts, like those of other medical writers, both depend on sources and models within earlier traditions of medical narrative and reflect contemporary developments. (Siraisi 1997, 196)

With her focus on the narrative structure of both autobiography and medicine

14 In fact, Jeake’s *Diary* belongs to the same genre of ‘inductive’ empirical scrutiny as the Babylonian *Astronomical Diaries* (see von Stuckrad 2003, 61–63), despite its quite different context.

15 The full title of the book is *A Diary of the Actions & Accidents of my Life: tending partly to observe & memorize the Providences therein manifested; & partly to investigate the Measure of Time in Astronomical Directions, and to determine the Astrall Causes, &c. Rye, Begun July 12 1694.*

16 It may be noted in passing that this document is also valuable as an astrological source for fleshing out historical details of life in Stuart England.

17 See also Monica Azzolini’s contribution to the present volume.

Siraisi raises an important issue.¹⁸ On the one hand, there is evidence that the use of astrological analysis in these biographies is more than a mere stylistic feature because it connects such documents to scientific writings. On the other hand, it is important to note that biography and identity are formed in a mode of narration. I will come back to this latter aspect of astrological biographies, but before doing so, let me bring in another famous example of an autobiography that starts with the analysis of the author's geniture.

3. Goethe: The Geniture between Poetry and Truth

On the 28th of August, 1749, when the bell struck twelve noon, I came into the world in Frankfurt on the Main. The constellation was lucky: The sun was in Virgo and culminating for the day; Jupiter and Venus were looking friendly at it, Mercury not repulsively, Saturn and Mars behaved indifferently; only the moon, which was almost full at the moment, exerted the power of its opposition even more so because his planetary hour was just beginning. Hence, the moon resisted my birth, which could only take place after this hour was over.

These favorite aspects, which the astrologers later credited high against me, may well be the reason for my surviving: Because due to the clumsiness of the midwife I was born as dead and was brought to see the light only after manifold efforts. This circumstance, however, which caused much distress for my people, turned out to be an advantage for my fellow citizens because my grandfather, the village mayor Johann Wolfgang Textor, took this incident to hire an obstetrician and to inaugurate or improve the education of midwives. This was for the benefit of many a future generation.¹⁹

18 See her whole chapter, "*Historia, Narrative, and Medicine*," in Siraisi 1997, 195–213. That "[m]edicine is, indeed, in fundamental ways a narrative discipline, although the form the narrative takes—and by whom it is told—has varied greatly over time" (Siraisi 1997, 195), is argued by other scholars, as well; see particularly Hunter 1991 and, more generally, Dear 1991.

19 "Am 28. August 1749, mittags mit dem Glockenschlage zwölf, kam ich in Frankfurt am Main auf die Welt. Die Konstellation war glücklich: die Sonne stand im Zeichen der Jungfrau und kulminierte für den Tag; Jupiter und Venus blickten sie freundlich an, Merkur nicht widerwärtig, Saturn und Mars verhielten sich gleichgültig; nur der Mond, der soeben voll ward, übte die Kraft seines Gegenscheins um so mehr, als zugleich seine Planetenstunde eingetreten war. Er widersetzte sich daher meiner Geburt, die nicht eher erfolgen konnte, als bis diese Stunde vorübergegangen.

Diese guten Aspekten [sic], welche mir die Astrologen in der Folgezeit sehr hoch anzurechnen wußten, mögen wohl Ursache an meiner Erhaltung gewesen sein: denn durch Ungeschicklichkeit der Hebamme kam ich für tot auf die Welt, und nur durch vielfache Bemühungen brachte man es dahin, daß ich das Licht erblickte. Dieser Umstand, welcher die Meinigen in große Not versetzt hatte, gereichte jedoch meinen Mitbürgern zum Vorteil, indem mein Großvater, der Schultheiß Johann Wolfgang Textor, daher Anlaß nahm, daß ein Geburtshelfer angestellt und der Hebammen-Unterricht eingeführt oder erneuert wurde; welches denn manchem der Nachgeborenen mag zugute gekommen sein" (Goethe 1911 [1811], 5; all translations from German are mine).

Thus begins the autobiography of Johann Wolfgang von Goethe (1749–1832), *Aus meinem Leben: Dichtung und Wahrheit*, the first part of which was published in 1811.²⁰ Why did Goethe, who was not a convinced adherent of astrology, introduce his nativity at such a prominent place in his biography at a time when astrology had already lost much of its earlier credit? There is no doubt that Goethe respected Cardano's *De vita propria* (see Weintraub 1978, 352; Grafton 1999, 180), and the similarity in presentation is not without meaning. The conscious construction of *Dichtung und Wahrheit* that began in 1809²¹ has to be seen in a wider context. In 1777/1778, Goethe had published the first part of Johann Heinrich Jung-Stilling's *Lebensgeschichte*; in the 1790s he had translated Cellini's *Vita*; and with his *Schrift über Winkelmann* (1805) and the *Biographie Hackerts* (1811) he had already taken steps towards a new understanding of the biographical genre. Goethe abhorred the usual self-fashioning in biographical narrative and anecdotal approaches to a person, weighing the good and bad elements of one's character or boring the audience with a confession of one's shortcomings. These were the works of what he called "*Nekrologen*,"²² "the dull product of hacks who pieced together the lives of great men, without a scrap of insight into their subjects, without any sense of human growth bursting forth out of the live background of the age" (Bowman 1971, 11). As the title *Dichtung und Wahrheit* indicates, it was Goethe's intention to show the 'truth behind the facts,' because, as he argued, a fact, even if it is true, is only important if it has meaning.²³ 'Truth' (*Wahrheit*) means the gradual formation of his personality; 'poetry' (*Dichtung*) means the description of possibilities and latent potentials that were important in a creative process, even if they did not manifest in concrete situations. Following an ideal in freemasonry,²⁴ Goethe presents to the audience the constant work on his own character, the carving and refinement of an artist's personality. Consequently, he sees the genre of biographical narrative as a therapeutic and pedagogical means to educate the people.

20 Goethe worked on his autobiography for decades; the fourth part, comprising Books 16–20, was not published until after his death. Of the many works on *Dichtung und Wahrheit* see Misch 1969, 917–955; Bowman 1971, which is a brief and sympathetic introduction close to Goethe's own writings; Sturrock 1993, 172–181; on its reception see Aichinger 1977; Wefelmeyer 1981.

21 On 11 October 1809 Goethe wrote in his diary: "Schema einer Biographie"; see Bowman 1971, 11.

22 In a letter to Zelter dated 29 May 1801. Among the biographies Goethe stood out against are St. Augustine's *Confessiones* in antiquity, Karl Philipp Moritz's *Anton Reiser* (1785–1790), and Jean-Jacques Rousseau's *Les Confessions* (1782–1789).

23 Goethe in a letter to Zelter from 1830. See also Bowman 1971, 14–21.

24 For Goethe's esoteric interests, see the standard work of Zimmermann 1969; see also Wilson 1999, and now the overview of Maillard 2005.

Viewed from this perspective, it was only logical to open the report with his nativity, for Goethe regarded the horoscope as representing precisely the ‘truth behind the facts,’ or—in his famous *Orphische Urworte*—as “geprägte Form die lebend sich entwickelt” (“engraved form which is developed in living”).²⁵ Consequently, in *Dichtung und Wahrheit* the function of his nativity is not a mere trick to convince the people of his good qualities, but a stylistic element in his strategy to exemplify the unfolding of a personality in congruence with the rhythms of life.

3.1. Playing with Fragments: Joseph von Eichendorff

Goethe’s autobiography had a tremendous impact on later generations of authors. It was at the same time the last attempt at presenting a meaningful, coherent account of the gradual unfolding of a personality and the beginning of a new understanding of the *conditio humana* that emerged in Romanticism. The possibility of attaining coherence in literature was increasingly brought into question during the first half of the nineteenth century. With regard to autobiographical narrative two extreme positions have been taken, represented by Franz Grillparzer (1791–1872) and Christian Friedrich Hebbel (1813–1863). Both authors left fragmentary accounts of their lives that were only published posthumously (see Kunisch 1985, 38–42). Grillparzer, on the one hand, noted in his diary (September 1827) that “if I ever should happen—which I will never do—to write down the sequence of my inner states, people would think that they read the pathogenesis of a lunatic.”²⁶ Hebbel, on the other hand, claimed the right of the classic autobiography: “Those who describe their lives should, as Goethe did, emphasize only the charming, the beautiful, the appeasing, the balancing, which can be found even in the darkest conditions, and leave the rest unnoticed.”²⁷ This, obviously, was no longer possible for Hebbel himself. In their contrast, both positions reflect the new social and cultural conditions of the nineteenth century which differed fun-

25 Bowman 1971, 11, refers to this famous sentence without indicating its astrological background. Cf. Misch 1969, 933.

26 “Wenn ich je dazu kommen sollte—aber ich werde es nie tun—die Geschichte der Folge meiner innern Zustände niederzuschreiben, so würde man glauben, die Krankheitsgeschichte eines Wahnsinnigen zu lesen.” And he goes on: “Das Unzusammenhängende, Widersprechende, Launen hafte, Stoßweise darin übersteigt alle Vorstellung. Heute Eis, morgen in Flammen. Jetzt geistig und physisch unmächtig, gleich darauf überfließend, unbegrenzt. Und zu dem allen noch, nicht imstande sich von etwas anders bestimmen zu lassen als von der sprungweisen Aufeinanderfolge des eignen verstockten Idecnganges” (quoted from Kunisch 1985, 40).

27 “Wer sein Leben darstellt, der sollte, wie Goethe, nur das Liebliche, Schöne, das Beschwichtigende und Ausgleichende, das sich auch noch in den dunkelsten Verhältnissen auffinden läßt, hervorheben und das Uebrige auf sich beruhen lassen” (diary of 18 March 1842, quoted from Kunisch 1985, 40).

damentally from the self-understanding of authors such as Smith, Aubrey, or Jeake. Truth and fiction, self knowledge and literary construction, classical ideals and new uncertainties, were in a state of tension; this ultimately led to the disintegration of the entire genre of autobiography.²⁸

Joseph Freiherr von Eichendorff (1788–1857), one of the leading proponents of German Romanticism, is a good example of this changed situation. His approach to autobiographical narrative can best be described as a playful palimpsest and a consequent transgression of literary genres. Eichendorff never wrote a formal autobiography; instead, he inserted fragments of his life in various formal ways—in novellas, pseudepigraphic texts, poems, novels, etc. (see Kunisch 1985, 43–46). The experimental character of his autobiographical writings applies to the use of astrological symbolism as well. His “Kapitel von meiner Geburt” (“Chapter Concerning My Birth”), clearly a reference to Goethe’s account, has the following to tell:

The winter of 1788 was so cold that the nails of the roofs cracked, the poor birds during their sleep fell from the trees, and deer, rabbits, and wolves—completely confused—flew into the villages. [...] My father stood nervously at the window, blew the beautiful frostwork off the window pane, and looked at the starry sky. The constellation was extremely auspicious. Jupiter and Venus flickered in a friendly manner at the white roofs; the moon stood in Virgo and was to culminate straightaway.²⁹

Like Goethe’s, Eichendorff’s nativity was ruled by an auspicious aspect of Jupiter and Venus accompanied by a fortunate moon. But then, as Eichendorff reports, the scene was disturbed by the arrival of a coach, bringing not the doctor but a strange man (whose identity is not revealed). This disturbance had fatal consequences:

28 This is Kunisch’s thesis: “Das autobiographische Fragment erhält von daher einen bedingt formalen Status, es wird als ‘Uniform’ zum authentischen Ausdruck der Gattungsproblematik. Sowohl die allein glaubwürdige und für die Weiterentwicklung der Autobiographie unumgängliche Aufnahme und Bewußtmachung neuer Wirklichkeits- und Icherfahrungen wie auch die Rückorientierung der eigenen Lebensbeschreibung an klassisch-harmonischen Formvorstellungen—denkbar nur als konsequente Stilisierung und Wirklichkeitsauswahl—mußte aus Gründen der Darstellbarkeit bzw. literarischen Kommunikation einerseits, der Wahrheitstreue andererseits, jeweils mit Notwendigkeit in einen kritischen, die Möglichkeiten dieser Übergangszeit überschreitenden Bereich und vielfach in das Mißlingen solcher Vorhaben führen” (1985, 42).

29 “Der Winter des Jahres 1788 war so streng, daß die Schindelnägel auf den Dächern krachten, die armen Vögel im Schlaf von den Bäumen fielen, und Rehe, Hasen und Wölfe ganz verwirrt bis in die Dörfer flüchteten. [...] [Mein Vater] trat [...] unruhig ans Fenster, hauchte die prächtigen Eisblumen von den Scheiben und betrachtete den weiten gestirnten Himmel. Die Konstellation war überaus günstig. Jupiter und Venus blinkten freundlich auf die weißen Dächer, der Mond stand im Zeichen der Jungfrau und mußte jeden Augenblick kulminieren” (Eichendorff 1911, 373).

The stranger took a handful of snow and rubbed his half-frozen nose, the wagon-driver cursed, the snow cracked under his feet, the dog barked—at this moment I was born in the lounge beside the dining room. My father, when he heard the cry of a baby, looked frightened at the sky: the moon had just culminated! I was almost born at the auspicious hour, I was only one and a half minutes too late, and was born confusingly with the feet first; one says that thus I made an *entrechat*.

However, that I missed the wonderful aspects, the right constellation, has annoyed me to the present day, like the poor boy who almost received a cake during the wedding. Otherwise, it would have really been a pushover for me: a rich wife, a medal, excellent contacts and protections, instead of a bony shape, a distinguished *à plomb*, or even an honor in the morning newspaper.³⁰

Eichendorff concludes his fragment with a pious acceptance of the fate that has been given to all humans by God, and even those pushed down by a fatal constellation are given the talent and power of a “holy will” to gain a balanced life—a playful Stoic attitude combined with a pious Christian devotion.

The author seems to insert the interpretation of his nativity—mainly by his father, interestingly enough—to engage the difficult relationship between divine determination and free will. The *conditio humana* had become uncertain; the old model of complex symmetry in the stars had lost its reassuring quality. Stronger than in Goethe, a playful attitude to the importance of astrological inquiry enters the stage.³¹ At the same time, however, Eichendorff implicitly acknowledged his father’s reading of his nativity as valid, and thus took his fatal constellation as an expression of a divine impetus to strive for a successful life. An intertextual presence of Cardano’s *De vita propria* is evident.

30 “[D]er Fremde nahm schnell eine Handvoll Schnee und rieb sich damit die halberfrorne Nase, der Kutscher fluchte, der Schnee knirschte unter den Tritten, der Hofhund bellte—da wurde ich in der Stube neben dem Tafelzimmer geboren. Mein Vater, da er einen Kindsschrei hörte, blickte erschrocken nach dem Himmel: der Mond hatte soeben kulminierte! um ein Haar wäre ich zur glücklichen Stunde geboren worden, ich kam gerade nur um anderthalb Minuten zu spät, und zwar in der Konfusion mit den Füßen zuerst, man sagt, ich habe damit ein *Entrechat* gemacht.

Daß ich aber, trotz der vortrefflichen Aspekten, die rechte Konstellation verpaßt, verdrießt mich noch bis auf den heutigen Tag, wie jenen armen Jungen, der bei der Hochzeit beinahe einen Kuchen bekommen hätte. Es wäre ja sonst für mich ein wahres Kinderspiel gewesen, eine reiche Frau, einen Orden, vortreffliche Konnexionen und Protektionen, anstatt meiner dünnen Figur, einen vornehmen *à plomb*, oder gar im Morgenblatt einen Lorbeerkranz zu bekommen” (Eichendorff 1911, 374).

31 See von Stuckrad 2003, 283-286 (Schiller and the Romantics).

4. Horoscopes and the Narrative Construction of Identity

The examples I have discussed reveal quite different functions of the use of horoscopes in autobiographical narratives. Referring to one's nativity can mythologize and legitimate the course of one's life, provide it a sort of inevitability, and serve as a red thread that structures the development and unfolding of one's personality and circumstances. It can also demythologize one's life by setting it in the context of a higher interpretive register, or by illustrating the relation between general rule and individual case in astrological research.

Despite the functional differences, it is easy to detect common features in all biographies. The most obvious commonality is the fact that we are dealing here with *textual* or, more generally, with *narrative constructions*. The horoscope is introduced intentionally as a rhetorical device which constructs a subtext underlying the narrative. It inserts a separate level of meaning independent from yet linked to the plot of one's life. And it *adds* meaning to the narration by providing a red thread and a higher importance to a life that could otherwise be quite ordinary.

4.1. The Narrative Structure of Identity

Now we may ask if this observation can be generalized. My answer is "yes"; and to substantiate this answer I make use of psychological and historiographical research into the formation of identity.³² Constructivist approaches in psychotherapy derive from the thesis that the most interesting task of psychotherapy is to substitute painful interpretations of one's life with less painful ones, rather than to find out the 'truth' about one's character (see Neimeyer and Mahoney 1995). The individual arranges past and present in a coherent and plausible structure, a process in which the construction of one's biography is itself a mode of adding meaning to life (see Straub 1998). The construction of biographical identity is by no means—as the common notion of 'patchwork-identity' suggests—an arbitrary act of invention; it is a complex process of organizing experience with a necessary selection of data.

As J. A. van Belzen exemplified with a nineteenth-century conversion narrative,³³ it is particularly fruitful to apply recent psychological approaches to the study of biography. Dan P. McAdams (1993 and 1999), for instance, says that every person has an individual myth that one "lives by" (see also Campbell 1972). This personal myth, however, is by no means fixed. The

32 For a more detailed analysis with a focus on conversion narratives, see Kippenberg and von Stuckrad 2003, 136-146 (with further references).

33 Van Belzen 2004; see particularly ch. 3 ("De bronnen van het zelf—Autobiografie en zelfpresentatie") on pp. 139-266.

telling of one's story is dependent on the respective contexts and situations, and the listeners draw their own conclusions from what they hear, independently of what the story originally meant. Hermans and Kempen (1993; see also Hermans and Dimaggio 2004) argue that the human self is a text that is constantly being reworked. The author of a life story is not the sovereign center of control, but negotiates a dialogue between several ego-positions—positions and perspectives that occasionally even contradict one another. The linkage between constructivist approaches in psychology and in cultural studies is this simple fact: the formation of biographical identity is only possible in a mode of *narration*. The very term 'biography' reveals the narrative element of this construction that follows an identifiable pattern in which certain events are seen as meaningful and central, while other events are arranged around these centers (Ulmer 1988; Stenger 1993).

4.2. Horoscopes and Emplotment

Evidence for this mechanism comes from literary studies as well. Hayden White scrutinized the famous historiographical narratives of the nineteenth century and argued that the phenomena are constituted and prefigured by the manner of presentation the author chooses. The historical fact is itself the product of the narration; language is not only the form but also the content (White 1973; cf. Kippenberg and von Stuckrad 2003, 38–40). The inevitable structuring of otherwise meaningless or, more precisely, unconnected events, White calls *emplotment*, i.e. the creation of a plot or structure. In his concrete presentation, the author makes use of certain classical devices known from ancient rhetoric—the so-called *tropes*.³⁴

What has this to do with horoscopes in biographies? Quite a lot. The horoscope is the crystallizing point of emplotment in autobiography. It signifies the underlying unity of seemingly incoherent and disconnected phenomena. It is an element of the text, both literally and functionally; but it is more than that too: it is itself a text to be decoded in the subsequent chapters of autobiographical narrative. Using the horoscope prefigures and constitutes the biography's content, or, as Anthony Grafton says regarding Cardano: "Astrology shaped content as well as form, since it played a crucial role in Cardano's willingness to reveal the secrets of his bedrooms and bathrooms" (1999, 184). Put more generally: "Astrology offered a language for describing the indescribable, the momentary, the felt, in late recollection" (Grafton 1999, 197).

34 These four basic tropes are metaphor, metonymy, synecdoche, and irony; see White 1973, introduction. An important contribution to the relationship between narrative discourse and historical representation is White 1987, particularly chapters 1 and 2.

Judged from the classical theory of rhetoric, the nativity can be seen both as *metaphor* and as *synecdoche*. It is a metaphor because the horoscope expresses the biography's data by way of analogy drawn from astrological tradition.³⁵ And it is a synecdoche because the horoscope reveals the intrinsic quality of the biography; by using the trope of synecdoche, it is possible to integrate both parts into a whole that is *qualitatively* distinguished from the parts, which are only *microcosmic* reproductions of the whole.

I conclude my analysis with the observation that these functions of a birth chart are not limited to autobiographical texts alone. If we take into account that identities in general are shaped by discursive practices and that they have a narrative foundation, *every* horoscope reading serves the need of providing people with a meaningful interpretation of their lives.³⁶ No matter whether this reading represents the 'truth' of one's personality, it is definitely a means of *emplotment*, since it prefigures and pre-structures the understanding of a life.

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35 Wayne Shumaker's disapproving remark that autobiography before the eighteenth century is unable to confront experience directly and thus presents metaphor instead of reality (1954, 10) must be relativized.

36 I argued elsewhere (von Stuckrad 2003, 365-368) that modern psychological astrology should be interpreted as a hermeneutical procedure and a negotiation of meaning between astrologer and client. The perception of evidence and coherence is a *social* phenomenon and as such neither a 'proof' nor a 'disproof' of astrology. Consequently, experiencing the "truth of astrology" (Patrick Curry in this volume) is itself a narrative event (on the differences between Curry's and my understanding, see also von Stuckrad 2005). Cf. Cornelius 1994, Willis and Curry 2004, and Steven vanden Broecke's critical remarks in the present volume.

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J. W. A. Pfaff and the Rediscovery of Astrology in the Age of Romanticism

GÜNTHER OESTMANN

1. Introduction: The Crisis of Astrology

After Isaac Newton (1642–1727) had explained the planetary orbits by gravity and given physical reasons for Kepler's descriptive laws of planetary motion, astronomy made great progress in the course of the eighteenth century, profiting largely from the rapid advances in mathematics. In his *Mécanique céleste* ("Celestial Mechanics"), which appeared between 1799 and 1825, Pierre Simon de Laplace (1749–1827) treated all motions in the solar system as a purely mathematical problem. He could demonstrate that the solar system—notwithstanding all perturbations—is highly stable. It was taken as a huge mechanism driven by the universal force of gravitation with eternal movements. With the skillfully devised theory laid down by Carl Friedrich Gauß (1777–1855) in his *Theoria motus corporum coelestium* (1809), these movements could be calculated and predicted very accurately. Computing the orbits of celestial bodies became the foremost task of astronomy in the nineteenth century. Moreover, in his *Exposition du système du monde* ("Exposition of the World System," 1796), Laplace postulated an evolutionary development of the solar system from an entirely different original state, a train of thought already developed by Immanuel Kant (1724–1804) in 1755. There was good reason to assume that also human affairs would reach a similar level of perfection under the rule of freedom, reason, and science.

During this period astrology saw a rapid decline. Apart from England, where the situation was somewhat different, there was virtually no public interest, and the intellectual climate of the Age of Enlightenment was unfavorable. So, at the end of the eighteenth century, astrology was almost dead, at least as far as Germany is concerned. Astrology was no longer tolerated among astronomers, who were busy hunting for new comets and computing their orbits as well as the four minor planets between Mars and Jupiter, which had been discovered at the beginning of the nineteenth century. But a movement arose in opposition to a completely mechanistic view of the cosmos.

Romantic natural philosophy offered astrology a place of refuge. Here nature was viewed as a work of art constructed by a divine imagination and veiled in emblematic language. It was an organically unified whole, not, as rationalists would have it, a system of mechanical laws and mathematically defined motions. The notion of the clockwork universe, in which God had only wound up the mainspring, was replaced by an organic image. Symbolism and myth were given greater prominence. Placed above the supremacy of reason, imagination became the supreme faculty of the human mind. Only imagination allowed man to read nature as a system of symbols. Intuition, instincts, and feelings were seen as necessary supplements to logic and reason. Consequently, August Wilhelm Schlegel (1767–1845) spoke of a missing sense of the miraculous as a consequence of Enlightenment in his lectures *Über Literatur, Kunst und Geist des Zeitalters* (“On Literature, Art and Spirit of the Age,” 1803). Men thought only in categories of quantity and utility. Therefore, astronomy had to become astrology again because the observer of the heavens was far more elevated if he believed in the stars’ assistance as if he were a bondsman of nature. A similar train of thought can be found in the writings of Friedrich von Hardenberg (Novalis, 1772–1801). Johann Wolfgang Goethe’s (1749–1832) description of his own horoscope in his autobiography *Dichtung und Wahrheit* (1811/1833) is well known.¹ Confined to literature and philosophy, this aesthetic and symbolic reception of astrology was separated from the rapid development of the natural sciences at the turn of the nineteenth century. Only one natural scientist tried crossing the border—and he was met with a heavy barrage of criticism.

2. Enter J. W. A. Pfaff

Johann Wilhelm Andreas Pfaff was born on 5 December 1774 in Stuttgart. From 1791 on he studied in the famous Protestant Theological Seminar, called “Stift,” in Tübingen (Hermelink, Bürk, and Wille 1906/54, 3: 355, nr. 38850). There was a considerable spirit of opposition among the students at this time—the new revolutionary ideas from France had even reached Tübingen’s theologians who lived in almost monastic seclusion (Leube 1921/54, 2: 115ff.; Hahn and Mayer 1985, 54–58). The extant regular assessments contain harsh criticisms. Despite Pfaff being second best in the final examinations in 1796, one can find the caustic remark “*Studia theologica non plane neglexit*”—he did not neglect theological studies entirely.² Although becom-

1 See Kocku von Stuckrad’s contribution to the present volume.

2 “*Joannes Guilielmus Andreas Pfaff, Stuttgardianus, Friderici Burcardi, Consilarii aulici ibidem filius, nat. 1774. Valetudo firma. Statura mediam excedens. Eloquium distinctum, sed minus gratum. Gestus pauci. Ingenium felix. Judicium bonum.*

ing a Lutheran pastor was obviously not his professional ambition, he was nevertheless appointed as *Stiftsrepetent* in 1800.³ During his stay in Tübingen, Pfaff was able to acquire knowledge in the natural sciences. He must have had close contact with Christoph Friedrich Pfleiderer (1736–1821),⁴ professor of mathematics and physics, and probably also with his successor Johann Gottlieb Friedrich Bohnenberger (1765–1831), who was appointed as professor of mathematics and astronomy in 1798. The observatory was located in the castle of Hohentübingen in the immediate vicinity of the “Stift.”

In 1802 the University of Dorpat (Tartu) in Estonia (then belonging to the Russian Empire) had been reopened. Georg Friedrich Parrot (1767–1852) became Rector and offered a position as professor of mathematics to Pfaff's elder brother Johann Friedrich (1765–1825), who was then a professor of mathematics in Helmstedt. Although he was willing to accept, the University of Helmstedt did everything possible to keep him, even raising his salary. Therefore he recommended his younger brother for the position. Desiring to appoint candidates for the newly opened university from among his associates, Parrot told the council of Dorpat University that he knew the character of Johann Friedrich Pfaff thoroughly. Thus the soundness of his brother's recommendation was sufficiently guaranteed. But there were three other possible candidates for the post: Carl Friedrich Gauß, Johann Karl Burckhardt (1773–1825), a member of the *Bureau des Longitudes* in Paris, and Johann Anton Ide (1775–1806), a private lecturer from Göttingen. To achieve a vote between Pfaff and Ide only, Parrot tried to eliminate both Gauß and Burckhardt as candidates, remarking that Gauß would not leave Brunswick since the duke had promised to build an observatory for him. Burckhardt had already been appointed as successor to Joseph-Jérôme de Lalande (1732–1807), astronomer at the Military Academy of Paris, and—*horribile dictu*—had accepted the citizenship of a revolutionary republic.

Parrot's strategy was successful, and the commission nominated Pfaff as professor of mathematics and astronomy.⁵ He arrived in Estonia in spring 1804, also becoming director of a projected observatory, but building activities did not start until 1809. In the meantime, Pfaff made astronomical observations under primitive conditions in an attic. From 1807 on he used a small private observatory which Andreas Lambertini (1771–1850), a surveyor and

Memoria facilis. Scriptio lectu difficilis. Mores inculti. Industria sibi haud constans. Opes largae. Studia theologica non plane neglexit. Orationem sacram negligenter elaboratam, plerumque memoriter recitavit. Philologiae, philosophiae et matheseos gnarus” (Tübingen, Archive of the Protestant Seminar (Evangelisches Stift): Testimonia Examinandorum 1796).

3 Tübingen, Archive of the Protestant Seminar (Evangelisches Stift): K. III, F. 1, 2.

4 On Pfleiderer see Lagler 1998.

5 Tartu, Eesti Ajalooarhiiv (Estonian Historical Archive): Best. 402, Reg. 3, N. 1374 (*Acta des Conseils und Directoriums der Kaiserlichen Universität zu Dorpat betreffend Johann Wilhelm Pfaff*), fol. 5r–6r; see also Mütsersepp 1978. A detailed account of Pfaff's time in Dorpat was given by Levickij 1899, 23–55.

astronomical enthusiast, had built in his garden (Zhelnin 1969). At this time Heinrich Christian Schumacher (1780–1850), who later founded an observatory in Altona and became editor of the *Astronomische Nachrichten* in 1823, was teaching law in Dorpat as a private lecturer while he studied astronomy with Pfaff.⁶

2.1. Gotthilf Heinrich Schubert

In 1804 Pfaff married Pauline von Patkul, a noble woman from Livland, but life in Dorpat was very expensive at this time, and many professors—including Pfaff—ran into increasing debt (Levickij 1899, 27–30). Moreover, the administration of Dorpat University was restrictive, which caused many problems,⁷ so Pfaff left Dorpat in 1809 before the observatory had been completed, and received a teaching post at the Nuremberg *Realinstitut*. Heading the institute was Gotthilf Heinrich Schubert (1780–1860), a natural philosopher who had been trained in medicine at Jena. Schubert was a pupil of Johann Friedrich Schelling (1775–1854) and had studied galvanism with Johann Wilhelm Ritter (1776–1810).⁸ In 1807/08 Schubert delivered a series of public lectures on natural history, psychology, and animal magnetism in Dresden, which were published under the title *Ansichten von der Nachtseite*

6 Tartu, Eesti Ajalooarhiiv (Estonian Historical Archive): Best. 402, Verz. 3, A. 1969.

7 In 1809 Olbers wrote to Gauß, who had been proposed as successor to Pfaff: “Nur mit wenigen Zeilen sage ich Ihnen [...] Dank [...] und eile nur noch hinzuzufügen, daß ich hier das Vergnügen habe, mit dem Professor Pfaff aus Kiel [...] umzugehen, und daß mir dieser sehr nachtheilige Schilderung von der Lage der Professoren in Dorpat gemacht hat. Sein Bruder hatte dort 2500 Rubel, welches aber bei der Theuerung wenig sein soll, und fand überhaupt seine dortigen Verhältnisse so unangenehm, daß er sich um eine Stelle am Gymnasium zu Stuttgart, die 800 fl. einträgt, jedoch unter Ausbedingung einiger nicht bewilligter Nebenvortheile vergebens beworben, und jetzt eine Stelle von 1000 fl. bei dem Institut zu Nürnberg angenommen hat. Pfaff versicherte mich, die Schuld der Unzufriedenheit seines Bruders in Dorpat liege nicht etwa in dem individuellen Charakter desselben oder seiner Unverträglichkeit, und er könne, dies waren seine Worte, keinem seiner Freunde, der anderweitig sein Auskommen habe, rathen, nach Dorpat zu gehen. Besonders sei der Kurator dieser Universität, Hr. v. Klinger, ein äußerst unangenehmer Mann für die Professoren. Kasan sei Dorpat in aller Rücksicht für das Auskommen sowohl, als das angenehme Leben weit vorzuziehen, und man möge ja in dem so theuren Dorpat sich nicht durch anscheinend große Besoldungen täuschen lassen.- Ich habe mich, wie sich von selbst versteht, Ihretwegen, lieber Gauß, nichts merken lassen, halte es aber für meine Schuldigkeit, Ihnen diese Aussage sogleich zu referiren. Der Theil derselben, das unschickliche Benehmen des Kurators gegen die Professoren betreffend, wurde auch von einem anderen hier anwesenden Gelehrten, dem Leibmedikus Sterglitz aus Hannover, bestätigt. Sehen Sie sich also vor, mein teuerster Freund, ehe Sie sich für D[orpat] bestimmen” (Schilling 1894/1909, 2.1, 438).

8 There is no comprehensive treatment of Schubert available, but see Engelhardt 1980 and Merkel 1913. Schubert’s autobiography (Schubert 1854/56) contains a wealth of information and is an important source for the Romantic Era in Germany.

der Naturwissenschaft ("Views from the Dark Side of Natural Science") in five editions through 1840. The "dark side" of natural science Schubert treated were elements and appearances inexplicable by rationalistic science or simply unknown. With their emphasis on irrationality, fantasy, and vision, these lectures had a lasting influence on Romanticism and made him an instant celebrity (Gregory 1995), influencing many poets, including E. T. A. Hoffmann, Justinus Kerner, and Heinrich von Kleist.

Only an outline of Schubert's ideas expressed in a vast number of books with revealing titles, like *Ahndungen einer allgemeinen Geschichte des Lebens* ("Presentiments of a General History of Life," Leipzig 1806/21), can be given here. His publications were enormously popular, running through numerous editions.

Schubert had a deep appreciation of the religious meaning of nature, and saw all things as existing in spiritual interconnection, resulting in a coherent physical and historical existence. Thus no part of human experience should be ignored or omitted, and for Schubert the history of science was fundamentally important for understanding man and nature both past and future. Evidence for deeper insights could be found in extinct civilizations and cultures. The oldest of all the sciences was astronomy. Indeed, astronomical knowledge was revealed to mankind from a higher spirit and had immediately attained the highest perfection (Schubert 1808, 29, 33). This ancient all-embracing knowledge had been obscured over the course of history, although some of its traces could still be found in astrology and alchemy. In the beginning of the modern age new impulses had been released, but to Schubert Renaissance meant the reanimation of old traditions. With Kepler the entrance to the innermost sanctuary of science had been found (Schubert 1808, 14, 156). In contrast to Germany, a mechanical and artisanal view of lifeless nature developed in France, a science "in which only mechanic forces moved like worms gnawing rotten bones."⁹

Motivated by the discovery of the four minor planets, Ceres, Pallas, Juno, and Vesta between 1800/07,¹⁰ and inspired by Schelling (Schubert 1806/21, 2: 146ff), Schubert speculated about certain proportions in the solar system which were derived from the radii of the planets and their distance to the sun. He postulated the existence of two mathematical progressions (the first one from Mercury to Juno, the second from Juno to Uranus), and he hoped to have ascertained a mathematical dependency between the greatest distance of a planet to the sun, the diameter and greatest distance of the next

9 "[...] neben Keplers erhabenen Ansichten, hat sich noch zu derselben Zeit, in Frankreich, eine mechanische und handwerksmäßige Ansicht einer todten Natur gebildet, in welcher sich wie Würmer, welche ein modernes Gebein benagen nur noch die mechanischen Kräfte bewegen" (Schubert 1808, 14).

10 "Diese 4 Weltkörper sind uns erst der Schlüssel zu jenen tieferliegenden Verhältnissen des Planetensystems geworden, und ohne sie wäre hierinnen kein Fortschritt möglich gewesen" (Schubert 1808, 170).

inner planet, and a certain constant, for which (in the first progression) he took the proportion of the diameter of the sun to the diameter of Mercury. For the second progression, Schubert divided the radius of the sun with the addition of the radii of the orbits of Ceres and Pallas.¹¹ In a review, the astronomer Franz Xaver von Zach (1754–1832), director of the Seeberg observatory near Gotha, rejected Schubert's speculations sharply and marked them as a "mere creation of an effusive imagination entirely beyond the horizon of astronomy and mathematics."¹²

Without a doubt, Pfaff was attracted by Schubert, who connected anti-rationalistic piety with a Romantic spirit and became a leading representative of the religious awakening in Southern Germany. Soon a deep personal friendship developed between these two kindred spirits. Moreover, he found like-minded colleagues in Johann Arnold Kanne (1773–1824), "a genial researcher of Antiquity" (as Schelling described him; see Schubert 1854/56, 2: 286) and Johann Salomo Christoph Schweigger (1779–1857), who taught chemistry and later became professor of chemistry and physics in Halle (Snelders 1971; Kleinert 2000).

3. Pfaff's 'Conversion' to Astrology

Pfaff was noted as an astronomer and had already written several papers on practical and theoretical astronomy, when in 1816 he published a book of 245 pages with the simple title *Astrologie* in Nuremberg. In twelve chapters—each under the heading of one sign of the zodiac—he set out to vindicate the ancient science of the stars in opposition to contemporary enlightened (and hence disapproving) views.

The first part (Aries to Leo) comprises the history of astrology with chapters on Paracelsus and Kepler, whereas in the second part (Virgo to Aquarius) astrological doctrines (the signs of the zodiac, and the natures of the planets and twelve houses) are treated. The last chapter under the sign of Pisces forms the third part consisting of three supplements. Here a letter from Kepler to Emperor Rudolf II (Pfaff 1816c, 203–212) can be found, and Pfaff

11 Schubert 1808, 166–176, with additions on pp. 389–464 (*Ueber die Verhältnisse der Größen, Eccentricitäten und Rotationen der Weltkörper unsres Systems*). I was unable to locate a copy of Schubert's *Neue Untersuchungen über die Verhältnisse der Größen und Excentricitäten der Weltkörper* which appeared in Dresden as a separate publication the same year.

12 "Bloße Geschöpfe einer exaltirten Einbildungskraft ganz außer dem Gesichtskreise von Astronomie und Mathematik" (Zach 1808, 554f.). See also the devastating review of Schubert's separate publication (n. 18) by Friedrich Wilhelm Bessel in *Jenaische Allgemeine Literaturzeitung* 6 (1809), col. 469–471 (reprinted in Engelmann 1878, 66–68), and Jahn 1844, 1: 79.

also printed the horoscope of Emperor Maximilian I, cast and interpreted by Johannes Schöner, as an example of the topics treated in part two (Pfaff 1816c, 212-226). The third supplement comprises his German translation of the *Centiloquium*, then still ascribed to Ptolemy (Pfaff 1816c, 227-242).

Pfaff sent a copy to Bernhard von Lindenau (1779-1854), director of Seeberg Observatory and editor of the *Zeitschrift für Astronomie* ("Journal for Astronomy"), who was obviously somewhat irritated and asked for an explanation. Therefore, Pfaff addressed a letter to him, which v. Lindenau published. The *Zeitschrift für Astronomie* was a short-lived project existing only from 1816 to 1818 (Herrmann 1972, 60-70) and is now quite scarce. Pfaff's letter is a key document for his 'conversion' to astrology, and therefore central passages shall be quoted:

Schon vor mehr als zehn Jahren habe ich mich mit Astrologie beschäftigt. Bei populären Vorlesungen schien mir das Ganze Erwähnung zu verdienen. [...] Früherhin hatte ich nur wenige Schriften gelesen, allein doch machte manches, historisch betrachtet, einen großen Eindruck auf mich. Auch des Ptolemaeus Buch [*Tetrabiblos*] hat mehreres merkwürdige für mich gehabt. [...] Endlich war mir weder Ursprung noch Ende dieses räthselhaften Systems bekannt. Von Keppler kannte ich damals hierher gehöriges nichts als etwa das Mysterium [*cosmographicum*]; später lernte ich Keplers Harmonie [*Harmonice mundi*] kennen, ferner seine Briefe, die astrologischen Bewegungen zu seiner Zeit und seine Ansichten die so ganz verschieden von denen seines Zeitalters waren. So sammelte sich manches, die Bilder erweiterten sich, und so entstand der Entschluß dem astrologischen Glauben ein Denkmal zu stiften. Ich sammelte was in meiner Nähe aufzutreiben war, sah mich etwas im Arabischen um, und so gieng es nun in mannichfacher Zeit und Sage, auf die Aphorismen, Paragraphen und Sentenzen los. Bis hierher werden Ew. alles in der Ordnung finden. Nun aber entstand die Frage: was soll man dem Papierstoß für einen Geist einblasen? Sie schreiben mir unbedingt richtig: den historisch kritischen Geist. Aber der wurde mir aus mehreren Gründen unmöglich. Es fehlten mir die Hülfsmittel, meine Lectüre reichte dazu nicht hin [...]; endlich war ich überzeugt, daß der astrologische Glaube durch Tradition gieng, also sein Ursprung nicht nachgewiesen werden könne, also eine Hypothese aufgestellt werden müsse. Da war nun freilich leicht zu sagen, es war Pfaffenbetrug oder mißverständene Einkleidung astronomischer Wahrheiten, oder irrige Anwendung sonst richtiger Sätze: aber beweisen konnte ich nichts. Dazu kam, daß Keplers Wirken und Wesen, auch dargestellt werden müßte: denn er war gewiß ein Astrolog, d.h. er glaubte an den Zusammenhang der Gestirne mit dem Leben der Erde. Es ist wahr er fiel mannigfach in Irrthümer [...]; aber die Art, der Sinn, das Leben mit dem er dieß that, muß für jeden interessant seyn, der sich für das Streben eines großen Geistes empfänglich hält. In diesem Sinn sagte ich: er schrieb den Geist der Gesetzgebung; und in diesem Geist schien es mir merkwürdig, daß er die gemeine Astrologie verachtet und jenen Glauben gegen sein Zeitalter doch zu retten sucht. Aus diesen Gründen mußte ich also den historisch kritischen Weg aufgeben, und dem ganzen einen andern Ton und Stimmung geben. Den längst untergegangenen astrologischen Glauben zu widerlegen wäre unzeitig gewesen; ihn zu vertheidigen und zu preißen in einer Zeit, die Ernsthafteres zu thun hat, nicht anständig. So entstand also der Plan, dieß Bild des astrologischen Glaubens, gleichsam aus der Seele eines Astrologen heraus, mit aller Klarheit und Kunst, in abwechselnder Gestalt und Haltung vorzuzeichnen, dem Ganzen aber eine schwankende Bewegung zu geben, so daß das Klare wieder getrübt erscheine und die Kunst wieder mächtig. Dieses Schwanken glaubte ich durch mancherlei Mittel hervorbringen zu können, Zuvörderst schon die ganze Einkleidung des Buchs, nach den zwölf himmlischen Zeichen: der Löwe, Keppler, die Jungfrau Astronomie u.s.w.; die Erinnerung an den Leser, daß er sich hier, in einer Bilder- und Schattenwelt eigner Art sich befindet. Die Darstellung durch Aphorismen ließ mir die Freiheit in jedem Augenblicke nicht bloß den Ton, sondern auch den Inhalt zu ändern [...]. Endlich sollte das Ganze so gehalten seyn, daß niemand vom gemeinen Volk, im weitern Sinn,

die Astrologie daraus erlernen könnte, um davon Gebrauch zu machen. Dieß Leztere ist mir um so mehr gelungen, da mir manches selbst undeutlich ist. [...] Das ist die Geschichte der Astrologie, für welche Sie in Ihrem lezten Briefe nicht ohne Besorgniß für mich waren. [...] Ich glaube nicht, daß ich Eingriffe in die Astronomie gemacht habe. [...] Auch ist es wohl nicht so schädlich, wenn unter den Astronomen je ein cometenartiges Wesen, – vielleicht ich – wäre, wenn sie sich nur alle um die Sonne der Wahrheit bewegen, und keiner den andern mit sich fortnimmt. Stören ja doch auch die Planeten einander!¹³

- 13 “For more than ten years now I have occupied myself with astrology. I felt that it should be mentioned in popular lectures. [...] Earlier I had only read a few works, although some, viewed historically, made a marked impression on me. Ptolemy’s book [i.e., the *Tetrabiblos*] also had several curiosities for me. [...] Finally, I did not know either the origin or the end of this mysterious system. I knew then only the *Mysterium [cosmographicum]* by Kepler. Later I became acquainted with his *Harmony [Harmonice mundi]*, later still with his letters, the astrological movements of his time, and Kepler’s views, which were so different from those of his age. Thus a number of things were collected, and the resolution originated for establishing a monument to astrological belief. I collected what was available in my vicinity, looked around a bit in Arabic, and went for aphorisms, paragraphs, and sentences in many times and legends. Up to now Your Excellence will find everything in good order. But now the question arose: Which spirit should be blown into this pile of paper? You have written absolutely correctly: The historico-critical spirit. But for several reasons this was impossible for me. Aids were missing, my reading was insufficient; of the Greeks I knew little [...] Finally I was convinced that astrological belief had a tradition; therefore about its origin no proof could be furnished; therefore a hypothesis had to be put forward. Admittedly, it was easy to say that it was clerical deception or the misunderstood couchings of astronomical truths or false application of otherwise correct propositions, but I could not supply evidence. Moreover Kepler’s work and nature had to be described: For he certainly was an astrologer, that is, he believed in a connection of the celestial bodies with life on earth. It is true, he sank into many mistakes [...], but the nature, the mind, the life with which he did it, must be of interest for everybody who keeps himself receptive to the striving of a great genius. It is in this sense that I have said: He wrote the spirit of legislation, and in this spirit it appeared curious to me that he despised common astrology and tried rescuing this belief against his age. For these reasons I had to give up the historico-critical way and gave another tone and mood to the whole. To refute the astrological belief which declined long ago would have been untimely; to defend and praise it in our time, which has more serious things to do, would not be decent. So the plan originated to draw this picture of astrological belief with all clarity and art, so to speak, from the soul of an astrologer, in varied form and style, but giving a swaying movement to the whole, so that the clarity would become overcast and the art again mighty. I believed that I could produce this swaying by manifold means; first, the whole clothing of the book with the twelve signs: The lion Kepler, the virgin astronomy, and so forth, reminding the reader that he finds himself here in a strange world of pictures and shadows. The account by means of aphorisms left me the freedom to change not only the tone at any moment, but also the contents [...]. Finally the whole should be taken in such a way that none of the common people in a broader sense could learn astrology from it in order to use it. I was successful in the latter, because many a thing is indistinct for me, too. [...] This is the history of astrology, for which you were not without concern for me in your last letter. [...] I do not believe that I have made encroachments on astronomy. [...] It would also probably not be so harmful if there existed among astronomers a comet-like nature—perhaps me—even if they all are only in motion around the sun of truth and none carries another away with him. But indeed the planets also disturb each other!” (Lindenau 1816).

But Pfaff's colleagues spoke disparagingly about his book and exchanged derisive remarks in their correspondence. Wilhelm Olbers (1758–1840), physician and renowned astronomer in Bremen, wrote to his close friend and colleague Carl Friedrich Gauß:

Pfaff's Astrologie habe ich mit Befremden gelesen. Pfaff scheint nicht genug daran gedacht zu haben, daß, so lange man die Erde als den Mittelpunkt des Weltalls, und als den Zweck aller übrigen Weltkörper ansähe, der Glaube an Astrologie sehr natürlich, und ich möchte fast sagen, sehr konsequent war. Daß aber nun, da wir das wahre Verhältniß unserer Erde zu den übrigen Himmelskörpern kennen, die Nichtigkeit dieser frivolen Wissenschaft klar vor Augen liegt, da Erfahrung und Thatsachen sie nie bestätigt haben. Nach Copernicus' Zeiten mußte dieser Aberglaube von selbst aufhören. Kepler thut Pf[aff] in dem Stücke großes Unrecht, daß er ihn mit den krassen Astrologen, die selbst Begebenheiten, von willkürlichen Handlungen freier Geschöpfe abhängig, aus den Stellungen der Himmelskörper ableiten und vorhersagen wollten, gewissermaßen in eine Linie setzt. – Auch Pfaff's Darstellung der Astrologie an sich würde noch vielen Tadel verdienen, und er scheint mir nicht sehr mit ihren ehemaligen Lehren vertraut geworden zu sein.¹⁴

And Gauß replied:

Pfaff's Astrologie habe ich jetzt auch durchblättert. Es ist mir dabei zu Muthe gewesen, als ob ich mich in einem Irrenhause befände. Ich glaube aber doch, daß das Buch vielen Schaden stiften wird. Die hiesigen Buchhändler sollen eine große Menge Exemplare abgesetzt haben. Man geräth oft in Verwunderung, wenn man sieht, wie sehr die Menschen, auch die sonst gebildeteren, am Aberglauben hängen und überall in Zufälligkeiten wunderbaren Zusammenhang suchen.¹⁵

He was also publicly criticized when Johann Elert Bode (1747–1826), editor of the *Berliner Astronomisches Jahrbuch* ("Berlin Astronomical Yearbook"), announced the publication of Pfaff's book in the following note:

14 "I have read Pfaff's Astrology with displeasure. Pfaff does not seem to have thought enough about this, that, so long as the earth was looked upon as the center of the universe and the purpose of all other celestial bodies, belief in astrology was very natural, and I would almost like to say, very consistent. But now, since we know the true relation of earth to the remaining celestial bodies, the insignificance of this frivolous science is clear to everyone because experience and facts never confirmed it. After Copernicus's time this superstition had ceased by itself. Pfaff does a major injustice to Kepler in the piece, that he, so to speak, lines him up with crass astrologers, who even derive and predict events dependent on the deliberate acts of free creatures from the positions of the celestial bodies. Also Pfaff's account of astrology in itself would deserve still more reproach, and it seems to me that he did not become very much acquainted with its former doctrines" (Schilling 1894/1909, 2.1: 647f. [Bremen, 12 March 1817]).

15 "I have also now leafed through Pfaff's Astrology. I felt as if I found myself in a madhouse. But I believe the book will cause much harm. The local booksellers must have sold a vast number of copies. It is often astonishing to see how much people, even educated ones, adhere to superstition and search for miraculous correlation in accidental coincidences" (Schilling 1894/1909, 2.1: 653 [Göttingen, 28 April 1817]); see also Schaefer 1927, 136, 158.

Im vorigen Jahr ist zu Nürnberg auf 16 Bogen in 8vo m K. erschienen: Astrologie. Doch wol nicht die wahrsagende? Allerdings! Den ganzen Wust diser veralteten Kunst, und ehemaligen Verirrung des menschlichen Verstandes, hat man uns hier aufs neue aufgetischt. – Was können Kenner und Verehrer der wahren Astronomie, von dem Inhalte einer solchen Schrift anders erwarten, als: Unerhört willkührliche Darstellungen. Keplern wollen wir gerne die Schwachheit vergeben, daß er, seinem Zeitgeist gemäß, Astrologie trieb. Außerdem, daß er selbst sich oft sehr zweideutig darüber erklärte, war er leider, ums Brod willen, genöthigt, seinem Fürsten die Nativität zu stellen. Er erwarb sich, dagegen doch, durch die Entdeckung der wahren Gesetze des Planetenlaufs, die Unsterblichkeit.¹⁶

But in 1817 Pfaff faced serious professional problems from quite another direction: The Bavarian government decided to dissolve the *Realinstitut*,¹⁷ and he was moved to Würzburg as an associate professor. A year later he was appointed professor at Erlangen, where he lectured on mathematics and physics until his death on 26 June 1835.¹⁸

3.1. Astrology and Beyond

Pfaff's speculative mind was by no means confined to astrology. Besides writing school textbooks and editing German translations of scientific works,¹⁹ he also took a lively interest in comparative language studies (Pfaff 1816b, 1817), oriental studies (he started learning Sanskrit), and Egyptian archaeology. In 1825 Pfaff published a polemical book against Jean-François Champollion's (1790–1832) successful attempt to decipher the Egyptian hieroglyphs: *Die Weisheit der Aegypter und die Gelehrsamkeit der Franzosen* ("The Wisdom of the Egyptians and the Erudition of the French"; Pfaff 1824/27). Pfaff still adhered to Athanasius Kircher's symbolic interpretation of hieroglyphs. For J. F. Cotta's *Morgenblatt für gebildete Stände* Pfaff wrote

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- 16 "Last year in Nuremberg on 16 leaves in octavo appeared: Astrology. Not the predicting? Certainly! All the junk of this obsolete art and former aberration of human understanding has been served up for us again. What else can experts and admirers of true astronomy expect from the contents of such a paper than: Outrageous arbitrary accounts. We will readily forgive Kepler for his weakness, that he, in accordance with the spirit of his time, pursued astrology. Besides he often declared himself quite ambivalently about it and, alas, he was forced to cast his prince's nativity to earn his living. Nevertheless he gained immortality because he discovered the true laws of the planetary motion" (*Astronomisches Jahrbuch für das Jahr 1820*, 249f.).
- 17 Nürnberg, Staatsarchiv: Kammer des Innern, Stadtkommissariat Nürnberg, 4584 (*Acta des Königl. Commissariats der Stadt Nürnberg Die Organisation des Real Instituts betr. modo die Auflösung desselben*).
- 18 The principal archival records are preserved in Würzburg and Erlangen (Würzburg, State Archive, Universitäts-Curatel, 145, nr. 1-12; Würzburg, University Archive: Akten des Rektorats und Senats, 697, fol. 7; Erlangen, University Archive: Th. II. Pos. 1, P. Nr. 10).
- 19 Pfaff 1816a, 1823b, 1826, 1828, 1829, 1834. For a survey of Pfaff's publications, see Langhans 1971, 178-184, which is, however, incomplete.

a series of articles with astrological elements and allusions, which he edited as a book with the significant title *Der Mensch und die Sterne: Fragmente zur Geschichte der Weltseele* ("Man and the Stars: Fragments toward a History of the World Soul") shortly before his death in 1834.

In 1821 Pfaff had finished a book on conjunctions and the Star of Bethlehem in Bamberg, where he stated in the preface:

Die zweyte Abhandlung gesteht frey heraus, daß sie astrologischen Inhalts ist. Seit die Franzosen sich rühmten, die Welt, oder die civilisierte Menschheit, vom astrologischen Aberglauben befreit zu haben, war die Meinung herrschend, die Astrologie sey nichts gewesen, als das Nativität-Stellen für eine bestimmte Person oder eine moralische Gesammt-Einheit, z.B. Staat, Königreich, aus dem Stande des Himmels gegen den Horizont in dem Augenblicke der Geburt. Diese Meinung schien herrschend, als ich unter der Aufschrift: "Astrologie" [...] ein unter mancherley Rüstung und Waffen kämpfendes Frey-Corps von Paragrafen unter zwölf Fähnlein mit den Zeichen des Thierkreises in die gelehrte Welt ausziehen ließ.²⁰

A year later he began publishing an *Astrological Pocketbook*, which contained a German translation of books I and II of the "Bible of Astrologers," the *Tetrabiblos* of Claudius Ptolemy (Pfaff 1822, 18-112). Pfaff used a Latin translation by Aegidius de Thebaldis printed first in Augsburg (1484), the Greek texts edited by Joachim Camerarius (Nuremberg 1535) and Melanchthon (Basle 1553), and also another edition by Nicolaus Prugner (1551). But mostly he relied on Melanchthon's Latin translation, which accompanied the Greek edition of 1553 (Pfaff 1822, 10, 18). Pfaff's *Astrological Pocketbook* is now very scarce, but his translation was reprinted in 1938 as an appendix to the German astrological journal *Zenit*. After the Second World War this appendix was printed again as a separate booklet by a small astrological publishing house near Hannover (Pfaff 1950).

Furthermore, Pfaff added ten propositions on the nature of astrology (Pfaff 1822, 113-246), an essay by Gotthilf Heinrich Schubert on the coincidence of volcanic eruptions with the appearance of great comets (Pfaff 1822, 247-268), and he closed with "metagnostics" and prognostications for 1820 and 1822 (Pfaff 1822, 269-282).

In the second issue published the following year, he printed the translation of books III and IV of the *Tetrabiblos* (Pfaff 1823a, 3-128), a lengthy essay on hieroglyphs and astrology in three major parts (*Necepso und Peto-siris; Die Obeliken; Die astrologischen Denkmäler Ägyptens*; Pfaff 1823a,

20 "The second discourse confesses frankly that it has astrological contents. Since the French boasted about having liberated the world, or civilized mankind, from astrological superstition, the opinion prevailed that astrology was nothing but casting nativities for a particular person or entire moral unities, e.g. State, Kingdom, from the position of the heavens in relation to the horizon at the moment of birth. This opinion seemed to prevail when under the heading 'Astrology' [...] I set off into the learned world a volunteer corps of paragraphs fighting under manifold armours and weapons under twelve banners with the signs of the zodiac" (Pfaff 1821a, preface, 6).

129-302), and Kepler's letters in defense of his mother, who had been accused of witchcraft (Pfaff 1823a, 303-335). No more volumes appeared thereafter. Pfaff announced the edition in Gilbert's *Annalen der Physik und der physikalischen Chemie* with the following words:

Die Astrologie tritt wieder in die Reihe der Wissenschaften ein; sie nimmt Besitz von ihrem ächten und unveräußerlichen Eigenthum; sie sammelt das Zerstreute; alles, was den alten Glauben der Völker über die Bedeutsamkeit der Zeit, den Gang des Periodischen in der Natur, den Sinn der Zahl, selbst die Erhebung über die Zeit betrifft, das ist das Ihrige; nicht einzig in Beziehung auf das Siderische der Bewegung der Himmels-Körper am Firmamente. Durch Ankündigung eines Astrologischen Taschenbuchs für das Jahr 1822 glaubt demnach der Unterzeichnete in obiger Hinsicht dem Stande der Wissenschaft und den Regungen der Zeit zu entsprechen. [...] Auch nur die historischen Darstellungen, die es enthalten soll, mögen die Aufmerksamkeit eines sinnigen Lesers ansprechen [...]. Der Unterzeichnete erfreut sich der Theilnahme einiger ausgezeichneten [sic!] Naturfreunde, und ladet hiermit die Freunde siderischer Weisheit ein, durch Rath, Weisung und Beitrag ihn zu unterstützen.²¹

However, his announcement was accompanied with a very critical footnote written by Gilbert, in which he expressed his serious concern that this reanimation could nurture an inclination to mysticism and the miraculous among a public lacking knowledge of the fundamental principles of science.

In a letter to Heinrich Christian Schumacher, Pfaff also referred to his intentions:

Wenn es nicht zu verwegen wäre, das Wort Astrologie zu nennen, so möchte ich fast meine Verwunderung Ew. W. ausdrücken, daß die meisten darunter blos das Nativitätstellen und die Aderlaßtafel verstehen: auch wie sie sich wehren und dafür streiten, daß sie auf der Erde als einem bloßen Gefängniß sitzen, das gar keine Gemeinschaft mit den andern Himmels Lichtern hat.²²

Schumacher's reply is not extant, but he was no friend of astrological thought and we can be quite sure that his reaction was unfavorable. Pfaff's two books only received a scornful comment from Bode in the *Berlin Astronomical*

21 "Astrology takes her place again in the order of the sciences; she takes possession of her genuine and inalienable property; she collects what was scattered; everything is hers which concerns the ancient beliefs of people on the significance of time, the periodic course of nature, the sense of number, likewise the elevation over time, not only the movement of the celestial bodies in the heavens with regard to the sidereal realm. Through the announcement of an Astrological Pocketbook for the year 1822, the author believes himself to fulfill the latest developments in science and the movement of time in the above respect. [...] The historical explanations, which it shall contain, may meet with the good response of an apt reader as well. The undersigned is pleased to have the participation of some excellent lovers of nature, and hereby invites the friends of sidereal wisdom to support him with advice, instruction and contributions" (Pfaff 1821b, 426).

22 "If it were not too bold to mention the word astrology, I would almost express my amazement to you, Sir, that most people only understand it as casting nativities and the blood-letting table; also how they defend themselves and argue about sitting on earth as a mere prison with no communication to the stars" (Berlin, Staatsbibliothek Preußischer Kulturbesitz: Nachlaß Schumacher [Erlangen, 23 February 1823]).

Yearbook: “Beide von einem Professor der Mathematik auf einer Baierschen Universität, der, bei unsern jetzigen Kenntnissen vom Weltbau, noch mit solchen veralteten Irrthümern die Köpfe seiner Zuhörer und Leser verwirrt.”²³

Pfaff was fascinated by Kepler’s works and most likely his lively interest dates back to his student days at Tübingen: Pfeleiderer encouraged his students to occupy themselves with Kepler, whose books had fallen into oblivion (Lagler 1998, 173). According to Bode’s testimony, Pfaff was working on a German translation of Kepler’s *Harmonice mundi* in 1810.²⁴ Of these papers no traces exist, however. He also tried extending Kepler’s harmonic investigations to the new planet Uranus, discovered in 1781 by William Herschel (1738–1822), and to the four minor planets, which had been found in the first decade of the nineteenth century (Pfaff 1814). This early reception of Kepler became fruitful in the second half of the nineteenth century: It was not purely by chance that Christian Frisch (1807–1881), who studied with Pfaff in 1830/31, was responsible for the first critical edition of Kepler’s works from 1858 to 1871.²⁵

3.2. A Ruined Reputation

Nonetheless, Pfaff’s academic reputation among contemporary astronomers and physicists was seriously damaged, if not completely ruined. It also seems that among students there was only a little interest in his speculative inclinations. At any rate, Count August von Platen (1796–1835), who studied in Erlangen from 1819 to 1826 and had friendly connections with Pfaff, mentioned him in his very successful satirical comedy *Die verhängnisvolle Gabel* (“The Fatal Fork”), where in act one a Jew named Schmuhl boasted about having read Pfaff’s *Astrology*:

Laß’ Er mich, ich bin ein großer Astronom und Nekromant/ Der Natur geheime Kräfte sind mir alle wohlbekannt/ [...] Noch in Leipzig ergab ich mich ganz, wie du weißt, Schwarzkünsten und chemischen Studien/ Und der Chiromantie und der Pyromantie und der Nekromantie des Agrippa/ Drauf las ich für mich Pfaffs Astrologie, und in Göttingen trieb ich

23 “Both from a professor at a Bavarian university, who, with our current knowledge of the construction of the heavens, still confuses the heads of his audience and readers” (*Astronomisches Jahrbuch für das Jahr 1825*, 252f.).

24 “Zufolge eines Schreibens des Hrn. Doct. von Lamberti aus Dorpat an mich vom 21. April 1810, giebt Hr. Prof. Pfaff in Nürnberg jetzt Keplers Harmonice mundi heraus” (*Astronomisches Jahrbuch für das Jahr 1813*, 257).

25 However, he was not Pfaff’s son-in-law, as stated erroneously in Michaud 1843/65, vol. 33, 4. From a funeral oration (*Worte am Grabe des Herrn Oberstudienrath Dr. Christian v. Frisch, pens. Rektor der Realanstalt, Stuttgart 1881*, 4) preserved in his personal file (Ludwigsburg, State Archive: E 203 I Bü 463), it is clear that Frisch never married.

Punktierkunst;/ Doch trieb ich es nur ingeheim, weil dort schon ein Denkender ein Phantast heißt.²⁶

During summer semester 1822 Pfaff gave lectures on astrology and meteorology.²⁷ This may have been on the occasion of publishing his *Astrological Pocketbook*; at any rate, it was a unique event, as can be proven clearly from the extant lecture timetables of Nuremberg, Würzburg, and Erlangen. Therefore, it is somewhat exaggerated to call him “the last professor of astrology” (Korsch 1935, 90). From 1823 on Pfaff was the only lecturer on all branches of mathematics at Erlangen. However, in winter semester 1819/20, 1822/23, 1827/28, and 1834/35, he lectured on popular astronomy,²⁸ and here Pfaff may well have also made astrological digressions.

3.3 Pfaff's Memory

After his death, Pfaff was soon forgotten and only remembered as a curious, if not ridiculous figure.²⁹ In his *History of Astronomy*, Rudolf Wolf (1816–1893) even thought he had been temporarily crazy:

Nach der Kepler'schen Zeit verlor die Astrologie alsgemach ihre Bedeutung und man kann kaum begreifen, wie [...] auch in unserem Jahrhundert der allerdings zuweilen überhaupt verrückte Wilhelm Andreas Pfaff [...] wagen durfte, den Tod des ersten Napoleon aus einer Konjunktion von Jupiter und Saturn in Parallele zu setzen.³⁰

26 “I am a great astronomer and necromancer/ All secret powers of nature are well-known to me/ [...] Still in Leipzig, I gave myself up, as you know, to the dark arts and chemical studies/ And to Chiromancy and Pyromancy and Necromancy of Agrippa/ Then I read for myself Pfaff's Astrology, and in Göttingen I carried on the art of Geomancy/ But I did it secretly, because already a thinker is called there a visionary” (Platen according to Wolff and Schweizer 1894, 2: 14, 17).

27 Lecture timetables, University of Erlangen, SS 1822, 5. The date given in Becker 1981, 216 is wrong: “Pfaff, Julius [sic!] Wilhelm Andreas, 1774–1835; einer der letzten Professoren für Astrologie an einer deutschen Universität (letzte Vorlesung 1817 in Würzburg); schrieb eine ‘Astrologie’ (1816 in Nürnberg bei Friedrich Campe erschienen).”

28 Lecture timetables, University of Erlangen, WS 1819/20, 5; WS 1822/23, 6; WS 1827/28, 6; WS 1834/35, 6.

29 “Der Versuch eines gelehrten Mannes, den astrologischen Wahnglauben noch im XIX. Säkulum wieder aus seinem Schlummer zu erwecken, blieb ohne weitere Folgen. [...] Der psychologische Hergang bei Entstehung von J. W. A. Pfaff's bezüglichlichen Schriften [...] wird für Alle ein Räthsel bleiben, welche die sonstigen Leistungen des wackeren Mannes kennen” (Günther 1884, 4, 51).

30 “After Kepler's time astrology soon lost its importance and one can barely understand how [...] also in our century, Wilhelm Andreas Pfaff, even though he was temporarily insane, could dare to parallel the death of Napoleon the First with a conjunction of Jupiter and Saturn” (Wolf 1890/92, 1: 461).

It took well over seventy years until Pfaff was remembered again. Germany and Austria witnessed an increasing interest in astrology, and in 1910/11 Wilhelm Knappich (1880–1970), librarian and astrologer in Vienna, thought it important to commemorate Pfaff's life and work. He published a biographical essay with the subtitle "the last German astrologer" in the short-lived periodical *Zodiakus: Erste deutsche Zeitschrift für wissenschaftliche Astrologie* (Knappich 1910, 241–245). One hundred years after Pfaff's death, a certain Karl Weidner in 1935 published a short paper on his life in the *Astrologische Rundschau* (Weidner 1935/36, 15–19). During astrology's heyday in Germany with its culmination after the end of the First World War, Pfaff was primarily known among astrologers for his German translation of Ptolemy's *Tetrabiblos*.

Although he cannot be ranked among the most distinguished scientists of his period, Pfaff's romantic attempt to lead astrology back into the circle of the legitimate sciences deserves attention. His conversion to astrology as a professional astronomer was a unique case—at least, as far as the nineteenth century is concerned. In the second decade of the following century Pfaff got a "colleague" in Hans-Hermann Kritzinger (1887–?), the last astronomer of the private observatory founded by Chamberlain Friedrich Gustav v. Bülow (1814–1893) in Bothkamp near Kiel (Lühning 2004, 164–167). But this is another story.

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The Historiography of Astrology

A Diagnosis and a Prescription

PATRICK CURRY

1. Introduction

I would like to suggest a change in how social and cultural historians of astrology approach their subject-matter. That change is at once obscure, important, and impertinent: obscure, because it is virtually impossible to codify, except in very general terms, as a methodological rule; important, because it would nonetheless have considerable and, I feel, highly positive effects on history-writing; and impertinent, because my advocacy requires me to criticize my equals and/or betters.¹

The initial stimulus for what I want to say was a relatively inchoate but persistent intuition, a disquiet about the current state of the subject. However, it coincided with two other influences. One was some new work from within the contemporary astrological community (Cornelius 2004). The other was a newly awakened interest on my part in anthropological analyses of ‘magic,’ ‘the supernatural,’ and/or ‘the occult’—in connection with my recent work on astrology and/as divination (Willis and Curry 2004).

There is no space here to argue the case for approaching astrology as divination. To obviate any misunderstanding, however, I must stress that for reasons explained in Willis and Curry (2004), it would be quite inappropriate to categorize divination—and by implication, astrology *qua* divination—as magic, if by that is meant, for example, the manipulation of occult forces à la Neoplatonic, Hermetic, or Renaissance magic (see also Curry 1999). Equally ill-judged, for the same reasons, would be the rubric of ‘occult science.’ Divination is certainly not a science, whether ancient or modern (although the reverse is not so easy to dismiss; see Curry 1992, 167).

In order to explore the issue, I decided to take as my starting-point Keith Thomas’s *Religion and the Decline of Magic* (1971) and, as a convenient terminus, a relatively recent book that seems on its way to achieving

1 For earlier reflections, see Curry 2000.

comparable status, both among historians and general readers, namely Anthony Grafton's *Cardano's Cosmos* (1999).

Then I remembered a powerful critique of the first book by the anthropologist Hildred Geertz which appeared, together with a reply by Thomas, in the *Journal of Interdisciplinary History* of 1975. The point is not so much Geertz's specific criticisms and suggested corrections as the fundamental problem she perceived, and, consequently, the kind of approach that might serve as a remedy. It seems perfectly fair to ask, after thirty years, what progress, if any, has been made.

Actually, both problem and prescription also figure in a longstanding debate within the discipline of anthropology, as well as (albeit to a significantly lesser extent) among historians. And although it is not my purpose to trace it in any detail, anthropologists have already had considerable impact upon historians of magic (for want of a better label)—again, more so than the reverse.

2. Thomas vs. Geertz

Let us start with *Religion and the Decline of Magic*. The essence of Geertz's critique (shared by others) was that Thomas's approach to magic was fundamentally utilitarian and functionalist, with the meeting (or attempted meeting) of needs, both individual-psychological and social-sociological, as a virtually exhaustive explanatory framework. In this, as she also pointed out, he had followed Bronislaw Malinowski in assuming that magical acts are *necessarily* ineffective; thus their persistence apparently gives rise to the puzzle, why do they persist? And the functionalist answer is, because they meet actors' needs that they themselves fail to recognize. Thus, for Thomas, the principal question to be answered regarding astrology was: why were such beliefs, which are "now rightly disdained by intelligent persons, taken seriously by equally intelligent persons in the past?" (Thomas 1973, ix). Geertz rightly pointed out the peculiarity of this attitude, all the more striking on the part of an historian writing of a period when to take astrology seriously (some of it, at least, and to some degree) was the norm, no less for intelligent persons than anyone else. It follows, she wrote, that "[i]t is not the 'decline' of the practice of magic that cries out for explanation, but the emergence and rise of the label 'magic'" and its attendant connotations (1975, 76).

In a related context, four years later, G. E. R. Lloyd remarked on how Greek science developed: "The *explanandum* is not, in any case, the victory of rationality over magic: there was no such victory: but rather how the criticism of magic got some purchase" (1979, 263f.). And in a paper on early modern English astrology, I called for "a project which defies anachronism

by asking not 'why did they believe in astrology?' but 'why did they *stop* believing in it? Why them and not these others?'" (Curry 1991, 290).² But note that as recently as 1991 this was still more of a *desideratum* than a reality. So this is one problem, or one aspect of the problem: *anachronism*.

Geertz also argued that what linked together the specific behaviors exhaustively catalogued by Thomas was "not a psychological attitude but an ontology"—a world. In particular, "What it means to know and to gain knowledge ('cunning') in such a cosmos has a peculiar connotation in such a cosmos, having much more to do with participation and influence than our terms signify" (1975, 83; 85). This point overlaps one made by E. P. Thompson in an earlier cogent essay-review of Thomas: "religion, magic, astrology, prophecy—all operate in a language of symbolism which, when translated into rational argument, loses a portion of its meaning and all of its psychic compulsion" (1972, 49). Let this be the second problem, then, or aspect thereof: *positivism*, or, to borrow an apposite term from Owen Barfield, RUP: residues of unresolved positivism.³

Thomas (1975, 101; 102), in his reply to Geertz, was unrepentant:

[I]t is unquestionably true that it is the technological gap between man's aspirations and his limited control of his environment which gives magical practices their relevance [...]. Their [cunning folk's] prestige depended upon their supposed efficacy, and earlier anthropologists were right to point out how the self-confirming nature of their activities prevented clients from realizing that they were not efficacious.

In short, 'we' know, and what we know is the truth; they, on the other hand, 'believe,' and have only beliefs. (Until, that is, they turn into us, which putative process is what supplied the grand narrative of Thomas's text.)

3. Grafton's Cosmos

At this point, let us turn to Grafton's *Cardano's Cosmos*. At the risk of seeming ungrateful, I shall pass over its several virtues to come straight to the point in the present context: what progress has there been? Certainly Thomas's crude functionalism has disappeared from view, but it seems to have been replaced by refinements—historiographical epicycles, if you will. Thus, Grafton writes of "the social worlds [astrology] served." Classical and Renaissance astrologers "*projected* the same beneficent and threatening images into the heavens," while the "preserved horoscopes and textbooks of astrol-

2 See Veyne 1988, 2: "No positivist criticism can adequately deal with mythology and the supernatural. How then does it happen that people cease believing in legends?"

3 Unfortunately I cannot locate the exact source for his use of this expression at the moment.

ogy *mirror* the hopes and expectations, anxieties and terrors of a whole society [...]" (1999, 6; 5; 10; my emphases). Furthermore, "Cardano would never have admitted that he—or Ptolemy—owed his prominence to persuasive abilities, rather than operational knowledge of nature" (1999, 145).

Just as Malinowski was an inspiration for Thomas, there is an anthropological *éminence gris* for Grafton: E. E. Evans-Pritchard and his *Witchcraft, Oracles and Divination among the Azande* (1937). And just as the work of the latter was more subtle than that of Malinowski, so is Grafton's in comparison to that of Thomas. Thus, Grafton (1999, 15) proclaims that "I wanted to do justice to both the rationalism and the irrationality of Renaissance astrology [...]" An admirable goal, but note the choice of words: the 'rationalism' (not rationality) of astrology follows granted the premises, but modernist sensibilities are saved by the very next term, because those premises, as 'we' 'now' 'know'—and *all three terms* can, and should, be closely questioned—are 'irrational.' So it is safe to grant what Thomas probably would not have, namely that "the astrologers and their clients used rational means to explore their worlds and their selves, and to master them" (1999, 202). "Even Cardano's expressions of skepticism," Grafton (1999, 162) writes, "resembled those of the Azande medicine men studied by E. E. Evans-Pritchard; he often challenged the proficiency of individual rivals, but not the validity of the art they practiced."

This approach raises several questions. (1) Is there any sense here that astrology could have involved—and, by implication, could still involve—anything more or other than serving, mirroring, or projecting official realities (whether physical, social, or psychological) compared to which it is essentially epiphenomenal? (2) Is there any awareness that historians of astrology too owe their prominence to persuasive abilities rather than 'operational knowledge of nature'—and, *horribile dictu*, maybe even professors of physics? (3) Is there any evidence that we too very rarely question the validity of our 'arts,' and just as quickly come up against the limits of our skepticism?⁴ That we are thus, *au fond*, in precisely the same situation as Cardano and his contemporaries, and vice-versa? And (4), is there any acknowledgement that there were any serious astrologers—in as serious a sense of 'serious' as you like—after the Renaissance and early modern period? Or, by the same token, that however rare they might perhaps be, it is still *possible* (as well as *still possible*) to be a serious astrologer? Unfortunately, the answer to all these not unimportant questions must be "no." By implication, if we take *Cardano's Cosmos* as a touchstone, the answer to my earlier question about progress must be "very little."

This conclusion is reinforced at a less exalted level by such recent books as Stephen Wilson's *The Magical Universe: Everyday Ritual and*

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As Wittgenstein observed, it is impossible to doubt everything.

Magic in Pre-Modern Europe (2000, xxv), which covers the same terrain as that of Thomas, and according to which magic “is a system of over-rationalisation, which requires and produces explanation [...]. Magic here gives a sense of control in a situation of actual insecurity and impotence [...]. Via rituals, people [...] could ‘do something’ rather than remain passively helpless,” and so, depressingly, on. (I would make an exception of one work, however: Ann Geneva’s *Astrology and the Seventeenth-Century Mind* [1995], whose crowning virtue is to take William Lilly’s astrology seriously.)

Of course, I accept that there are perfectly valid sorts of history-writing which escape this damning verdict because they are trying to do something else. But in terms of the kind that both Thomas and Grafton profess to have undertaken—the recovery of ‘lost’ worlds of meaning, let us say (although we shall have cause later to question that goal more closely)—the approaches and conclusions of both are clearly unsatisfactory. They fail to respect and accommodate fully the lived experience of their historical subjects, astrologers and their clients, as real and true to exactly the same extent, and with the same qualifications (as part of that experience), as that of the historian writing about them. In a word, they lack *reflexivity*.

Even to the extent an historian’s goal is not hermeneutic but explanatory, perhaps along social scientific lines, it seems to me that there is a serious problem here. Without going into this debate to the depth it ultimately requires, is explanation really satisfactory when data that is regarded as essential by the human subjects has been discarded, tacitly ruled inadmissible, from the outset?⁵ One will undoubtedly end up with an explanation, but it will surely not be one of its subject(s), whole and alive; it will be one of only whatever *can* be explained in such a way.

4. Insights from Anthropology

What, then, does anthropology have to offer? After all, its historiographical influence to date has not been an unmixed blessing. And as I already mentioned, the same debate is longstanding, and often heated, within that discipline too.

A useful starting-point is Susan Greenwood’s *Magic, Witchcraft and the Otherworld: An Anthropology* (2000). It is useful because it reviews that debate within anthropology, and because her points have some ringing resonances with their historiographical equivalents. For example, she writes that:

5 See the forthcoming review of Grafton (1999) by Geoffrey Cornelius in *Culture and Cosmos*.

anthropologists have used functionalist, structuralist or symbolic models to explain informants' experiences. Alternatively, they have analysed informants' accounts as 'texts' to be analysed in terms of meaning. The emic [i.e., 'insider's'] reality of informants has been treated as interesting and even reasonable (given the premises upon which it rests), but not as a serious alternative to Western scientific views of reality [...]. (2000, 11)

Now one of Thomas's conclusions in his response to Geertz was that "historians are going to have to come to terms with the methods and approaches of structural analysis" (1975, 108). But it should be clear that structuralism, whether in history or in anthropology, does not go to the heart of the problem we are considering. Nor even does the symbolic approach of the late Victor Turner, whose work on ritual, *communitas*, and liminality is fascinating for the way it balances on the very point at stake here—"swaying between rationalization and deep understanding," in the words of Edith Turner (1992, 29). Roy Willis notes that

Turner's '*communitas*' concept was certainly an improvement on the 'functionalist' theory that long dominated anthropology, according to which all social institutions, including rituals, served to uphold the *status quo*. But it was still Durkheimian in that it saw human reality as contained within an alternation between the limitations of social structure and its libertarian antithesis. [...] In this model of '*communitas*', the infra-social world of aliens, beasts and cosmic spirits—especially spirits—would seem to have no part. (1999, 118)

Edith Turner was, in fact, one of the first modern anthropologists to take that brave next step toward deeper understanding in her book *Experiencing Ritual: A New Interpretation of African Healing* (1992). She grasped, and wrote (1992, 2; my emphasis), the crucial fact that in the healing ritual—in which "I participated instead of merely witnessing"—the central ritual object "is both a spirit *and* a tooth"—not just a tooth, 'really,' onto which spirit-like properties are projected, mirroring social realities, and all the rest of the modernist rationalizing apparatus. (It is a tiny but revealing fact that for all his innovative work on divination, Victor Turner did not actually attend a divination session; see Peek 1991, 9.)

Why brave? Not only because breaking with the consensus risks professional (institutional) censure, but because of the way it demands what Keats called negative capability—"that is, when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason." This is a personal and psychic demand as much as a professional *desideratum*, of course. Why not? Isn't the pretense that the individual and personal can be ironed out and dispensed with through methodology itself part of the modernist myth? And it is demanding. In the words of Greenwood (2000, 19), the effect of post-80s "critical awareness and the radical democratisation of knowledge" is "that ethnographic work is now attempting to bridge the gulf between Self and Other by revealing both parties as vulnerable experiencing subjects." In another word, *participation*.

Her conclusion is a close parallel to the remedy already suggested for Thomas's anachronism: "my emphasis," she writes (2000, 49), "[...] will [be] on seeing the process of becoming engaged in magical practice as learning the language of another mode of reality." But the spirit of this approach undercuts Grafton's qualified generosity too, because:

If magic and the magicians' otherworlds are seen as irrational or are identified solely as due to individual psychology or as figments of the imagination, or even if—as in Evans-Pritchard's study of the Azande—they are rational in themselves for ordering action and social life, but in the final analysis are inferior to science—then this devalues the reality of magic for the practitioners themselves. (2000, 13)

Such devaluation is entailed by both anthropological ethnocentrism—the inferior Other in another place—and historical anachronism: the inferior Other in an earlier time. (Note too how easily, given a teleological narrative of Progress, no matter how subtle, 'earlier' becomes evaluative as well as chronological). And a lack of reflexivity is part of the same package. Evans-Pritchard ascribed the Azande's "blind" adherence to oracles "to the fact that their intellectual ingenuity and experimental keenness are conditioned by patterns of ritual behaviour and mystical belief. Within the limits set by these patterns they show great intelligence, but it cannot operate beyond these limits" (1937, 338). Unlike ourselves, constantly and heroically venturing beyond the limits of our own assumptions, rituals and cultural patterns...? I think not (cf. Peek 1991, 8).

I am afraid it follows that ideally, at least, "if an anthropologist wants to examine 'magic' then she or he must directly experience the otherworld" (2000, 12). But what is the corollary for historians of astrology? How are participation and reflexivity possible when one's subjects are, so to speak, history? The answer, it seems to me, is this—and here I am trying for that elusive methodological prescription:

1a. The historian should have experienced, for him- or herself, the truth of astrology in action, in practice, and without any *post hoc* "reaching after fact or reason" to disqualify such an experience as metaphysically, ideologically or personally unacceptable.

1b. Failing this, he or she should have recourse to some equivalent experience and a principled habit of accommodating it.

2. When horoscopes by the astrologer(s) survive, the historian should have, or acquire, sufficient skill in the astrology involved to follow and illuminate them. (But note that this stipulation alone, although desirable, is not sufficient to result in the kind of history-writing I am advocating.)

Is no. 1, the key demand, unreasonable or unduly onerous? On the one hand, surely not. Unless one has succeeded in entirely turning oneself into a modernist automaton, some such experience is part of every life and, proba-

bly, at least to some degree, everyday life.⁶ So the second, alternative stipulation (1b) is actually fairly generous. But the first remains the ideal.

On the other hand, where academic disciplines are concerned, apparently it is asking a lot. Even within anthropology, where ethnography is so central, it has been a struggle to attain and arguably remains a minority view. An anthropologically literate historian, Ronald Hutton, recently provided a terse and amusing summary as part of a valuable overview (2003, 286): the dominant methodological positions have been that (1) it is alright to behave like the natives, but not to think like them, subsequently succeeded by (2) it is alright to go native as long as you do not stay native afterwards. But as he points out, even the latter approach

retained the assumption that the beliefs and attitudes of the people studied were valueless in themselves, and that the anthropologist would accordingly suffer no loss in shaking them off at the end of the project [...]. [Also] it turned the researcher into a form of impostor, an undercover agent for a different culture who acted out membership of a group before leaving it and throwing off the disguise.

Too many historians have, for too long, undertaken an equivalent of this patronizing and ultimately exploitative act.

5. Against 'Belief'

The issue at stake is one summarized in this way by another anthropologist, Katherine Ewing (1994, 571)⁷: "the taboo against going native results from a refusal to acknowledge that the subjects of one's research might actually know something about the human condition that is personally valid for the anthropologist: it is a refusal to believe." But I would prefer to say 'to experience,' and this leads to an important point which needs emphasis. *I am not arguing that historians should 'believe in' astrology.* Belief is not the issue here, or certainly not a fundamental one. Another anthropologist, Jenny Blain, reflects helpfully on the adverse consequences of "Taking the view that 'they believe it, so I'll accept it as emic description'" and stopping there:

[It] positions the researcher as having access to a 'truth' outside and at odds with that of her participants. It is, to say the least, patronising. It may also, in the final resort, actively deny access to the 'realities' of the participants [...] including the researcher's own experiences. And in distancing the ethnographer from this 'belief', it starts to reify 'emic knowledge' as fixed, static and unchanging, as generally shared, rather than as a specific construction of interpretations that each person, ethnographer included, engages in, and with.

6 Hence the title of Latour's *We Have Never Been Modern* (1993).

7 Reviewing Luhrmann 1989, a work whose controversial status still remains potent.

"For some time," she adds, "my choice was to refuse to adjudicate belief [...]."⁸ However, 'belief' is, in my opinion, not a good description for the relation of [the anthropologist's] subjects, shamanists, with the other beings and realities that share their worlds" (Blain 2002, 156; 157).

In addition to Blain and the other anthropologists mentioned here, I could adduce Wouter J. Hanegraaff's (2003, 374) recent reflections on the inadequacy of intellectualist interpretations of participation, and David J. Hufford's (1995) succinct methodological critique of scholarly 'disinterest.' Similarly, the striking progress in science studies in the last few decades, both historical and sociological, required adopting the 'symmetry principle' of bracketing the so-called truth-value of both 'scientific truth' and 'superstitious beliefs' and treating the conditions of their production alike.⁹ Doubtless further support of a philosophical kind could be found in the work of Gadamer, Ricoeur, and Wittgenstein.

There is a simpler test regarding the adequacy of 'belief,' however. It is to note the fact that (at least in my experience, both personal and second-hand) historians and other academics studying astrology are often asked—including by other academics, although usually in private—"But do you believe in it?," whereas those lecturing on, say, physics, very rarely are. (This asymmetry is itself a revealing fact with a history, of course, which can and should be studied—but which also impinges directly on how it is studied.) But what justification is there for regarding such a question as relevant in the one case but not in the other? And what would we think of someone who thought it a substantively important question for an historian of science, or of art: "Do you actually believe in it?" Could we sensibly require historians of religion to be 'believers'—or require them not to be?

For these reasons, I am taking as fundamental not belief but reflexive participation: in Geertz's (1975, 83) terms, not a "psychological attitude" but "ontology," that is, worlds; and in Wittgenstein's (1953, 241), not "opinion" but "form[s] of life."¹⁰ By the same token, the appropriate objects of enquiry are not beliefs but practices. And a point I made in 2000, recently endorsed by Hutton (2003, 289f.), still stands: to write an 'objective' or 'impartial' history of astrology (*in the sense that is meant by objectivists*) is simply not an option; in taking astrology and astrologers seriously, one is already, in Hutton's words, "automatically taking sides in at least one major, and often bitter, cultural debate."

At this point I want to introduce a voice from the astrological community. Indeed, I am honor-bound to do so, because Geoffrey Cornelius's recent call for "primary scholarship," honoring the phenomenological "pri-

8 As it was mine: see Curry 1992, 16f.

9 The historiographical *locus classicus* is Shapin and Schaffer 1985.

10 Cf. again Hanegraaff 2003, whose position (e.g. on pp. 374f.) seems very Wittgensteinian.

mary truth” or “verity” of astrology, slightly predates as well as parallels mine. And one of his points too is that astrology cannot adequately be treated as “some sort of belief-system, to be sympathetically annotated, dissected, and put up for comparison with various other belief-systems.” To do so is to engage in “a common avoidance strategy,” typical of the social sciences, “which is to avoid allowing the material to touch the observer as *truth for the observer*” (2004, 108).

Cornelius’s emphasis on the need to allow for the possibility for experiencing the primary truth of astrology—on a par with that of any other truth-experience, including scientific—should not be understood as an attempt to elevate the status of astrology to that of science. We are denying that scientific truth-value *has* such privileged status, one which sets it apart from other experiences of truth and grants it a superior epistemological position, *even in principle*, against which to measure other kinds, such as astrological or magical, and to which they might aspire (and then, all too predictably, fail; see Willis and Curry 2004, ch. 8). Such an attempt would simply be another anachronistic and positivistic move in the service of what we are criticizing. The intention, rather, is to move towards reconstruing the notion of truth as such (including scientific) as *itself* participatory.

Now for historians to ignore these sorts of points because of their provenance—whether astrological, anthropological, or philosophical, but in any case extra-disciplinary—would only be evidence of a professional tendency to circle the wagons and sit tight. But let me offer some slight relief: even if the news remains unwelcome, I am at least about to quote another historian! Before leaving the anthropologists, however, let me emphasize, with irresponsible brevity, something more we could learn from them. Astrological truth does not emerge arbitrarily, willy-nilly; like arguably every other human situation where truth is an issue, it does so in the context of what, viewed diachronically, is a *tradition*, but what equally, viewed synchronically, is a *ritual*. However understandably, we have, I think, neglected the latter aspect, and our work has suffered as a result. Now what ritual ‘is’ is beyond the scope of this paper, but all the anthropologists I have mentioned positively have valuable insights into it for us (and to their ranks must certainly be added the late Roy Rappaport [1999]).

6. Provincializing Reason

Dipesh Chakrabarty, in his book *Provincializing Europe: Postcolonial Thought and Historical Difference* (2000), makes essentially the same observation as Cornelius: “the giveaway word ‘belief’ is what takes [us] out of lived, preanalytical relationships and inserts [us] into on objectifying rela-

tionship of social science [...].”¹¹ And his title refers to just the project of reconstruing what constitutes truth I have just described.

Chakrabarty’s analysis is profound and subtle, and I hope I shall not do it an injustice in briefly summarizing the salient points for my purpose. “Reason becomes elitist”—in the way we have seen at work in the historiography of astrology—“whenever we allow unreason and superstition to stand in for backwardness, that is to say, when reason colludes with the logic of historicist thought. For then we see our ‘superstitious’ contemporaries as examples of an ‘earlier’ type, as human embodiments of the principle of anachronism” (2000, 238). And what is the enabling condition for historicism, that opens the door to teleology and anachronism? It is the “capacity to construct a *single* historical context for everything [...] the capacity to see the past as genuinely dead, as separate from the time of the observer [...]. It is through such objectification—predicated on the principle of anachronism—that the eye of the *participant* is converted into the eye of the *witness*” (2000, 239; my emphases). (If I may add a purely subjective comment, perhaps this point also explains that deadening pall that so much history-writing seems to cast over its subject-matter, no matter how exciting it is—or should be.)

However, as Chakrabarty adds, the same program also provokes romantic attempts “to try to get inside the skin of the past, to try and see it ‘as it really was,’” and so on, by way of reaction (2000, 243)—noble, to be sure, but still missing the essential point that the past is actually *not*, in the objectivist sense, past; so the effort needed is not to overcome its deadness and pastness but to recognize its living presentness. The resonance with Blain (as well as the contrast with Grafton) is plain:

If historical or anthropological consciousness is seen as the work of a rational outlook, it can only ‘objectify’—and thus deny—the lived relations the observing subject already has with that which he or she identifies as belonging to a historical or ethnographic time and space separate from the ones he or she occupies as the analyst. In other words, the method does not allow the investigating subject to recognize himself or herself as also the figure he or she is investigating. It stops the subject from seeing his or her own present as discontinuous with itself. (Chakrabarty 2000, 239)

This is a key passage, particularly the last two sentences. They entail a double hermeneutic which is the substance of my earlier methodological prescription: a recognition (1) that the historian is in the same existential situation of vulnerability and uncertainty, vis-à-vis ‘the truth,’ as were his or her subjects; and (2) that for all parties concerned, their situation is characterized by “the plurality that inheres in the ‘now,’ the lack of totality, the constant fragmentariness, that constitutes one’s present” (2000, 243). In both these

11 Cf. Veyne again (1988, xi; 113): “instead of speaking of beliefs, one must actually speak of truths [...]. The plurality of modalities of belief is in reality the plurality of the criteria for truth.”

respects, there is a common *pluralism*—as against a single ‘necessary’ scheme or ordering principle—that demands the reflexive participation I have already foregrounded.

What then of the ‘residues of unresolved positivism’? Secularism is an integral part of the modernist historical program, cut from the same cloth, with the added twist of having seminally defined itself against ‘magic,’ including astrology.¹² When there is a dominant consensus that reason is the ‘highest’ human attribute, and furthermore that scientific reason is its ‘highest’ expression (Platonism lives!), then, as Chakrabarty writes, “the life practices we do not approve of—practices that seem superstitious or that ascribe agency to gods and spirits—seem anachronistic if not reactionary [...]” (2000, 243). And the rationalizing efforts of many ambitious astrologers, past and present, to present astrology in terms of a natural science—withstanding the fact that those efforts have been overruled by superior hegemonic power—are surely more evidence to that effect (see Curry 1992). Indeed, they are often contradicted by the same astrologers’ own experiences of the actual “moment of astrology” (Cornelius 2003): what Cardano called “a certain hidden power” (Grafton 1999, 146). Two centuries later, William Oughtred, one of the ablest mathematicians of his generation and a practicing astrologer, confessed that “[h]e was not satisfied how it came about that one might foretell by the Starres, but so it was that it fell out true as he did often by his experience find; he did believe that some genius or spirit did help” (Aubrey 1898, vol. 2, 105).

Programmatic secularism does have one additional peculiarity. In spirit as well as (to some extent) provenance, the import of much of what I have been setting out can validly be described as ‘postmodern,’ using that term with all the cheerful incoherence it requires, from Lyotard to Foucault and Derrida; and none the worse for that.¹³ The twist, however, is that much of the modernist fear and loathing of the magical and spiritual survived the postmodern turn, especially in the academy.¹⁴

Now as any intelligent ‘relativist’ (including the authors just named) would, or would have, agreed, the argument I am putting forward is not ‘irrationalist’ or ‘anti-reason.’¹⁵ To return to Chakrabarty, the project of ‘provin-

12 On the historical roots of the anti-astrology mentality, see Curry 1989 and 1991. The same situation can be found in anthropology; Peek (1991, 9) found a “striking [...] number of British social anthropologists who treated divination with great derision.” (The degree of animus involved is often the giveaway.)

13 Grafton’s [1999: 176] well-worn crack about scholars availing themselves of the iron laws of aerodynamics to fly to conferences and denounce realism betrays his misapprehension of these issues. (See Herrnstein Smith 1988 and 1997.)

14 Witness Richard Rorty’s aggressive programmatic secularism, for example.

15 Not unless a realist-rationalist definition of reason—the point under discussion—is already assumed *a priori* (see Herrnstein Smith again); or unless those are simply terms of abuse.

cializing Europe' is not one of *ressentiment* towards European thought. To "think beyond historicism [...] is not to reject reason but to see it as one among many ways of being in the world" (2000, 249).

This is the nub of the matter. As Chakrabarty points out, the 'objectifying' mode "is simply one, albeit a globally dominant one at present" (2000, 252). And where our own field is concerned (as in so many others), reason cannot even do its rightful job properly until it is no longer forced—in the name of a grossly distorted, because totalized, version of itself—to do them all. As the late Paul Feyerabend observed, in that way that managed to be simultaneously mild and (it seems) scandalous, "[t]he objection that [a] scenario is 'real,' and that we must adapt to it no matter what, has no weight, for it is not the only one: there are many ways of thinking and living" (1995, 164). Astrology too is a form of life, a way of being in the world. It is not a flawed or failed version of something else, but fully itself to the same extent, and ultimately in the same way, as being an historian, or scientist, or anything else: fully, in a word, human.

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A very useful *glossary of astrological terms* is available on the Internet. See www.astrologycom.com/glossary.html (accessed 2 September 2005).

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