

VIR SAPIENS DOMINABITUR ASTRIS

**ASTROLOGICAL KNOWLEDGE AND PRACTICES IN THE
PORTUGUESE MEDIEVAL COURT
(KING JOÃO I TO KING AFONSO V)**

Helena Cristina Ferreira Avelar de Carvalho

Dissertação de Mestrado em História Medieval

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Dissertação apresentada para cumprimento dos requisitos necessários à obtenção do grau de Mestre em História Medieval, realizada sob a orientação científica da Professora Dr^a.

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ABSTRACT

VIR SAPIENS DOMINABITUR ASTRIS

ASTROLOGICAL KNOWLEDGE AND PRACTICES IN THE PORTUGUESE MEDIEVAL COURT (KING JOÃO I TO KING AFONSO V)

The present study addresses the practice of astrology and its cultural repercussions in the 14th and 15th centuries' Portuguese court.

The research is based in the comparative study of three sets of sources: 1) the astrology books from the royal libraries, which reveal the dominant concepts of astrology; 2) the writings of kings João I and Duarte, and prince Pedro, as examples of the practical application of these concepts; 3) the royal chronicles of Fernão Lopes, Gomes Eanes de Zurara and Rui de Pina, as examples of its presence in political discourse. The astrological references occur in three main contexts: the validation of power, the explanation of manners and the debate about determinism-versus-free will. The latter stands as the main fracturing topic in medieval astrology. In any case, the validity of astrology *by itself* was never in question; the debate revolved only around its limits and its legitimacy in face of Christian faith.

Astrology was seen as a sophisticated *art*, practiced by learned men. Its foundation was the *scientific* understanding of the natural laws and its practitioners tried to demarcate themselves from common divination and superstition.

Due to its pervasiveness in this period, it can be concluded that astrology is an essential factor for the understanding of Portuguese medieval life. The study of the astrological practice, from the perspective of the History of Culture and Mentalities, offers new insights to the understanding of the medieval period.

KEYWORDS: medieval history, medieval astrology, medieval culture, medieval society, 14th century, 15th century, intercultural exchanges, interreligious exchanges

VIR SAPIENS DOMINABITUR ASTRIS

**CONHECIMENTO E PRÁTICAS ASTROLÓGICAS NA CORTE PORTUGUESA
MEDIEVAL (D. JOÃO I A D. AFONSO V)**

O presente estudo aborda a prática da Astrologia e suas repercussões culturais na corte portuguesa dos séculos XIV e XV.

A pesquisa baseia-se no estudo comparativo de três fontes distintas: 1) os livros astrológicos presentes nas livrarias reais; 2) os escritos dos reis D. João I e D. Duarte, e do Infante D. Pedro, como exemplos da aplicação prática destes conceitos; 3) as crónicas de Fernão Lopes, Gomes Eanes de Zurara e Rui de Pina, como exemplos da sua presença no discurso político.

As referências astrológicas ocorrem em três contextos principais: a validação de poder, a justificação de modos e comportamentos, e no debate do determinismo versus livre-arbítrio. Este último torna-se o principal factor de clivagem na astrologia medieval. Em todo o caso, a validade da astrologia em si nunca é posta em causa; o debate desenrola-se principalmente em torno da questão dos limites e da legitimidade da astrologia perante a fé cristã.

A astrologia era encarada como uma arte sofisticada, praticada por homens cultos. A sua base era a compreensão científica das leis naturais, e os seus praticantes tentavam demarcar-se da divinação comum e da superstição.

Devido à sua presença nos mais diversos sectores da sociedade desta época, pode concluir-se que a astrologia se constitui como um factor essencial para o entendimento da vida medieval portuguesa. O estudo da prática astrológica, na óptica da História Cultural e das Mentalidades, oferece novas perspectivas para a compreensão do período medieval.

PALAVRAS-CHAVE: história medieval, astrologia medieval, cultura medieval, sociedade medieval, século IV, século V, trocas inter-culturais, trocas inter-religiosas

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INTRODUCTION

History of Astrology has been addressed in several academic Portuguese works, though its cultural contribution is seldom recognized. Most of these works approach astrology through the perspective of the History of Science (because of its connection to the art of navigation) or, alternatively, focusing on its demise due to the change of paradigm from the geocentric to the heliocentric model. Very few address the cultural relevance of the topic, even if this is already widely accepted. As early as 1961, the Portuguese historian Luís de Albuquerque stated that “*it is no longer possible to deny that Arabic and Hebrew astrology, in both its technical and judiciary aspects, had among us a much wider acceptance than it was supposed, and much before its contribution had been claimed to the art of sailing*”¹, but still, little work has been done since then.

In more recent years, Henrique Leitão, an historian of science, declared that “Astrology is today, and always has been, a complex body of knowledge and beliefs which reaches all social groups: from the most educated to the most ignorant, from the higher to the lower social strata, whether the people come from the urban centres, or from rural areas”². This study is therefore crucial for the better understanding of both medieval astrology and its contemporary repercussions.

This thesis addresses astrology as a cultural practice within the Portuguese medieval court in the 14th and 15th centuries. The acknowledgment of this practice as a structural factor in medieval culture, as well as the correct understanding of the astrological system *per se*, allows a deeper knowledge of the medieval culture and mentalities.

The first part of the thesis deals with the fundamental concepts of astrology and its practice; the second analyses the books and the personal writings of the House of Avis, in

¹ “*Já não é possível recusar que a astrologia árabe e judaica, nos seus dois aspectos técnico e judiciário, teve entre nós maior aceitação do que se supunha, e muito antes de ter sido reclamado o seu concurso para o apetrechamento da marinharia*”. Albuquerque, Luís de, *Os Almanques Portugueses de Madrid*, Coimbra, Junta de Investigações do Ultramar, 1961, p. 4.

² “*A astrologia é hoje, e sempre foi, um complexo corpo de conhecimentos e crenças que atravessa todos os grupos da sociedade: dos mais letrados até aos mais ignorantes, dos estratos sociais mais elevados aos mais baixos, quer se trate de populações dos centros urbanos ou do campo.*” Leitão, Henrique (scientific director), *O Livro Científico Antigo dos séculos XV e XVI. Ciências físico-matemáticas na Biblioteca Nacional. Catálogo de livros científicos dos séculos XV e XVI*, Lisbon, Biblioteca Nacional, 2004, p. 28.

order to understand the practice of astrology; the third explores the astrological references in the chronicles of Fernão Lopes, Gomes Eanes de Zurara and Rui de Pina.

Most of the topics studied in this work were only partly explored. In the conclusion, a concise account of what remains to be done is presented.

The sources studied in this work are of three distinct kinds:

First, the books from the royal libraries. The authors chosen for the main research are: Claudius Ptolemy (*Tetrabiblos*³), Ali ben Ragel (*El Libro ccumplido de los iudicios de las estrellas*⁴), Abraham Zacuto (*Almanach Perpetuum* and *Tratado Breve de las Ynfluencias del Cielo*⁵). Also studied, though in less extent, are John of Hollywood (*De Sphera*⁶), Pseudo-Aristotle (*Segredo dos Segredos*⁷), Abraham ben Ezra (*Beginning of Wisdom* and *Libro de los Juicios de las Estrellas*⁸) and Egidio de Collona (*Regimine Principum*⁹).

Secondly, we shall focus on the astrological references contained within the personal writings of some Portuguese kings, namely some chapters of the books written by King João I (*Livro da Montaria*¹⁰) and king Duarte (*Leal Conselheiro* and *Livro dos conselhos de D. Duarte – Livro da Cartuxa*¹¹).

³ Ptolemy, Claudius, *Tetrabiblos*, Translated by F. E. Robbins, London, Loeb Classical Library, Harvard University Press, 1998 (first print: 1940).

⁴ The book of Ali ben Ragel, composed by eight distinct parts (to which he calls books) was written in the 11th century and translated by order of king Alfonso X of Castile in the 13th century. The first five books were translated by Gerold Hilty. This edition will be extensively quoted in this thesis: Ragel, Ali Ben, *El Libro conplido en los iudicios de las estrellas*, intro. Gerold Hilty, Madrid, Real Academia Española, 1954. As to the remaining three books, the only translation available is Ragel, Ali ben, *Libro conplido en los iudicios de las estrellas*, Zaragoza, Gracento, 1988-1997.

⁵ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, in *Revista de Estudos Hebraicos*, Vol. 1, Lisbon, 1928 (pp. 95-183).

⁶ Thorndike, Lynn, *The Sphere of Sacrobosco and its commentators*, Chicago, University of Chicago Press, 1949.

⁷ Pseudo-Aristotle, *Segredo dos Segredos*, Lisbon, Faculdade de Letras da Universidade de Lisboa, 1960.

⁸ Ezra, Abraham ben, *The beginning of wisdom*, The John Hopkins Studies in Romance Literatures, Extra Volume XIV, Ed. Raphael Levy and Francisco Çantera, Mansfield, Ascella Publications, 1939 and Ezra, Abraham ben, *Libro de los Juicios de las Estrellas*, 2 Vol., Sirventa, Editorial Biblioteca de Sirventa, 2001.

⁹ Egidio de Colonna, *Regimiento de Principes*, Sevilha, Menardo Ingut e Stanislao Polono, 1494, fol. CIXV.

¹⁰ João I, *Livro de Montaria*, in *Obras dos Principes de Avis*, Porto, Lello & Irmão – Editores, 1981, Livro de Montaria (pp. 1-232), pp. 73-77.

¹¹ Duarte, *Livro dos Conselhos de el-rei D. Duarte (Livro da Cartuxa)*, Lisbon, Editorial Estampa, 1982.

Finally, we will explore the royal and noble chronicles, written by Fernão Lopes¹²; Gomes Eanes de Zurara¹³ and Rui de Pina¹⁴. We will also mention the work of Paulo de Portalegre (*Crónica dos Lóios*¹⁵) although it is not a royal chronicle, because it contains a relevant reference to the use of astrology in every-day life.

The comparative study of the astrological references in these three sets of sources allows a better understanding of the role of astrology and its cultural repercussions in the Portuguese medieval court.

Because some readers of this work may not be familiarized with Portuguese Medieval History, some topics relating to persons and events were briefly explained, in order to provide the necessary context.

All the quotations from the sources, originally written in 15th century Portuguese, were translated into English; for practical reasons, the translation was incorporated in the main text, between brackets. The quotations from Portuguese bibliography were left in the original language, except in those cases where the translation came to be indispensable.

¹² Lopes, Fernão, *Crónica de D. Pedro*, Lisbon, Imprensa Nacional – Casa da Moeda, 2^a Edição, 2007; Lopes, Fernão, *Crónica de el-rei D. Fernando*, first published 1816 in J.F. Correia da Serra, editor, Collecção de livros ineditos de historia portugueza, Vol. IV, Lisbon, Academia das Ciências de Lisboa; Lopes, Fernão, *Crónica de D. João I*, 2 Vol. Barcelos, Livraria Civilização, 1983; *Chronica do Condestable de Portugal*, Lisbon, Ed. A. A. Caiado, 1998 (the attribution to this Chronicle to Fernão Lopes is disputed); *Crónica dos Sete Primeiros Reis de Portugal* (1952 title) or *Crónica de Portugal de 1419* (1998 title) (manuscript cod. 965, dated from 1419, discovered in archives of Casa Cadaval).

¹³ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta por el-rei D. João I*, Coimbra, Imprensa da Universidade, 1915, pp. 92, 93; Zurara, Gomes Eanes de, *Crónica dos feitos notáveis que se passaram na conquista da Guiné por mandado do Infante D. Henrique*, 2 Vols., Lisbon, Academia Portuguesa de História, 1978; Zurara, Gomes Eanes de, *Crónica do Conde D. Pedro de Meneses*, Edição por Maria Teresa Brocardo, Lisbon, Fundação Calouste Gulbenkian, 1997; Zurara, Gomes Eanes de, *Crónica do Conde D. Duarte de Meneses*, ed. Larry King, Universidade Nova de Lisboa, Lisbon 1978.

¹⁴ Pina, Rui de, *Crónicas de Rui de Pina*, Porto, Lello & Irmão – Editores, 1977. The book includes all Pina's chronicles: *Chronica delrey D. Sancho I* (pp. 1-70); *Chronica delrey D. Affonso II* (pp. 71-116); *Coronica delrey D. Sancho II* (pp. 117-156); *Coronica delrey D. Affonso III* (pp. 157-208); *Chronica delrey D. Diniz* (pp. 209-318); *Chronica delrey Dom Afonso o Qvarto* (pp. 319-476); *Chronica do Senhor Rey D. Duarte* (pp. 477-576); *Chronica do Senhor Rey D. Affonso V* (pp. 577-882); *Chronica d'el Rey D. Joaõ II* (pp. 883-1033).

¹⁵ Portalegre, Paulo de, *Novo Memorial do Estado Apostólico. Primeira Crónica dos Lóios Edição Crítica por Cristina Sobral*, Lisbon, Roma Editora, 2007.

The computer program used to compare/contest the astrological positions presented by the chroniclers was the software Solar Fire, specifically designed for astrological calculation. The solar and lunar eclipses, were determined in the NASA website “Five Millennium Catalog of Solar Eclipses”¹⁶, which provided data for their exact time of occurrence, their duration and their level of occultation.

¹⁶ <http://eclipse.gsfc.nasa.gov/SEcat5/SE1301-1400.html>

PART I – STATE OF THE ART: A SUMMARY

The history and historiography of astrology in Portugal began in the last decades of the 19th century and early 20th century. The earliest studies regarding or mentioning this topic date from the first decades of the 20th century, by the hand of Joaquim Bensaúde¹⁷.

The early studies approached astrology through one of these perspectives: the History of Navigation (thus History of Science) or the History of Culture.

The History of Navigation focuses mainly on the genesis of nautical astronomy. In this area, the work of Luís de Albuquerque, written in the decades of 60, 70 and 80,¹⁸ stands as paramount for the understanding of astrology's role in the navigation progress during the nautical discoveries of the 15th and early 16th century. This historian addressed the topic of astrology several times within the context of nautical science and he also studied the works of several medieval and renaissance cosmographers and mathematicians; these studies have brought forward many first order sources as the astronomical tables of Abraham Zacuto (c. 1450-1510) and the mathematical works of Pedro Nunes (1502-1578); they also brought to evidence the Jewish/Arabic astrological tradition in the Iberian Peninsula.

As to the History of Culture, astrology has been addressed from several angles. The most common is the supremacy of astronomy over astrology, focusing chiefly on the impact

¹⁷ Joaquim Bensaúde (1859-1952). Some of his works in the field of astrology were: *L'astronomie nautique au Portugal à l'époque des grandes découvertes*, Berna, Akademische Buchhandlung von Max Drechsel, 1912; *L'astronomie nautique au Portugal à l'époque des grandes découvertes*, Genève, A. Kundig, 1917; *Histoire de la science nautique des découvertes portugaises*; Lisbon, Imprensa Nacional, 1921; *Regimento do astrolábio e do quadrante: Tractado da espera do mundo*, Lisbon, Imprensa Nacional, 1924.

¹⁸ Luís de Albuquerque (1917-1992). Some of his works on this topic: *Os Guias Náuticos de Munique e Évora*, Intro. Armando Cortesão, Lisbon, JIU-AECA, Série Memórias n° 4, 1965; *Os Antecedentes Históricos das Técnicas de Navegação e Cartografia na Época dos Descobrimentos/The Historical Background to the Cartography and the Navigational Techniques of the Age of Discovery*, Lisbon, CNCDP-Ministério da Educação, 1988; *A 'Aula de Esfera' do colégio de Santo Antão no século XVII*, Coimbra, JIU-AECA, Sep. LXX, 1972; *As inovações da náutica portuguesa do século XVI*, Lisbon, IICT-CEHCA, Sep. 166, 1984; *Instrumentos de Navegação*, Lisbon, CNCDP, 1988; *A Náutica e a Ciência em Portugal. Notas sobre as navegações*, Lisbon, Gradiva, 1989; *Navegação Astronómica*, Lisbon, CNCDP, 1988; *Portuguese books on nautical science from Pedro Nunes to 1650*, Lisbon, IICT-CEHCA, Sep. 168, 1984; *A projecção da náutica portuguesa quinhentista na Europa*, Coimbra, JICU-AECA, Sep. LXV, 1972; *Sobre a observação de estrelas na náutica dos descobrimentos*, Coimbra, JIU-AECA, Sep. VII, 1965; *Arte de Navegar de Manuel Pimentel*, Lisbon, JIU-AECA, Série Memórias n° 7, 1969.

in Portugal of the predictions of the universal deluge for 1524¹⁹, the observation of comets and the development of new cosmological models (namely the heliocentric model). These topics were addressed by Joaquim de Carvalho²⁰ and Pina Martins²¹. Also relevant is the study of literary references related to astrology, namely the works of play writer Gil Vicente (c.1435-c.1536); these were studied by Augusta Gersão Ventura²² and Luís de Albuquerque²³. Another approach was pursued by Luciano Pereira da Silva²⁴, who studied the library of king João I, giving special attention to literary references to astrology and correlated matters.

However, these approaches do not always regard astrology as an essential factor to the understanding of medieval life; instead, they depict it as “superstitious belief”, unworthy of academic study. Only the works of Luís de Albuquerque escape, at least partially, to this constraint.

A concise but comprehensive paper on the history and the historiography of astrology was written in 1982 by professor Francisco Bethencourt²⁵; this historian refers all the aforementioned authors and presents the state of the art at the beginning of the 80’s.

In recent years, astrology has been mentioned occasionally in the Portuguese academic world, mainly in the context of the History of Science; it is frequently used as the “superstitious and outdated” counterpart of “modern science”, and seldom presented as a

¹⁹ In 1499 Iacob Pflaum and Johan Stoffler started publishing a series of almanacs of astrological nature. In the almanac for the year of 1524 they predicted that an universal deluge would occur, due to the conjunction of Saturn, Jupiter and Mars in the sign of Pisces. This prediction caused panic among the people, and its failure ignited the critics against astrology; the most famous of these detractors was Giovanni Pico de la Mirandola.

²⁰ Carvalho, Joaquim de, *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983.

²¹ Martins, José Pina, “Fr. António de Beja contra a Astrologia Judiciária”, in *As grandes polémicas portuguesas*, Lisbon, Verbo Editora, 1964.

²² Ventura, Augusta Gersão, *Estudos vicentinos: I Astronomia, astrologia*, Coimbra, Oficinas Gráficas de Coimbra Editora, 1937.

²³ Among their works: Albuquerque, Luís de, *As Navegações e a sua projecção na Ciência e na Cultura*, Lisbon, Gradiva, 1987; *Introdução à História dos Descobrimentos*, Mem Martins, Publicações Europa-América, 1989; *Para a História da Ciência em Portugal*, Lisbon, Livros Horizonte, 1973.

²⁴ Silva, Luciano Pereira da, O astrólogo João Gil e o Livro de Montaria in *Lusitânia Revista de Estudos Portugueses*, V. 2, Fasc.1, 1924, pp. 1-9.

²⁵ Bethencourt, Francisco, Astrologia e Sociedade no século XVI: uma primeira abordagem in *Revista de História Económica e Social*, 8, (1981), pp. 43-76.

crucial knowledge for the medieval culture. A positive exception in the work of Maria José Feror Tavares, about the Jewish contribution to astrology and astronomy²⁶.

There are a few articles by Vasco Jorge Rosa da Silva²⁷, but his work has been published mostly outside the academic world and within the context of the History of Astronomy; furthermore, he is openly adverse – and therefore biased – towards astrology, and does not seem to recognize its cultural relevance.

A more comprehensive approach can be found in the works of historians Luís Carolino and Henrique Leitão. Once more the focus is on the History of Science, but their work has nonetheless brought to attention of the Portuguese academia the astrological writings of the 16th and 17th century. Luís Carolino has made an outstanding study on the Almanacs of the 17th century, in his doctorate thesis²⁸, while Henrique Leitão has organized several relevant conferences and exhibits on the History of Astronomy and published many articles on the subject. He also investigated the *Aula da Esfera* of the Jesuit college of Santo Antão²⁹ (also 17th century), which brought the subject of Astrology back to the Portuguese academic world.

It is also worth mentioning some studies by Brazilian scholars. Roberto Martins wrote about astrology, again from the perspective of the History of Science³⁰. There are also a number of theses focusing on astrology, although the majority address the topic from the anthropological and sociological perspectives. Also noticeable are the MA dissertations by

²⁶ Tavares, Maria José, “Os Judeus, os astros e a astrologia”, in Canas, António Costa e Ferrão, Maria Eugénia, *A matemática no tempo do Mestre José Vizinho*, Lisbon, Gradiva, 2009, pp. 15-23.

²⁷ Silva, Vasco Jorge Rosa, *História da astronomia medieval portuguesa*, Porto, edições e-copy, 2008; Silva, Vasco Jorge Rosa, “A história do Sol em Portugal: do século XII ao século XVIII”, in *Estudos de Castelo Branco*, nº 4, (Janeiro 2005), pp- 203-226; Silva, Vasco Jorge Rosa, “O Cosmos visto pelos portugueses: da Idade Média ao século XVIII”, in *Revista História*, Ano XXVI, III.^a série (Agosto 2005), pp- 42-45.

²⁸ Carolino, Luís Miguel, *Ciência, Astrologia e Sociedade: teoria da influência celeste em Portugal (1593-1755)*, Porto, Fundação Calouste Gulbenkian e Fundação para a Ciência e Tecnologia, 2003.

²⁹ The “aula da esfera” (class on the sphere) was a class on mathematical science lectured at Colégio de Santo Antão (a Jesuit College), in Lisbon, from c.1590 to 1759. Leitão, Henrique, “O debate cosmológico na ‘Aula da Esfera’ do Colégio de Santo Antão”, in *Sphaera Mundi: a ciência na Aula da Esfera – manuscritos científicos do Colégio de Santo Antão nas coleções da BNP*, Lisbon, Biblioteca Nacional de Portugal, 2008, pp. 27-44.; Leitão, Henrique, *A ciência na “Aula da Esfera” no Colégio de Santo Antão 1590-1759*, Lisbon, Comissariado Geral das Comemorações do Vº Centenário do Nascimento de S. Francisco Xavier, 2007. Leitão, Henrique, “The Jesuits II; Cultures, Sciences and the Arts, 1540-1773”, ed. O’Malley, SJ, John W.; Bailey, Gauvin Alexander; Harris, Steven J.; Kennedy, SJ, T. Frank, Toronto, University of Toronto Press, 2006, pp. 370-389.

³⁰ Martins, Roberto de Andrade. *A influência de Aristóteles na obra astrológica de Ptolomeu (o “Tetrabiblos”)*. Trans/Form/Ação (1995), pp. 51-78.

Adalgisa Botelho da Costa³¹, José Celório³², Cristina de Amorim Machado³³ and Angélica Ferroni³⁴; and the doctorate thesis by Juliana Mesquita Hidalgo Ferreira³⁵, Aléxia Teles Duchowny³⁶, Márcia Helena Alvim³⁷ and again Cristina de Amorim Machado³⁸.

It is impossible to address the history of astrology without mentioning the seminal work of American historian Lynn Thorndike, *History of magic and experimental science*³⁹, and his many other writings about astrology and correlate topics. Richard Lemay, Thorndike's pupil, published a work revealing the connections between Arabic astrology and Aristotle's natural philosophy⁴⁰. He also originated a collective book on the history of astrology⁴¹. Otto Neugebauer, mathematician and historian of science, is the author of an extensive work on ancient astronomy⁴². His successor in Brown University, David Pingree, translated from Arabic into English the book "*Carmen Astrologicum*", written by Dorotheos of Sidon⁴³.

More recently, several relevant studies on this matter were produced, namely by Jim Tester⁴⁴, Suzel Fuzeau-Braesch⁴⁵, Jean-Patrice Boudet⁴⁶; Bernard Gueneé⁴⁷, Eugenio Garin⁴⁸,

³¹ Costa, Adalgisa Botelho da, *O Relatório dos Tempos de André do Avelar e a astrologia em Portugal no século XVI*, MA dissertation, Programa de estudos pós-graduados em História da Ciência, PUC-SP, 2001.

³² Celório, José, *A educação medieval e a filosofia em Tomás de Aquino: elementos para compreensão de uma astrologia cristã*, MA dissertation, UEM, 2004.

³³ Machado, Cristina de Amorim, *A falência dos modelos normativos de filosofia da ciência – a astrologia como um estudo de caso*, MA dissertation, PUC-Rio, 2006.

³⁴ Ferroni, Angélica, *Cosmologia e astrologia na obra astronômica de Marcus Manilius*, MA Dissertation, PUC-SP, 2007.

³⁵ Ferreira, Juliana Mesquita Hidalgo, *O estudo dos céus e suas linguagens: a transição do erudito ao popular na astrologia inglesa no século XVII*, PhD thesis, PUC-SP, 2005.

³⁶ Duchowny, Aléxia Teles, *De magia (Ms. Laud Or. 282, Bodleian Library)*, PhD Thesis, UFMG, 2007.

³⁷ Alvim, Márcia Helena, *Dos céus e da terra: astrologia judiciária e descrição da superfície terrestre nos relatos missionários da Nova Espanha do século XVI*, PhD thesis, UNICAMP, 2007.

³⁸ Machado, Cristina de Amorim, *O papel da tradução na transmissão da ciência: o caso do Tetrabiblos de Ptolomeu*, PhD thesis, PUC-Rio, 2010.

³⁹ Thorndike, Lynn, *A History of Magic and Experimental Science*, New York, Columbia University Press, 1923.

⁴⁰ Lemay, Richard, J. *Abu Ma'shar and Latin Aristotelianism in the Twelfth Century: The Recovery of Aristotle's Natural Philosophy Through Arabic Astrology*, Beirut, 1962.

⁴¹ Curry, Patrick, (ed.) *Astrology, Science and Society*, Woodbridge: Boydell and Brewer, 1987.

⁴² Neugebauer, Otto, *A History of Ancient Mathematical Astronomy*, 3 vols. Berlin, Springer, 1975.

⁴³ Pingree, David (ed.), *Dorothei Sidonii Carmen Astrologicum*, Teubner, Leipzig, 1976.

⁴⁴ Tester, Jim *History of Western Astrology*, Woodbridge, The Boydell Press, 1987.

⁴⁵ Fuzeau-Braesch, Suzel, *L'Astrologie (Que sais je?)*, Presses Universitaires de France, 1989.

Tamsym Barton⁴⁹, James Herschel Holden⁵⁰ John North⁵¹ and Kocku von Stuckrad⁵², to mention only a few.

All these works explore the connections between astrology, science and philosophy. They were all important in the formulation of our project, since they allowed us to look at medieval astrology as a cultural matter.

⁴⁶ Boudet, Jean-Patrice, *Entre science et nigromance: Astrologie, divination et magie dans l'Occident médiéval (XIIIe-Xve siècle)*, Paris, Publications de la Sorbonne, 2006, among many other relevant articles.

⁴⁷ Guenée, Bernard, *Entre l'Eglise et l'Etat: quatre vies de prélats français à la fin du Moyen Age, XIIIe-XVe siècle*, Paris, Gallimard, 1987.

⁴⁸ Garin, Eugenio, *Astrology in the Renaissance: The Zodiac of Life*, London, Arkana, 1983.

⁴⁹ Barton, Tamsym, *Ancient astrology*, London & NY: Routledge, 1994.

⁵⁰ Holden, James Herschel, *A History of Horoscopic Astrology*, Tempe, AFA Inc., 2006.

⁵¹ North, John, "Medieval Concept of Celestial Influence: a Survey", in *Astrology, Science and Society: Historical Essays*, ed. P. Curry, Woodbridge, 1987, pp. 5-18; North, John, *Stars, Minds and Fate. Essays in Ancient and Medieval Cosmology*, London, 1989; among other works.

⁵² Stuckrad, Kocku von, *História da Astrologia, da Antiguidade aos nossos dias*, São Paulo, Editora Globo, 2007; "Interreligious Transfers in the Middle Ages: The case of Astrology", in *Journal of Religion in Europe*, Brill, 2008 pp. 34-59; "Whose Tradition? Conflicting Ideologies in Medieval and Early Modern Esotericism", in *Historicizing "tradition" in the study of religion*, ed. Engler, Steven and Grieve, Gregory Price, Berlin, Walter e Gruyter, 2005, pp. 211-227, among many relevant articles.

PART II – ASTROLOGY AND MEDIEVAL THOUGHT

“Astrologia es ell art que muestra conoscer los mouimientos delos çielos e delas estrellas et de como se catan unas a otras en sus rayos. Et por que es esta ell arte que fabla del saber delas estrellas lleua el nombre deste fecho mismo, segund quelos griegos pelo puseiron, ca alo que nos llamamos estrella dizen ellos Astros, alo que nos razon ellos logos; e destos dos nombres griegos, astros et logos, uiene este nombre astrologia, que quiere dezir tanto como art que fabla dela razon delas estrellas e las ensenna saber”

(Astrology is the art that reveals the movements of the stars and the way they aspect each other with their rays. And because this is the art that talks about the knowledge of the stars, it has their name, according to the Greeks who gave it; for to what we call *star* they say *astro*, to what we [call] reason, they [call] *logos*; and from these Greek names, *astros* and *logos*, comes this name *astrologia*, which means: the art that speaks of the reason of the stars, and teaches their knowledge.

Alfonso X of Castile, *General Estoria* f⁵³

⁵³ Alfonso X of Castile, *General Estoria*, Livro VII, Chapter 28, in Carvalho, Joaquim de, *Obra completa de Joaquim de Carvalho*, Lisbon, Gulbenkian, 1983, Vol. II, 1948-1955, pp. 176-177, footnote 70

CHAPTER 1 – THE COSMOS ACCORDING TO MEDIEVAL ASTROLOGY

This chapter briefly explains what was astrology in the medieval period – its principles, its rules and its practical applications. It also presents the case study of the Negro Family, a lineage of astrologers living in the Portuguese court for several generations.

Medieval man lived in a geocentric enclosed universe. Earth, the centre of Creation, was surrounded by the nine concentric heavens, or spheres, containing the Luminaries, the five visible planets and the stars. Each planet revolved in its own sphere, at its own pace⁵⁴.

The innermost realm, the Earth, was the domain of the four elements. The densest was earth, placed in the very centre of the world and composed by the soil, the rocks and the mountains – all the dense and immovable parts of the world. Water came next, surrounding earth with the rivers, lakes and oceans. Above earth and water, there was air, manifesting through the winds and the atmosphere, and over all the elements was fire, the subtlest of them all, occupying the outer sphere of the Earth, and generating phenomena such as rainbows, shooting-stars and comets.

Above and surrounding the Earth, came the concentric spheres of the planets, arranged according to their relative speed and proximity to the Earth. The first, closer to Earth, was occupied by the Moon, the fastest of all celestial bodies. The other spheres, concentrically ordained, were the second, of Mercury; the third, of Venus; the fourth, of the Sun; the fifth, of Mars; the sixth, of Jupiter, and finally the seventh, of Saturn, the slowest and most distant of the planets.

Surrounding the seven spheres of the planets there was the sphere of the fixed stars. These were immutable (fixed) in their relative position to each other and contrasting with the eternal wandering movement of the planets, the Sun and the Moon. The last was the ninth sphere, encompassing all others and containing the Zodiac. This sphere was set in motion by

⁵⁴ This description portrays the Aristotelian cosmic model: the sublunar world (Earth) at the centre, subject to changes and decay, surrounded by the concentric spheres of the heavens, where the planets revolved. The complexities of the geocentric model are consistently described by authors diverse periods, like Aristotle, *On the Heavens*, translated by W.K.C. Guthrie, Cambridge, Harvard University Press, 1986; Ptolemy, Claudius, *Tetrabiblos*; and Thorndike, Lynn, *The Sphere of Sacrobosco and its commentators*, Chicago, University of Chicago Press, 1949.

the *primum mobile*, the primordial impulse that put the world in motion. Beyond the spheres, and surrounding them, there were the celestial realms, where the angels and God dwelt.⁵⁵



Figure 1 – The celestial spheres, from *Les Echecs Amoureux*, Mss. fr. 143, fol. 20, BnF, 15th century

There was a crucial dichotomy in Creation: above, the Heavens – perfect, immutable and eternal, forever revolving in regular circles; below, the Earth – the place of change and decay. These changes on the sublunary sphere (that is, Earth) were generated by the movement of the planets and the stars. For that reason, all earthly creatures – human, animal

⁵⁵ For a description of the geocentric universe in a Portuguese medieval source, refer to Zurara, Gomes Eanes de, *Crónica de Ceuta*, p. 271, and also to Abraham Zacuto, in Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, in *Revista de Estudos Hebraicos*, Vol. 1, Lisbon, 1928 (pp. 95-183).

and vegetal – were conditioned by the succession of the days, the months and the seasons. Each individual was endowed with a certain “seasonal quality”, related to the part of the year he/she was born. The phase of the Moon, the hour of the day and the position of the planets at a given moment, also had their part on this conjecture. To each moment corresponded a different configuration⁵⁶. The systematic study of these celestial movements (carried on by several civilizations, from Mesopotamia to the Greeks) originated the body of knowledge we now call astrology. Astrology – from the Greek term *astro logien*, the knowledge of the stars – is therefore the study of the correlation between celestial phenomena and terrestrial events.

Branches of astrology

Astrology was divided into four main branches, each defined by its object of study:

1. **Mundane** astrology studies, as the name implies, the word itself. It analyzes the changes in the weather and its repercussions in the crops and economy, as well as any alterations in the political, social and cultural fields. For the purpose of this study, the nations, the countries and entire cultures were associated with zodiacal signs and planets, so a correspondence could be established between them and the celestial movements.⁵⁷ Such was the importance of mundane astrology, that even the ruler’s personal horoscope could be used for mundane purposes, since it represented not only the individual, but also the nation.

⁵⁶ This topic is addressed by Claudius Ptolemy in the 2nd century: “*For the Sun, together with the ambient, is always in some way affecting everything on the Earth, not only by the changes that accompany the seasons of the year to bring about the generation of animals, the productiveness of plants, the flowing of waters and the changes of bodies, but also by its daily revolutions furnishing heat, moisture, dryness, and cold in regular order and in correspondence with its positions relative to the zenith. The Moon, too, as the heavenly body nearest to Earth, bestows, her effluence most abundantly upon mundane things, for most of them, animate or inanimate, are sympathetic to her and change in company with her. (...) Moreover, the passages of the fixed stars and the planets through the sky often signify hot, windy, and snowy conditions of the air, and mundane things are affected accordingly. Then, too, their aspects [relative positions] to one another, by the meeting and mingling of their dispensations, bring about many complicated changes. For though the Sun’s power prevails in the general ordering of quality, the other heavenly bodies aid or oppose it in particular details, the Moon more obviously and continuously (...)*” Ptolemy, Claudius, *Tetrabiblos*, pp. 7-9. For the dynamics of astrology, refer to Stuckrad, Koeku von, *História da Astrologia*, pp. 20-30.

⁵⁷ A complete explanation about this topic can be found in *Tetrabiblos*, pp. 117-161.

Another important practice in mundane astrology was the exact calculation of beginning of the year. In astronomical terms, the year begins with the ingress of the Sun in the sign of Aries, which occurs in March and marks the beginning of Spring. A chart was cast for the exact moment this event took place, and it was interpreted to obtain a prognostic of the year to come. Secondary prognostications were obtained by studying the beginning of each season, which complemented the main prognosis.⁵⁸ In sum, there were four main moments each year, corresponding to the four seasons: Spring equinox, that is, the ingress of the Sun in Aries (the start of the astrological/natural year); Summer solstice, the ingress of the Sun in Cancer; Autumn equinox, the ingress in Libra; and Winter solstice, the ingress in Capricorn. An astrological chart was calculated for the exact moment of each of the ingresses, and its interpretation would reveal the general tendencies of the respective season. As the Sun returns every year to the same points, after completing an entire circle (or *revolution*) around the Zodiac, these charts are called the *revolutions of time* or *revolutions of the year*. They were complemented by the study of eclipses and of comets, if any of these phenomena took place in that year⁵⁹.

The conjunctions of the slowest planets, Jupiter and Saturn, were related to the study of historical cycles. These conjunctions occur once every 20 years and follow complex patterns through the signs of the Zodiac, encompassing cycles of 240 and 790 years⁶⁰.

2. **Nativities** (*genitures* or natal astrology), studies the births of individuals, their traits, vocations, relationships and development. This study had two moments: the interpretation of the natal chart, and the prediction of the native's life or *accidents*⁶¹.

⁵⁸ For the seasonal ingresses, refer to Ragel, Ali ben, *Libro conplido en los iudicios de las estrellas*, Zaragoza, Gracento, 1988-1997, Livro 8, Chapter IX, p. 95. Evidences of this practice in the 15th century can be found in a manuscript from Torre do Tombo (the Portuguese national archives); it contains tables of planetary positions from the year 1468 to 1480 and the ingress charts for each season of the mentioned years; it also includes a collection of horoscopes of noble men and women who lived in the court of Burgundy in the late 14th and early 15th century, including Philip *the Good* and Charles *the Bold*; interestingly, it does not include duchess Isabel (duke Philip's third wife). ANTT, *Manuscritos da Livraria*, Ms. 1711, *Almanaque ab anno 68 osque ad anno 80, Nativitates quorundam p.*

⁵⁹ Both solar and lunar eclipses are relatively easy to predict, due to their regularity; solar eclipses are only visible in a limited area of the world (*called the path of the eclipse*); the comets are often unpredictable.

⁶⁰ The Jupiter-Saturn conjunctions, which occur approximately once in every twenty years, were considered to be crucial from the political and economical points of view. Some authors, like Abu Mashar (Albumansar, 787-886) conceived an historical model based on these conjunctions. For more on this topic refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 184-186.

3. **Elections**, the choice of the best moment for a given action. This practice would assist many important events, both in personal life and in politics. It could set the moment for crucial choices, like the enthronement of a king or the signing of a treatise, founding a building or starting a battle, but it would also be used for more common purposes, such as cutting hair or buying new clothes. This branch was frequently applied in medicine, to assist the choice of the better moment to take a remedy, to perform a surgery or for bloodletting.

4. **Interrogations** (also called horary astrology or question) was the study of specific questions, by interpreting the celestial configurations at the moment a question was presented to the astrologer. As with elections, the question could address important matters, as the outcome of a war, or more trivial ones, as the whereabouts of a lost jewel.

The four branches of astrology are mentioned in a letter to king Duarte⁶², written by Diogo Afonso Mangancha, teacher of Law at the University of Lisbon⁶³. When discussing the legitimacy of astrological prediction, Mangancha declares that certain conditions should be observed in all forms of astrology. He specifically mentions “*nas reuoluções dos tempos como nas nascenças como nas Inleições como nas questões*”⁶⁴ (in the revolutions of time [mundane], as in the nativities, as in elections, as in questions).⁶⁵

Astrology had a well-defined role within the *arts*⁶⁶ and was clearly separated from other, less respected, divinatory practices⁶⁷. Ptolemy clarifies this topic in the beginning of

⁶¹ In astrology, the term *accidents* means occurrences, events, happenings.

⁶² D. Duarte, *Livro dos Conselhos de el-rei D. Duarte*, Lisbon, Editorial Estampa, p. 204. Mangancha is referenced in Carvalho, Joaquim de, “Instituições de Cultura – Período Medieval”, *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, (pp. 128-219), p. 156, footnote 47.

⁶³ Carvalho, Joaquim de, “Instituições de Cultura – Período Medieval”, 156, footnote 47.

⁶⁴ D. Duarte, *Livro dos Conselhos de el-rei D. Duarte (Livro da Cartuxa)*, p. 204. This division prevailed in the Modern Period. As it can be attested in instance, the inquisitorial processes of Lúcio Cipião dAragona (16th century) and Alvaro Martins from Alcaria (17th century), mentioned in Bethencourt, Francisco, “Astrologia e Sociedade no século XVI: uma primeira abordagem”, pp. 66-77. For another perspective on the branches of astrology, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 30-33.

⁶⁵ The philosophical and theological aspects of this letter are addressed in p. 83.

⁶⁶ Astrology was one of the Seven Liberal Arts: the *Trivium* (Grammar, Dialectic and Rhetorics, the three verbal arts) and the *Quadrivium* (Arithmetic, Music, Geometry and Astrology, the four numeric arts).

⁶⁷ For instance, a papal bull from Nicolaus IV, from 1290, declared that the *licit* faculties, except Theology, could be taught at the university. This excludes practices such as magic and necromancy, but not astrology,

his work: “(...) *most, for the sake of gain, claim credence of another art in the name of this, and deceive the vulgar, because they are reputed to foretell many things, even those that cannot naturally be known beforehand, while to the more thoughtful they have thereby given occasion to pass equally unfavorable judgement upon the natural subjects of prophecy*”⁶⁸. With this statement, Ptolemy puts astrology in a completely different, much higher, level than common divination, and prevents possible criticism, by warning against those who call themselves astrologers, but practice lesser forms of divination. He considers this harmful to the reputation of astrology, to the point of threatening its very practice. And he goes further: “*it is the same with philosophy – we need not to abolish it because there are evident rascals among those that pretend to it*”. By establishing equivalences between philosophy and astrology, Ptolemy endows the latter with great dignity, and places it within the realm of high knowledge – therefore distancing it from other practices.⁶⁹

Medieval astrology was an *art* for the learned, while the divinatory practices were considered as unworthy (or even unholy) and left to the less educated (peddlers, barbers, witches)⁷⁰. The synods also recognized the difference, as they condemned the “magic and divinatory” practices, but said little or nothing about the interpretation of star configurations – that is, astrology.⁷¹

which was indispensable to the teaching of medicine. For this topic, refer to Albuquerque, Luís de, “Universidade”, *Dicionário de História de Portugal*, coord. Joel Serrão, Porto, Livraria Figueirinhas, 1985, vol. VI, p. 229 and also Jacquart, Danielle, *La Médecine Médiévale dans le Cadre Parisien: XIV^e-XV^e siècle*, Paris, Librairie Arthème Fayard, 1998, pp. 117-227, 448-465.

⁶⁸ Ptolemy, Claudius, *Tetrabilos*, pp. 13-15.

⁶⁹ Ptolemy’s work reached great prominence in Late Antiquity, as it generated many commentaries and studies. In spite of the differences between his astrological work and those of those of the Islamic scholars (which have been more recognized by later authors), Ptolemy stands as one of the main references of the history of astrology in the Early Middle Ages. For this topic, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 122-124.

⁷⁰ In practical terms these boundaries could be somewhat blurred.

⁷¹ For the edicts against the practice of *superstitiones* refer to Antonio Garcia Y Garcia (dir.), *Sinodicon Hispanum*, II - Portugal, Madrid, Biblioteca de Autores Cristianos, 1982; there are many interdicons against sorcery and witchcraft, but none of them refers explicitly to the practice of astrology. For instance, in op. cit., Lx 11:23, one can read: “(...) *que nenhum use de sortes, nem agoiros, nem de encantamentos, nem de esconjurar, nem de chamar spiritus malignos (...), que nenhuu nom fezessem cirço per chamar os demónios ou pèra saber as coussas ascondudas*”. It should be noted that all these interdicons relate to witchcraft and lesser forms of divination, not to astrological calculation and/or interpretation.

CHAPTER 2 – MEDIEVAL ASTROLOGY: WHAT IT IS AND HOW IT WORKED

In order to understand some passages of the Portuguese chronicles, it is essential to have a basic understanding of the astrological principles and rules, as they were understood in the medieval period. This section will address these principles, using as main sources three books on astrology, which were part of the Portuguese royal libraries. They were written in different periods and by authors of different religions and cultures: *Tetrabiblos* by Claudius Ptolemy, an Hellenistic author from 2nd century Alexandria; *Libro Conplido en los Iudicios de las Estrellas* by Ali ben Ragel, a Muslim who lived in 11th century Tunes⁷²; and *Tratado breve en las ynfluencias de cielo* by Abraão Zacuto, an Iberian Jew from the 16th century⁷³. These three books, which will be addressed in detail in chapter 2, offer a representative overview of the astrological knowledge of the medieval period; they also reveal that, in spite of occasional differences, the rules and principles of astrology remained coherent throughout the centuries, at least until the end of the medieval period.

The principles of analogy

Astrology establishes a correspondence between the regular cycles of the planets and certain meteorological, political and personal events. This connection is rooted in direct observation; it started when man first established the correlation between the two most evident phenomena – the annual cycle of the Sun and the monthly cycle of the Moon – and some equally obvious terrestrial events: the seasons of the year (which mirror the Sun's cycle) and the ebb and flow of the tides (connected to the Moon's motion). This was a natural and self-evident phenomenon. For Ptolemy, the correlation between astrological configurations and the events on Earth was quite obvious: “*Those who are consequent upon greater forces and simpler natural orders such as the annual variations of the seasons and the winds, are comprehended by very ignorant men, nay even by some dumb animals*”⁷⁴.

⁷² Ragel's book was translated into old Castilian in the 13th century, by order of king Alfonso X of Castille.

⁷³ Although living after the medieval period, Zacuto summarizes the knowledge of his predecessors, being therefore a good example of the late medieval astrological practice.

⁷⁴ Ptolemy, Claudius, *Tetrabiblos*, p. 9.

The ability to predict the natural cycles was crucial to individual and collective survival; it helped to foretell important events, like the time to sow the crops and to collect the harvest, the better moment to launch a boat, to store food and wood, and so on. These predictions conferred specific qualities to each period – time was interpreted, both in the quantitative as well as in the qualitative sense.⁷⁵ Their importance was evident, as the abilities to predict implied success and power to those who held them. In Antiquity, astrology therefore was reserved to specialists, and with consequences in religion and politics.⁷⁶

The next step was to correlate these natural stages (the seasons, the phase of the Moon, etc.) with the traits of the individuals born at each stage. The planets also added to this equation with new correlations, as their cyclic movement is also easy to observe. Ptolemy evokes the principle of analogy to explain this correlation; in his discourse the different steps of correlation are clearly evident. He starts by asserting that if the astrologer is capable of determining “(...) *the distinctive mark of quality resulting from the combinations of all the factors*”⁷⁷, he can also be able to determine “*on each given occasion the characteristics of the air from the relations of the phenomena at the time, for instance, that it will be warmer or wetter?*”⁷⁸ Several concepts arise from this sentence. The term “mark of quality” relates to the concept of “qualified time”, before mentioned, while the “combination of all the factors” reinforces the idea of complexity and multiplicity of influences (this concept will be relevant for the analysis on determinism, on Part IV). He starts by recalling the ability to predict the weather, and then he expands the concept from the weather to the individuals, again according to the principle of analogy: “*Why can he not, too, with respect to an individual man, perceive the general quality of his temperament from the ambient at the time of his birth, as for instance that he is such and such in body and such and such in soul, and predict occasional events, by use of the fact that such and such an ambient is attuned to such and such a temperament (...)?*”⁷⁹ By transferring this notion from the meteorological sphere to the human realm, Ptolemy correlates these two planes of existence; allowing the astrological interpretation into several contexts – hence the various branches of astrology.

⁷⁵ Stuckrad, Kocku von, *História da Astrologia*, p. 16.

⁷⁶ Stuckrad, Kocku von, *História da Astrologia*, p. 16.

⁷⁷ Ptolemy, Claudius, *Tetrabiblos*, p. 11.

⁷⁸ Ptolemy, Claudius, *Tetrabiblos*, p. 11.

⁷⁹ Ptolemy, Claudius, *Tetrabiblos*, p. 11.

Prediction

Prediction is the logical outgrowth of this system. It assumes that, if it is possible to interpret celestial motion to describe the present, it is also possible to foresee future celestial movements and describe the future (and similarly to describe the past).

Astrology thus described the reality of the present, past, and future, through the movements of the celestial bodies and their correlation to Earth⁸⁰. Prediction was first applied to natural phenomena (as the tides and seasons), and later to political and individual events.

Astrology and astronomy

The astrological practice integrated mathematical calculation and symbolic interpretation. Ptolemy distinguishes “*the knowledge of celestial bodies, their position and movements*” (calculation) and “*the changes they bring about in the natural environment by means of their natural character*” (interpretation).⁸¹ They were frequently referred to as *mathematics*, as a synonym of astrology⁸². Medieval astrology was a mixture of exact *science* and interpretative *art*.⁸³

The principles of medieval astrology⁸⁴

⁸⁰ This concept of prediction relates to Stoic philosophy and cosmology (and its repercussions in medieval philosophy). It implies the notions of *heimarmene* (destiny or causality, in the sense of natural law) and *sympatheia* (compassion, the connection between all parts of the Cosmos). For an explanation about these concepts, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 96-100, and also pp. 160-161.

⁸¹ Ptolemy, Claudius, *Tetrabiblos*, p. 3. In practical terms, the distinction was not so clear.

⁸² Stuckrad, Kocku von, *História da Astrologia*, p. 16: “*There was no conceptual distinction between the two terms and, frequently, one would talk about mathematics when referring to astrology. The mathematic science of the stars was the tool that should provide the data for the interpretative science of the stars.*”

⁸³ Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los secretos de astrologia ao Infante D. Henrique”, in *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, (134-184) p. 177: “*Nem pura astronomia, nem somente astrologia judicativa, mas uma mescla em que as relações quantitativas e de posição dos corpos celestes comportavam, por assim dizer, dimensões qualitativas e de causalidade em eventos e seres do mundo sublunar.*”

⁸⁴ For a concise but clarifying analyses of the astrological principles, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 22-33.

As stated before, the practice of astrology had two distinct moments: calculation and interpretation. The first step was to determine the position of the planets in the Zodiac – that is, in the signs. For this purpose, the medieval astrologers would rely on direct observation or on astrological tables⁸⁵. They would also determine the planet’s position in relation to point of observation (if above or below the horizon, if high or low in the sky); for this study, the celestial sphere was divided into twelve segments, called the houses.

These are the three main referentials in astrology – planets, signs and houses – each endowed with a specific meaning. The attributes of these referentials remained essentially the same throughout Antiquity and the Middle Ages (although they gained complexity as the centuries went by), providing a common ground of study for different cultures⁸⁶.

A brief overview of these referentials in the works of the three aforementioned authors (Ptolemy, Ragel, and Zacuto), illustrates this line of continuity.

Three main concepts:

1. The planets

The Greek term *planetes* – meaning *wanderers* – included all the celestial bodies with movement, that is, all the *wandering stars*. This broad designation incorporated the five visible planets (Mercury, Venus, Mars, Jupiter and Saturn) and the two luminaries (the Sun and the Moon). Each of these bodies moved at their own pace in their respective *sphere* (their perceived geocentric orbit). The Sun and the Moon were called the *luminaries*, because they were sources of light: the Sun was *the light of the day*⁸⁷, and the Moon, *the light of the night*⁸⁸. The other stars were *fixed*, because they seem to remain immovable (fixed) in their relative positions.

⁸⁵ Stuckrad, Kocku von, *História da Astrologia*, p. 181.

⁸⁶ For the development of astrological concepts, and their progressive complexification, refer to Stuckrad, Kocku von, “Interreligious Transfers in the Middle Ages: The Case of Astrology”, in *Journal of Religion in Europe I* (2008), pp.34-59, p. 46; and also to Stuckrad, Kocku von, *História da Astrologia*, pp. 180-198.

⁸⁷ Ali ben Ragel calls it “Luz del cielo”. Ragel, Ali Aben, *El Libro conplido*, p. 2.

⁸⁸ Ali ben Ragel refers to it as “rey de la noche”; the masculine name is unexpected, because in the Iberian languages “moon” is a feminine word; it probably originated from the Arabic language, which considers the Moon to be masculine. Ragel, Ali Aben, *El libro conplido*, p. 10.

The astrological meaning of each planet derives from their position within the scheme of the spheres. Saturn, the outermost planet, was extremely cold and dry, due to its distance to the Sun and its proximity to the fixed stars. Its excessive cold was distempered and destructive to life (especially agriculture) and consequently the planet was attributed a malignant nature. The same malignity was attributed to Mars, but for different reasons: due to its proximity to the Sun, the planet was considered very hot and also dry; again, its excessive nature conferred him malignity. Between the spheres of Saturn and Mars there was the sphere of Jupiter; due to its intermediate position between the excesses of cold and hot, Jupiter was considered to be moderate and therefore, benign. The Sun hot and dry like Mars, but it was not excessive, because its heat was moderated by the sequence of the seasons. Venus was equally benign, regardless of its proximity to the Sun, because its heat was balanced by the moist exuding from Earth. In spite of its proximity to Earth, Mercury was dry due to its swiftness, which made it prevented the moist to adhere.

These attributions can be found in Ptolemy, who establishes a connection between the planets and the elements, enhancing their effects on the weather: “*the ancients accepted two of the planets, Jupiter and Venus, together with the Moon, as beneficent because of their tempered nature (...), and Saturn and Mars as producing effects of opposite nature...*”⁸⁹. The good or bad quality of each planet is therefore determined by their good or bad effects in weather and consequently in agriculture.

⁸⁹ Ptolemy, Claudius, *Tetrabiblos*, p. 39.

These attributions remained essentially the same throughout the centuries:

Table 1: The planets and the luminaries⁹⁰			
	Tetrabiblos (pp. 35-39) Ptolemy, 2 nd century	Livro Conplido (pp. 9-16) Ali ben Ragel; 11 th century	Tratado Breve (pp. 124-126) Abraham Zacuto; 16 th century
Saturn	Nature: chiefly to cool and moderately to dry probably because he is furthest removed both from the sun's heat and the exaltations about the earth	Old, big, tired, planet of demerit, worries and sorrows, and of long infirmities; cold and dry, similar to melancholy	Cold and dry; contrary to life, major infortune; melancholic coldness and dryness, with a part of phlegm
Jupiter	Nature: temperate active force; heats and humidifies; heating power is greater	Equitability and communality, goodness and piety; the law and simplicity	Major fortune; hot and moist; means wealth and honor and all things good
Mars	Nature: chiefly to dry and to burn, by reason of its nearness to the Sun	Hot and dry, fiery, of natural malignity, angry, successful, makes war and acquisition, makes battles	Hot and dry, burning, planet of the battles
Sun	Nature: heating and to a certain degree drying (p. 35) Affecting everything on Earth, by the changes that accompany the seasons of the years (...) and also by its daily revolutions, furnishing heat, moisture, dryness, and cold in regular order (p. 7)	It is the light of the sky and its fire; planet of great lordship and power; nobility and highness; signifies the fathers	Hot and dry, moderate, has power over all life
Venus	Nature: warms moderately because of her nearness to the sun, but chiefly humidifies	Fortune, cold and moist, pleasant, of good aspect, likeable, clean, pretty; loves games, joy, singing, eating, drinking and the vices	Feminine, all the vices and pleasures, and women; cold and moist with a part of liquid hot
Mercury	Nature: certain times drying and absorptive of moisture and others humidifying; changes quickly from one to the other	Hot and dry, changeable in shape and nature; loves the books, the numbers and the sciences	Restless, changeable; [planet] of the wise and of good speech; of merchants, traders and story tellers
Moon	Nature: humidifying due to be close of the Earth; shares moderate heating power because of the light which it receives from the Sun (pg. 35) Bestows her effluence mainly upon mundane things, for most of them, animate or inanimate, are sympathetic to her and change with her (pg. 7)	Cold and moist; king [or queen] of the night	Cold and wet, and feminine; confers strength to all other planets, awakens them and moves them

The planets' virtues are determined chiefly by its qualities (hot, cold, dry and moist) and especially by the ways these qualities are balanced (on imbalanced, as the excesses as considered harmful); however, the planets' qualities are also built around the mythological associations with the gods from whom they derive their names: Mars, god of war, is associated with battles; Mercury, god of commerce, is associated with merchants⁹¹.

⁹⁰ The attributions depicted in this table are taken from larger texts in the referred pages. Some parts were abridged. The original passages can be found in pp. 38.

⁹¹ The association between planets and gods precedes Greek/Roman mythology. In the Middle East, the planets were also related to the gods, and their qualities were, in general terms, similar to those derived from Classical mythology. Nevertheless, the mythological association explains some of the attributions, but not all.

The planets' qualities remain the same in the three authors, but the symbolism may vary slightly as each one favors different attributes. For example, when discussing Mercury, Ragel refers to "the numbers and the sciences", and Zacuto mentions "the wise", "speech" and "story tellers". They refer to the same concepts, but in different terms. Ptolemy focuses on the planet's qualities, while Ragel and Zacuto explore their symbolism.⁹²

2. The signs

The signs are segments of the Zodiac, which is an imaginary circle surrounding the Earth. This circle is generated from the apparent movement of the Sun around the Earth during the course of the year.⁹³ This apparent motion, traces a line around the Earth, and it is along this line, known as the ecliptic, that the Moon and the planets move through the sky.

The Zodiac has four primary points of division: the Spring Equinox, the Summer Solstice, the Autumn Equinox, and the Winter Solstice. A new season begins when the Sun crosses the correspondent point. Each season is further divided into three parts, corresponding to the beginning, the middle and the ending phases. The division of the Zodiac into four seasons and each season into three parts, generates twelve segments, corresponding to the twelve signs. The first three signs signal the spring: Aries, which marks the beginning of the season, Taurus, which corresponds to its culmination, and Gemini, which signals its end. The signs for the summer are Cancer, Leo, and Virgo; followed by those of the autumn: Libra, Scorpio, and Sagittarius and finally those of winter: Capricorn, Aquarius and Pisces.

⁹² The comparison between classical and medieval sources (and the increased complexity of the astrological system) is out of the scope of this work. For a concise survey on medieval astrology and its sources, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 180-198 (astrology in Islamic Iberian culture) and pp. 205-212 (astrology in Christian culture).

⁹³ In reality it is Earth that circles the Sun in its translation movement; but this fact is not self-evident.

As with the planets, the attributions given to the signs reveal a basic continuity throughout the centuries.

Table 2: The Signs⁹⁴				
	Ruler planet⁹⁵	Tetrabiblos (pp. 65-69) Ptolemy; 2 nd century	Livro Conplido (p. 1) Ben Ragel; 11 th century	Tratado Breve (pp. 114-115) Abraham Zacuto; 16 th century
Aries	Mars	Equinoctial	Fiery (Igneo)	Hot and dry like the fire Moveable
Taurus	Venus	Solid	Earthy (Terreo)	Cold and dry like the earth Fixed
Gemini	Mercury	Bicorporeal	Airy (Aéreo)	Hot and moist like the air Common or of two bodies
Cancer	Moon	Solstitial	Aquatic (Acuáticos)	Cold and moist like the water Moveable
Leo	Sun	Solid	Fiery (Igneo)	Hot and dry like the fire Fixed
Virgo	Mercury	Bicorporeal	Earthy (Terreo)	Cold and dry like the earth Common or of two bodies
Libra	Venus	Equinoctial	Airy (Aéreo)	Hot and moist like the air Moveable
Scorpio	Mars	Solid	Aquatic (Acuáticos)	Cold and moist like the water Fixed
Sagittarius	Jupiter	Bicorporeal	Fiery (Igneo)	Hot and dry like the fire Common or of two bodies
Capricorn	Saturn	Solstitial	Earthy (Terreo)	Cold and dry like the earth Moveable
Aquarius	Saturn	Solid	Airy (Aéreo)	Hot and moist like the air Fixed
Pisces	Jupiter	Bicorporeal	Aquatic (Acuáticos)	Cold and moist like the water Common or of two bodies

In this case, Zacuto summarizes the attributions presented by the other two authors. Ptolemy addresses the signs from the perspective of their relation to the season of the year; Ragel focuses mainly on their relation with the four elements (the other attributes appear scattered along his book). Zacuto synthesizes both contributions, relating each sign with an element (which in its turn is composed by two qualities) and with a motion (moveable, fixed or common).

The differences between the designations given by Ptolemy and Zacuto to the signs Aries, Cancer, Libra and Capricorn. Ptolemy calls *equinoctial* to Aries and Libra, and *solstitial* to Cancer and Capricorn; Zacuto uses the term *moveable* (Ragel connects the signs to the elements and omits this point). But in spite of the different designations, they both relate the signs to the beginning of the four seasons. Aries and Libra are *equinoctial* because

⁹⁴ The original passages and references for this table can be found in p. 38.

⁹⁵ The rulers of the signs were included, for they will be needed to clarify certain passages in Parts III and IV.

they mark the equinoxes (of Spring and Autumn, respectively); Cancer and Capricorn are *solstitial* because they mark the solstices (of Summer and Winter); they are all called *Moveable* because they correspond to the beginning (movement) of a season.

As to the other designations – fixed/solid and common/double-bodied– they are also related with the changes of the seasons. The fixed signs mark the middle of the season, when the weather has stabilized in the typical conditions of that particular time of year. The common or double-bodied signs (sometimes also called bi-corporeal or mutable) represent the time when the seasons change; they are *double* because the weather has both the characteristics of the current season and of the one to come.

Each sign is also associated with an element, and always in the same order: fire, earth, air and water. To the first sign is attributed fire, to the next earth, then air, then water, and so on. Thus, the first sign, Aries, belongs to the fire element; followed by Taurus, related to earth, Gemini to the air, Cancer to water and so on.

The planets were not all equally powerful in all the twelve signs. The power of each planet in a given sign was determined by a system of planetary *dignities* or *strengths*. This system had been developed throughout the centuries and becoming increasingly more complex.

In the medieval period there were five types of planetary dignity (that is, five different ways for a planet to attain power): throne or house (some times called domicile or rulership), exaltation, triplicity term and face (the first three are mentioned in the Portuguese chronicles)⁹⁶. It is common to find tables of the dignities in astrological books. For instance, Zacuto mentions exaltations and rulerships⁹⁷.

⁹⁶ This is one of the innovations brought by the Arabic culture to astrology; the astrological systems become increasingly complex in the medieval period, due to the Arabic contribute. For this matter, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 170-220.

⁹⁷ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 115.

3. The astrological houses⁹⁸

Like the Zodiac, also local space is divided in twelve parts, called the houses⁹⁹. This division takes as reference four points: East, where the celestial bodies rise, South, where they culminate (that is, where they reach the highest altitude in relation to the horizon), West, where they set, and North, where they reach their lowest point below the horizon. These points divide the sky in four areas (or quadrants), which in turn are divided into three parts each (beginning, middle and end), thus obtaining the twelve houses.

His house has a set of attributes related to an area or activity, or an aspect of life.

Table 3: The astrological houses¹⁰⁰

	Tetrabiblos Ptolemy; 2 nd cent. (pp. 273-275)	Livro Conplido Ali ben Ragel; 11 th century	Tratado Breve (pp. 119-120) Abraham Zacuto; 16 th century
1st House	The Horoscope	The native, his thinness or fatness (p. 29)	The complexion, manners, life and knowledge; it is universal for all things and thoughts [of the native]
2nd House	(Gate of Hades)	Highly valued and priced things, possessions (p. 33)	Money and sustenance
3rd House	(Goddess)	Brothers, short journeys, law and its knowledge (p. 35)	Brothers, short journeys, law and knowledge
4th House	(Lower Mid-Heaven)	Parents, the ends of things, hidden things (p. 36)	The father, possessions and the end of all things
5th House	(Goof Fortune)	Children, gifts and pleasures, invitations and drinks [pubs and parties] (p. 42)	Children, pleasures, garments and vices
6th House	(Bad Fortune)	Infirmities, captives, servants, animals (p. 60)	Infirmities, servants and slaves, small cattle and minor sciences [crafts]
7th House	The occident	Women, marriages, opponents (p. 73)	Women, battles, declared enemies and companions
8th House	(Beginning of Death)	Death and killing, poverty and fears, heritage from the death (p. 118)	Lost things, death, heritages
9th House	The House of the God	Roads and movement, things of God, houses of prayer, prophets and prophecy, astrology and philosophy (p. 119)	Sciences and distant journeys, journeys by water, houses of prayer and the laws
10th House	The Mid-Heaven	Highness, king and kingdom, lordship and nobility, good fame, mastery, the women of the father [mother or stepmother] (p. 138)	Kingdom and lordship, honour, the office of the mother
11th House	The House of the Good Demon	Hopes, adventures, recognition, good fames, prizes, friendship from great men (p. 154)	Friends, the king's treasures, good fame and hope
12th House	The House of the Evil Demon	Enemies, misfortunes, confinement, prisons, deception and the evil crafts (p. 156)	Secret enemies, confinement, horses and knowledge [of hidden things]

⁹⁸ A more complete explanation about the houses is presented in Appendix 2.

⁹⁹ This is the equal house system. Already in antiquity there was an in-going discussion about whether the better system, and eventually, unequal house systems were developed. For this topic, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 26-28 and pp. 191-192.

¹⁰⁰ The translation and references for this table can be found in p. 39.

(As Ptolemy fails to mention some of the houses in *Tetrabiblos*, the table was completed with the attributes mentioned by F. E. Robbins, the book's translator¹⁰¹; the extra attributes are in brackets.)

Ptolemy is very sparse in his descriptions, whilst the later authors offer a more detailed explanation. Also, the names he attributes to the houses clearly have a pagan origin, which obviously does not appear in the later works. Ragel and Zacuto's descriptions contain great similarities, and represent the standard house description of the medieval period. Their attributions derive from earlier authors, other than Ptolemy.¹⁰²

The placement of a planet in a given house would determine that the events of the nature of that planet would occur within the matters represented by the house. For instance, if Mars, the planet of the battles, was placed in the 11th house, it would imply that the adventures, recognition and good fame represented by that house, would be obtained through martial activities, like battles and war.

The astrological chart

For practical purposes, the astrologer annotated the positions of the planets (their placement in a sign and a house), in a diagram called astrological chart or figure. This was a map of the planetary positions, a sort of celestial equivalent to a geographical map.

It is generally a squared figure, divided in twelve parts, representing the twelve houses. In each space, or house, is annotated the degree of the sign occupying the house. If any planets are placed in the house, they are represented by their glyph, along with the zodiacal degree in which they are positioned.

These charts would serve any of the four branches of astrology: they could be calculated for the birth of an individual (nativities), the beginning of a season or an eclipse (mundane), the favorable moment for signing a treatise or crowning a king (elections) or to answer a question (horary).

¹⁰¹ Ptolemy, Claudius, *Tetrabiblos*, pp. 272-273, footnote 2.

¹⁰² Besides Ptolemy, Ragel mentions other relevant sources, such as Vetius Valens (120-c.175), Mash'allah (740-815), Al-Kindi (801-873).

In some cases there is a squared space inside the chart containing the title (name of the person, name of the event, or the question asked), and the date and time for which the chart was calculated.

Astrological rules

The combination of these three referentials – planets, signs and houses – according to certain rules, provides the astrological interpretation. These rules developed throughout the ages, from the simplicity of direct observation, to the complexity of a personal horoscope, as in the medieval period.

It is worth noting that the planetary positions and their interrelation were not the only factors to take in account: hereditary traits, upbringing, place of birth (both for political and for geographical reasons) and – most importantly – personal choice were equally relevant.¹⁰³ The exact balance between the determination of the stars and the other factors (especially free will) was extensively debated throughout the centuries.¹⁰⁴

¹⁰³ This complexity of influences is discussed in works as early as 2nd century' *Tetrabiblos*.

¹⁰⁴ This topic, and its consequences to the late medieval Portuguese court, is addressed in the final part of this thesis (pp. 117-127).

CHAPTER 3 – THE ASTROLOGICAL PRACTICE AT THE ROYAL COURT

Being an astrologer at a royal court was a position of merit and responsibility. It was also a demanding one, as the requests for astrological advice included a wide range of topics, from personal health to politics, from meteorology (which included agriculture and economy) to diplomacy and war. The medieval court astrologers were the natural heirs of ancient traditions from the Middle East (the Chaldeans, the Persians, the Jews and the Arabs).¹⁰⁵

Many court astrologers were of Jewish ascent and many acted as pivotal elements in the transmission of knowledge between the Ancient World (which survived mostly through the Arabic translations) and the Christian kingdoms. The Iberian Peninsula (the Arabic al-Andalus) was particularly active in terms of cultural transfers.¹⁰⁶ This active exchange of knowledge between Muslims, Christians, and Jews (which co-existed with strong religious tensions), remained active throughout all the medieval period. Astrology was one of the disciplines that benefited the most from it, both in the technical and the philosophical aspects.¹⁰⁷ There were significant cultural developments in this period, and the position of court astrologer attained great respectability.

Astrology brought profuse rewards to its practitioners, both in the material and in the social aspects. Their services were generously paid by their noble patrons, and their social status also improved. Some Portuguese court astrologers even received the equivalent to a nobility title, with the honors and the lands that come with it.

In the Portuguese court, astrology was often associated with other correlate activities: it assisted in the political and economical decisions (through mundane, horary and elective), as well as the personal choices (nativities, horary and elective). Astrology was frequently associated with the medical practice, and most astrologers were also physicians.

¹⁰⁵ For a comprehensive explanation of astrology and its cultural roots, both in the Christian and in the Muslim cultures, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 170-220.

¹⁰⁶ Stuckrad, Kocku von, “Interreligious Transfers in the Middle Ages: The Case of Astrology”, p. 46: “*From the beginning, Spain had been characterized by a vivid exchange between religious traditions, fostered not only by the Muslim rulers. Jews and converts had a key position in these processes, since their multilingualism made them first-class translators.*”

¹⁰⁷ Stuckrad, Kocku von, “Interreligious transfers”, pp. 54-55: “*Paradigms of reason and rationality, as well as philosophical issues, belonged to the shared heritage of these religious communities, notwithstanding the difference in interpretation due to religious rhetoric and interest.*”

Astrology applied to Medicine¹⁰⁸

Astrology played a crucial role in medieval medicine, as method of diagnostic. Zacuto quotes Hippocrates on astrology's role in medicine: "*ciego es al medico que nõ sabe astrologia*"¹⁰⁹ (blind is the doctor who doesn't know astrology).

Essential to the medical practice was the theory of the four elements¹¹⁰, and their correspondent temperaments. According to it, everything in the Cosmos – objects, plants, animals and Man – had a unique combination of these elements, which in the case of Man was represented in the astrological chart.

Temperament	Sanguine	Choleric	Melancholic	Phlegmatic
Element	Air	Fire	Earth	Water
Signs	Gemini, Libra, Aquarius	Aries, Leo, Sagittarius	Taurus, Virgo, Capricorn	Cancer, Scorpio, Pisces
Humour	Blood	Yellow bile	Black bile	Phlegm
Organ	Veins and arteries	Gall bladder	Spleen	Lungs

Illness originated from the imbalance and cure was achieved by the restoration of the natural balance. To accomplish this, there was an extensive system of correlations between signs and planets with parts of the body and with specific illnesses. The zodiacal (or *melothestic*) man is probably the most recognizable of these correspondence systems. In this system the signs were related to specific areas of the body, in general terms:

¹⁰⁸ A complete study of the complex correlations between astrology and medieval medicine is out of the scope of this thesis. The theme of medieval medicine is addressed by many authors, such as Jacquart, Danielle, *La Médecine Médiévale dans le Cadre Parisien: XIV^e-XV^e siècle*, Paris, Librairie Arthème Fayard, 1998, pp. 448-465; Stuckrad, Kocku von, *História da Astrologia*, p. 90-91, 200-202, 237-241; and to Azzolini, Monica, "The political uses of astrology: prediction the illness and death of princes, kings and popes in the renaissance", in *Studies in History and Philosophy of Biological and Biomedical Sciences, Special Issue, Stars, Spirits, Signs: Astrology 1000-1800*, Vol. 41, issue 2, 2010, p. 135-145, and also Azzolini, Monica, "Reading health in the stars: politics and medical astrology in Renaissance Milan" in *Horoscopes and Public Spheres: Essays on the History of Astrology*, Berlin, Walter de Gruyter GmbH & Co. KG, 2005, pp. 183-206.

¹⁰⁹ Carvalho, Joaquim de, "Dois inéditos de Abraham Zacuto", p. 127.

¹¹⁰ Referenced by Empedocles (495/90-435/30 BC), this theory was expanded by Hippocrates (460-377) and later Galen (131-200). For a concise refer to Sarton, George, and, von Earhardt-Siebold, Erika, Remarks on the Theory of Temperaments, *Isis*, Vol. 34, n° 3 (Winter 1943), University of Chicago Press, 1943, pp. 2035-208.

Table 5: Correspondences between signs and body parts (Zacuto ¹¹¹)	
Sign	Area of the body
Aries	Head
Taurus	Neck
Gemini	Arms
Cancer	Breast and stomach
Leo	Heart and liver
Virgo	Navel and intestines
Libra	Kidneys and buttocks
Scorpio	Genitals
Sagittarius	Hips
Capricorn	Knees
Aquarius	Ankles
Pisces	Feet



Figure 2 – Zodiacal Man; Oxford Bodleian Library Ashmole ms 391, fl.9. 14th Century

Images similar to this are represented in many drawings and miniatures during the Medieval Period. They establish a correlation between the signs and parts of the bodies, they serve various medical purposes, namely the choice of favorable moments for medical interventions (surgery, bleeding, etc.). This was determined mainly by the passage of the Moon through the signs, because it was believed that this passage would induce the affluence of blood to the correspondent body part. Zacuto says, quoting Ptolemy: “*tocar con el hierro al mjenbro q la luna estoviere en el sygno adaptado aql mjenbro. es dañoso*”¹¹² (to touch with iron the member, when the Moon is in the sign correspondent to that member, it is harmful). For instance, “*quando la luna estovjere en geminis nõ sangren de los braços (...) y la luna en aries es malo rrapar la cabeça*”¹¹³ (when the Moon is in Gemini, do not bleed the arms (...) and [with] the Moon in Aries is harmful to shave the head) – for the arms are related to Gemini and the head to Aries.

Also, the position of the Moon in certain signs could favor the elimination of specific undesired humors: “Quando quiera que oviere de dar purga o dar a comer pera purgar ade

¹¹¹ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 114.

¹¹² Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 129.

¹¹³ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 129.

estar la luna en signo que paresca aquel humor que quieren vacuar y amenguar: que si quiere vacuar la colera que este la luna en signos igneos que som. aries. leo. sagitarius: y si la melãcolia en signos de tierra. fueras de capricornio. que som. taurus y virgo: y se la flema que este en signos de agua que som cancer. scurpius. piscis. y se sangrar em signos de aire que som genjnjs. libra. aquario”¹¹⁴ (When it is necessary to purge or administer a purgative, the Moon should be in a sign with similarity with the humor you want to evacuate and diminish: if one wants to purge cholera, the Moon should be in fiery signs, which are Aries, Leo and Sagittarius; if melancholy, [the Moon should be] in Earth signs, except Capricorn, which are Taurus and Virgo; if the phlegm, let it be in watery signs, which are cancer, scorpio and pisces; and if [you want] to bleed [the sanguine humour], in airy signs, which are Gemini, Libra and Aquarius). This passage reveals the complexity of the astrological medicine: every time one humour needed to be purged, the Moon should be in a sign of the corresponding element. For example, cholera, a hot and dry humour with an affinity with the element fire, was purged when the Moon was in one of the three fire signs (Aries, Leo and Sagittarius). The same principle is applied to the other three humours.

The complexity of the system goes even further, as there are exceptions to be taken into account. For instance, the Moon in Capricorn (a sign of the element Earth) should not be selected to treat the corresponding element (melancholy). This is probably because in the astrological system of planetary strength, the Moon in Capricorn is considered to be weak. Another example of this complexity is evident when Zacuto relates the position of the Moon with that of other planets. “*Y era meter en baño al enfermo que este la luna en signos de agua o en qualquier signo con que sea acatada de buenas planetas o del sol fuera de oposicion o conjunciõ (...)*”¹¹⁵ (to bathe the patient, let the Moon be in the water signs or in any sign where it aspects¹¹⁶ good planets or the Sun, except the opposition or conjunction)¹¹⁷.

¹¹⁴ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 130.

¹¹⁵ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 131.

¹¹⁶ Aspect: angular relationship between two planets in a given chart. In medieval astrology there are five aspects: conjunction (when the two planets are joined in nearby degrees), opposition (when they are in opposite places of the Zodiac); trine (when they form an angle of 120 degrees between them; they are generally placed in signs of the same element; i.e. Aries and Leo, both of the fire element); square (90° angle) and sextile (60° angle). Trines and sextiles are considered to provide beneficial relations between the planets; squares and oppositions are harmful. The effects of the conjunctions also vary according to the two planets involved. The astrological interpretation combines the aspect and the natures of the planets.

¹¹⁷ The conjunction or the opposition of the Moon to the Sun refer to the two main lunar phases: New Moon (conjunction) and Full Moon (opposition), which are considered harmful to the medical practice.

The action of bathing is not only favored by the Moon's position in watery signs, but also by its relationship with beneficial planets (which are Jupiter and Venus) and/or the Sun.

Through these factors, the physician determined the condition of the patient, the development of the disease and the best time to apply the remedies. The natal chart was a diagnostic tool, along with the standard physical assessment. It revealed the forces and weaknesses of the individual – the diseases he would be prone to due to his temperament. The interrogations would also be used to scrutinize the origins and development of a disease, as well as the possibilities of cure. The time when the first symptoms appeared (if known) would also provide information regarding the evolution of the disease. For surgery and the administration of remedies, it would be chosen (elected) the best astrological moments.

Additionally, the general tendencies of the weather in a given region were determined through mundane astrology. Some seasons were considered to be more adequate to certain medical procedures; some were more likely to induce specific diseases (spring increased blood flow, summer enhanced cholera, autumn, melancholy and winter, phlegm).¹¹⁸

The practice of medicine granted privileged access to the king: the physician cared for the king's physical conditions and also offered advice about his moods and dispositions.

¹¹⁸ Carvalho, Joaquim de, "Dois Inéditos de Abraão Zacuto", p. 148: "*los quarto tiempos del año que la primavera que es desde que entra el sol em aries hasta la cabeça de cancer es caliente e humjda y ena este tiempo se mueue la sangre. y el estio que es de cancer hasta libra es caliente y seco y tiene la colora. el otoño que este de libras hasta capricornjo. es frio y seco y tiene la melancholia. y el inuierno que est de capricornio hasta el fin de piscis es frio y humjdo*".

The astrologers: the Negro¹¹⁹ family – a case study

As a comprehensive study of all the Portuguese astrologers of the medieval period would not be possible, we decided to present the Negro family as an example¹²⁰.

One of the better examples of social elevation through counseling (with extensive use of astrology) is the Negro family, a lineage of Jewish noblemen who lived in the Portuguese court for nine generations¹²¹.

The cooperation of this family to the Portuguese crown is documented since the first king, Afonso Henriques (c. 1109-1185). In his incursions towards the South attempting to expand his territory¹²², Afonso encountered the *taifas*¹²³, the small Islamic kingdoms that resulted from the dismantlement of *Al-Andalus*. Most of the sovereigns of these *taifas* were sworn enemies of the Christians, but some were willing to forge occasional alliances with them, in order to gain new allies against the other *taifas*.

Ibn-Qasi¹²⁴, lord of Mértola and Silves, was one of these lords. To face his many enemies, he decided to forge an alliance with Afonso Henriques. He sent as emissary his Jewish counsellor, Yahia ben Yahia¹²⁵, a learned man and a warrior, and he managed to establish a solid alliance with Afonso Henriques. So solid that, when some time later he fell from grace before Ibn-Qasi's eyes, he did not hesitate to join Afonso Henriques (who, meanwhile, had also broken his alliance to Ibn-Qasi). His services were promptly accepted,

¹¹⁹ *Negro* literally means *black*, a designation that could originate either from their skin colour (as they were probably of Moor/Berber descent) or from the dark clothes they wore.

¹²⁰ Other examples of court physicians/astrologers Other examples are Mestre Tomás, David Iom Tov bin Billia and José Vecinho. For examples in the late medieval France, refer to Jacquart, Danielle, *La Médecine Médiévale dans le Cadre Parisien: XIV^e-XV^e siècle*, Paris, Librairie Arthème Fayard, 1998, pp. 448-465. For an extensive list of court astrologers from Antiquity to Early Modern period, refer to Holden, James Herschel, *A History of Horoscopic Astrology, From the Babylonian Period to the Modern Age*, Tempe, AZ, AFA, 1996.

¹²¹ The transmission of astrological knowledge between different religions is addressed in Stuckrad, Kocku von, *Interreligious transfers and in Stuckrad, Kocku von, História da Astrologia*, pp. 180-198, pp. 204-212.

¹²² These conquests were made in the context of what we call now the *Reconquista* (a Spanish and Portuguese word for *re-conquest*). For a period of about 700 years (539 years in Portugal) in the Middle Ages, several Christian kingdoms of the Iberian Peninsula struggled to recuperate the territories occupied by the Muslims in the from the Muslim *Al-Andalus* (the Iberian Peninsula).

¹²³ *Taifa*: Arabic word meaning *flag*; it refers to the small kingdoms which emerged after the shattering of powers in *Al-Andalus*.

¹²⁴ Ibn Qasi (or Ibn Kasi) was probably a *muladi* (a Christian converted to Islam) of humble origins; his name may derive from the Latin family name Cassius.

¹²⁵ Yahia Ibn Yahia is sometimes referred to as Yahya *Ha-Nasi*, Yahya Ibn Yaish, Jachia ibn Jachia or Don Yahia *El Negro*, for more information refer to Basto, A. C. Barros, *Don Yahia Ben-Yahia (O 1^o Rabi-mór de Portugal)*, Porto, Instituto Tecnológico Israelita, 1944.

and Yahia became one of Afonso's closest counselors. He served him as a military advisor in the conquest of several important cities in the south, namely Santarém, in 1147. As a reward for his military efforts, Afonso Henriques gave him three villages: Unhos, Frielas and Aldeia dos Negros¹²⁶. He also authorized him to use the title of *Dom*, as a Christian nobleman would do. And, also as a nobleman, he conferred him the right to add the most important village, Aldeia dos Negros (literally *Village of the Blacks*¹²⁷), to his name. From then on, he was known as Dom Yahia Negro¹²⁸. This surname, together with the respective title and the lands, passed on to his descendants for several generations.

Afonso's also chose Yahia as *rabbi gadol* (chief rabbi) – an immense honor, as the chief rabbi's powers within the Jewish communities were second only to the king's. The rabbi had to have significant knowledge of the planetary movements, in order to perform his religious functions. He had to execute (or at least supervise) complex mathematical calculations, in order to determine the exact position of the Sun and the Moon in the Zodiac, to establish the beginning of the Jewish calendar and festivities¹²⁹. Astrology was related to this practice, due to its direct relationship with the calendar and astronomical calculation.

Yahia remained at the service of king Afonso until his death, around 1185¹³⁰.

Yahia's descendants stayed close to the Portuguese kings for nine generations, and formed the Jewish elite. Their success within the court, in spite of the religious differences, can be attributed to their political proficiency and their specialized skills. Through the Arabs, they inherited the knowledge of classical world – of which astrology took a crucial part – and brought it into the Christian society. Their abilities were not accessible to all, for they

¹²⁶ Meyer Keyserling refers that this donation is documented in the preface of the book *Schalschelet-ha-Kabbala (The chain of Tradition)*, written by Gedaliah ben Joseph Ibn Yahia (1515–1587), a descendant of Yahia ben Yahia it is also mentioned by Inácio Steinhardt, who quotes Joaquim Veríssimo Serrão, in *História de Portugal: "que esta doação se refere à tomada de Óbidos em 1148, tem que se aceitar a identificação com a actual povoação de A-dos-Negros, situada a 4 km"*. Steinhardt, Inácio, em *Um documento hebraico sobre a batalha de Toro*, pp. 118.

¹²⁷ There is no agreement about the origin of the name. Some historians affirm that Yahia adopted it because that was already the name of the village (A-dos-Negros), while others say that the village only got this designation when it was donated to Yahia, because he was known as *el Negro* (the Black).

¹²⁸ Social prestige was natural to him; he claimed to be a direct descendant of King David (c. 1050 b. C) and he had the title of *ha-Nasi* (the prince). He was also related to the powerful Abravanel family.

¹²⁹ Tavares, Maria José, "Os Judeus, os astros e a astrologia", in Canas, António Costa e Ferrão, Maria Eugénia, *A matemática no tempo do Mestre José Vizinho*, Lisbon, Gradiva, 2009, pp. 15-23.

¹³⁰ Not all historians agree with this date; some place Yahia's death in the year 1151, during a military expedition to conquer Alcácer do Sal.

required both adaptability and specialization – they combined astronomical observation, mathematic calculation and the knowledge of the astrological rules.

As the *Reconquista* slowed down (after the first four reigns) the services provided by the Negro family to the crown gradually expanded, to other fields of expertise. Along with the military services (which remained until as late as the 15th century), they also started to offer their knowledge as counsellors, physicians, treasurers and minstrels. Many of his descendants were directly connected to the astrological practice.

For instance, Gedaliah *ha-Zaken* ben Shlomo ibn Yahia (1295-1385), possibly a son of rabbi Shlomo, was chief rabbi during the reign of Afonso IV (1291-1357), and also served as treasurer for Queen Brites (the king's mother).

When Afonso's son, Dom Pedro (1320-1367), came to power, he lost the king's favour. He was substituted by Moisés Navarro, another Jewish courtesan, and his possessions were confiscated. But still, after king Pedro's death, in 1367, Dom Gedaliah was able to obtain the prestigious function of court physician in the court of king Fernando (1345-1383) Pedro's son. In 1370, again for political reasons, he moved to the kingdom of Castile and offered his professional skills to king Henrique II (1334-1379). Again, his knowledge granted him prestige, and he eventually became the leader of the Jewish community of Toledo.

Gedaliah's ability to achieve success and prestige in the Portuguese and Castilian courts is related with his astrological knowledge: his positions as chief rabbi and physician depended largely on astrological and astronomical calculation. The position as treasurer was possibly attained due to his ability with numbers.

Another example is Yehuda ben David Negro ibn Yahia, usually called *Dom Judá Negro*, a grandson of Dom Gedaliah. Born in Toledo in the mid-14th century, he was forced to flee to Portugal to escape the persecution of Vicente Ferrer¹³¹ and became a minstrel and a courtesan of Philippa of Lancaster (1359-1415), the queen of João I (1357-1433).¹³² In the

¹³¹ Vicente Ferrer (23 January 1350 – 5 April 1419) was a Valencian Dominican missionary and logician.

¹³² Incidentally, his poetry is considered to be “a good example of acculturation from the Jews in a Christian court”. Tavares, Maria José Ferro, Linhas de Força da “História dos judeus em Portugal das origens a actualidade”, *Espacio, Tiempo y Forma, Serie III, Historia Medieval*, t. 6, 1993, pp. 447-474.

court, Yehuda was seen as an experienced practitioner of astrology, as it can be deduced by an episode recorded by Zurara¹³³.

Gedaliah ben Shlomo ibn Yahia (c.1400-c.1453), generally known as *Mestre Guedelha*, was also a distinct courtesan. A nephew of Yehuda Negro, he was chosen to the position of chief rabbi of Portugal, as well as physician and astrologer in the court of João I. Quite remarkably, he achieved these honors before the age of 30. He also served Prince Pedro during his regency, as well as Henry the Navigator and king Afonso V¹³⁴. He was highly respected and received many benefits, including the authorization to possess a mule and the respective apparel, for the period of three years (in a document from 1450)¹³⁵.

Guedalia's son, Abraham Guedelha (d. 1471), known as *Mestre Abraão Guedelha*, lived in the court of king Afonso V. In 1453, he succeeded his father in the positions of court physician and chief rabbi. He studied philosophy at *Estudos Gerais* (the equivalent of the university), together with the Christian students. While in school, he was involved in an argument about Christ's temperament¹³⁶.

¹³³ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta por el-rei D. João I*, Coimbra, Imprensa da Universidade, 1915, pp. 92, 93. The episode is addressed in this work, in p 108.

¹³⁴ Steinhardt, Inácio, em "Um documento hebraico sobre a batalha de Toro" in *Cadernos de Estudos Sefarditas*, nº 5, 2005 (pp. 115-134), pp. 119.

¹³⁵ *Monumenta Henricina*, vol. 10, doc. 252, pág. 346, mentioned in Cunha, Maria Cristina Almeida e, Pimenta, Maria Cristina Gomes, "A casa senhorial do Infante D. Henrique: organização social e distribuição regional", *Revista da Faculdade de Letras Porto*, 1984, (pp. 221-284), p. 260.

¹³⁶ This incident is presented in pp. 113-115.

Tables 1 and 2 – Original text and references

Table 1 – Planets and luminaries		
	Livro Conplido Ali ben Ragel; 11 th century	Tratado Breve Abraham Zacuto; 16 th century (pp. 124-126)
Saturn	Uieio, grant, cansado, planeta de despreciamiento e de cuidados e de tristezas e de enfermedades luengas Su naruea es fria e seca, semeia a melancoia (pg. 12)	Frio e seco e contrario de la vida infortuna mayor (...) frialdad e sequedad melancolica con parte de fleuma (...)
Jupiter	Igualdad y comunaleza, el bien e e la pietá; s. gnifica la ley e la simplicidad (pg. 13)	Fortuna mayor caliente y humido , significa rriqueza y honrra y todo bien
Mars	Caliente e seca, igneo, de maletria natural, sanudo, uencedor , mueue guerras e fazendas, faze batallas (pg. 14)	Caliente y seco ardiente (...) planeta de las batalhas
Sun	Luz del cielo y su fuego planeta de grant sennorio e poderio, e nobleza e alteza es signicador de los padres (pp. 9, 10)	Caliente y seco tenplado Tiene señoria sobre la vida
Venus	Fortuna, fria e vmed (...) risuenna, de buen parecer, afeitada, limpia, fermosa; ama ioglerias e alegríad e cantares e comer e beuer e uicios (pg. 15)	Feminino (...) todo los vicios y prazeres y las mugeres (...) es fria e humeda com um poco de calor liquido
Mercury	Caliente e seco, conuertible de forna e de natura; ama los libros e las cuentas; ciencias (pg. 16)	Reboltoso que le muda muchas conplisiones (...) es de los sabios y de buena hablar y los mercaderes y negociadores y contadores
Moon	Su natura de la luna es fria e vmida (...) rey de la noche (pg. 10)	Fria e humida y feminine (...) da fuerza a todas las planetas que las despierta e las mueve

Table 2 – Signs	
	Tratado Breve Abraham Zacuto ; 16 th century (pp. 1145,115)
Signs	
Aries	Caliente y seco como el fuego Movile
Taurus	Frio y seco como la tierra Fixos
Gemini	Caliente y humido como el ayre Comun o de dos cuerpos
Cancer	Frio y humido como el agua Movile
Leo	Caliente y seco como el fuego Fixo
Virgo	Frio y seco como la tierra Comun o de dos cuerpos
Libra	Caliente y humido como el ayre Movile
Scorpio	Frio y humido como el agua Fixo
Sagittarius	Caliente y seco como el fuego Comun o de dos cuerpos
Capricorn	Frio y seco como la tierra Movile
Aquarius	Caliente y humido como el ayre Fixo
Pisces	Frio y humido como el agua Comun o de dos cuerpos

Table 3 – original text and references

Table 3 – The astrological houses		
The Astrological Houses		
	Livro Conplido Ali ben Ragel; 11 th century	Tratado Breve Abraham Zacuto; 16 th century (pp. 119, 120)
1st House	pg. 29: el nacido (...) su magrez e su grossura	La complision y el gesto y la vida y la ciencia y es universal para todas las cosas y pensamientos
2nd House	pg. 33: Las cosas alçadas, preciadas e el aue	Dinero y mantenimiento
3rd House	pg. 35: Los hermanos, carreras cortas, la ley e el saber de la le	Hermanos, caminos breves y ley e sciencia
4th House	pg. 36: Los padres, las fines de las cosas, cosas cubiertas escondidas	El padre, las possessiones el fin de todas las cosas
5th House	pg. 42: Fijos, presentes e los gozos; conuidamientos, los beveres	Hijos y plazeres y los vestidos y los vicios
6th House	pg. 60: Las enfermedades, los catiuos, los sieruos, biestas	Las enfermedades y servidores y esclavos y ganado meudo e sciencias pequenas
7th House	pg. 73: Las mugieres, casamientos, aduersarios	Las mugeres y las batallas y los enemigos publicos e los companeros
8th House	pg. 118: Muerte e matanza, pobreza e medos, herencias de los muertos	Cosas perdidas y la muerte y herencias
9th House	pg. 119: Carreras e andamientos de una tierra a otra; cosas de Dios, casas de oración, profecias e profetas, astrologia, e filosofia	Sciencias y caminos lexos y caminos de agua, casas de oratio y las leyes
10th House	pg. 138: Alteza e rey e regno e sennorio e la nobleza, buena fama, mestrias, las mugeres de los padres	El rreyno y senorio y la honrra y el oficio y la madre
11th House	pg. 154: Las fuizas, aventuras, gradecimientos, buenas famas, gualardones, amistad de los altos homnes	Los amigos, los thesoros del rey y de la buena fama y la esperança
12th House	pg. 156: Inimigos, lazerias, carceles, prisiones, enganos, malas mannas	Enemigos secretos y las carceres y las bestias cavallares y la sciencia

PART III – THE ASTROLOGICAL KNOWLEDGE OF THE PORTUGUESE KINGS AND PRINCES

“É desejável que estudem astrologia, que é a ciência dos corpos celestes, mostrando os movimentos e as distâncias das estrelas, e a influência que exercem sobre os corpos terrenos. Esta ciência é de muito valor para as obras dos homens, pois revela o tipo de poder que os ceus têm sobre eles e sobre todas as coisas corruptíveis”

(It is advisable that they [the princes] study astrology, the science of the celestial bodies, which reveals the movements and the distances from the stars and the influence they exert over the terrestrial bodies. This science is of great value to the works of men, for it reveals the kind of power the heavens hold over them and over all things corruptible).

Aegidius de Colonna, *Regimiento de Principes*¹³⁷

¹³⁷ Egidio de Colonna, *Regimiento de Principes*, Sevilha, Menardo Ingut e Stanislao Polono, 1494, fol. CIXV, in Russel, Peter, *Henrique o Navegador*, Lisbon, Livros Horizonte, 2004, p. 30.

This part addresses the books on astrology from the royal libraries and the personal writings of the first two kings of the second dynasty.

The analysis of the books from the libraries allows a better understanding of the cultural environment of the royal court, and also reveal some of the sources of astrological information available at the time.

The personal writings offer an overview on the private thoughts and intellectual interests of their respective authors. These writings include both personal letters and books authored by kings João I and Duarte, as well as the regent Pedro.

As these sources belong to different categories, the information therein will be addressed differently, according to its source. Although different in nature, these documents provide a glance into the practical application of astrological concepts in every-day life.

CHAPTER 4 – A BRIEF SURVEY ON THE ASTROLOGICAL CULTURE OF THE HOUSE OF AVIS, FROM JOÃO I TO AFONSO V (1383 TO 1481)

Many of the sources presented in this chapter are connected to the first kings of the House of Avis, the second dynasty of Portugal.

The books on astrology mentioned in this section were part of the royal libraries¹³⁸; the personal writings expressed the kings' personal and political thoughts, revealing the pedagogical concerns of the second dynasty¹³⁹. As to the chronicles presented in this work, they were written in the 15th century, even those addressing earlier periods¹⁴⁰. All these sources reflect the cultural interests and concerns of king João I, the founder of the dynasty and of his descendants.¹⁴¹

We shall begin by a short biography of each figure, focusing in the astrological issues.

King João I (1357-1433) was the illegitimate son of Pedro I (1320-1367). He was only six years old when he was nominated Grand Master of the Order of Avis¹⁴², a title that would become the designation of the new dynasty – the House of Avis¹⁴³. Being an educated man, he was appreciative of the classical culture, and he often referred to it in his writings. He also praised – quite enthusiastically – the pleasures of outdoor activities, particularly horse riding and hunting.

¹³⁸ For an analysis of the books extant in the royal libraries of the second dynasty, refer to Nascimento, Aires A., “As livrarias dos Príncipes de Avis”, in *Biblos*, Vol. LXIX (1993), pp. 265-287.

¹³⁹ Buescu, Ana Isabel, *Livros e livrarias de reis e de príncipes entre os séculos XV e XVI. Algumas notas, eHumanista*, Vol. 8 (2007), pp. 150.

¹⁴⁰ “In Portugal, the royal chronicles as such first started and gained importance from the early 15th century onwards, being closely linked to the new Avis dynasty, which began with João I (1385-1433).” Sousa, Bernardo Vasconcelos e, *Medieval Portuguese Royal Chronicles. Topics in a Discourse of Identity and Power, e-JPH*, Vol.5, number 2 (Winter 2007), p. 3.

¹⁴¹ For education and culture in the House of Avis refer to Gama, José, “A geração de Avis – I. D. Duarte”. In Calafate, Pedro (dir.), *História do Pensamento Filosófico Português*, Vol. 1, Lisbon, Editorial Caminho, 2003, pp. 379-409; Nascimento, Aires A., “As livrarias dos Príncipes de Avis”, in *Biblos*, Vol. LXIX, Lisbon, 1993, pp. 265-287; Carvalho, Joaquim de, “Instituições de Cultura – Período Medieval”, in *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, pp. 128-219 and op. cit. ed. cit. “Cultura filosófica e científica – Período Medieval”, pp. 220-305. See also Buescu, Ana Isabel, *Na corte dos reis de Portugal. Saberes, ritos e memória*, Lisbon, Colibri, 2010.

¹⁴² The Military Order of Avis is a Portuguese Order of Chivalry. Its name and arms were related to the dynasty of Avis, which ruled Portugal between 1385 and 1580.

¹⁴³ For a complete study on the life of this king refer to Coelho, Maria Helena da Cruz, *D. João I*, Lisbon, Temas e Debates, 2008.

There is a mention of his birthday and birth time in his father's chronicle, written by Fernão Lopes¹⁴⁴. The chronicler says “*nação em Lixboa onze dias do mes dabril, aas tres horas depos do meo dia do primeiro anno do seu reinado*”¹⁴⁵ (he [João] was born in Lisbon, 11 days of the month of April, three hours after mid-day, in the first year of his [Pedro's] reign)¹⁴⁶. Although there are no references of his horoscope, the chronicler mentions his birth date, as well as his birth time and place – that is, all the necessary data to calculate his chart (he doesn't mention any other data of this kind in his chronicle, not even the birth time of King Pedro, João's father, whose chronicle he is writing).

In 1386, few months after becoming king¹⁴⁷, he signed the Treaty of Windsor¹⁴⁸ to assure mutual aid between Portugal and England, and sealed the pact by marrying Philippa of Lancaster the first daughter of Duke John of Gaunt, first duke of Lancaster. It was a political marriage, but it turned out to be very productive from the cultural point of view.

Queen Philippa (1359-1415) had studied with excellent mentors, such as Friar John, a pioneer in physics and chemistry, Jean Froissart, a poet and a chronicler, and John Wycliffe (her father's confessor) a reformer, who translated the Bible into English. Geoffrey Chaucer, who wrote extensively about astrology¹⁴⁹) also had an crucial role in her life, both as mentor (and arguably her favorite teacher) and as close friend of her father, ultimately connected to the Lancasters by family ties: Philippa's stepmother, Katherine Swynford, and Chaucer's wife, Philippa Roet, were sisters¹⁵⁰. As queen of Portugal, she had at least one court astrologer, Yehuda Negro¹⁵¹. She promoted the translation into Portuguese of John Gower's

¹⁴⁴ Lopes, Fernão, *Crónica de D. Pedro*, Lisbon, Imprensa Nacional – Casa da Moeda, 2ª Edição, 2007. (Addressed in chapter 3.)

¹⁴⁵ Lopes, Fernão, *Crónica de D. Pedro*, p. 9.

¹⁴⁶ King Pedro began his reign in the year 1357, so king João's birthdate is April 11th 1357.

¹⁴⁷ He became king in 1385, after the dynastic crisis of 1383–1385.

¹⁴⁸ This treaty is the oldest diplomatic alliance in the world, which is still effective; it was signed in 1386.

¹⁴⁹ For a discussion about Chaucer's position regarding this topic, refer to Gilliard, Frank D., Chaucer's Attitude towards Astrology, *Journal of the Warburg and Courtauld Institutes*, Vol. 36, (1973), pp. 365-366.

¹⁵⁰ This fact is referred in the compilation *The works of the English poets, from Chaucer to Cowper*, Michigan, The University of Michigan Library, 1817, (21 Vol.), Vol 1, p. VIII, as well as in the article Fisher, John A., A Language Policy for Lancastrian England Author(s), *Proceedings on the Modern Language Association*, Vol. 107, No. 5 (Oct., 1992), pp. 1168-1180, p. 1169.

¹⁵¹ Yehuda ben David Negro ibn Yahia (Dom Judá Negro), a member of the prominent Negro family, is mentioned in p. 35.

Confessio Amantis (which includes a section on astrology); the book, written in 1390, reached the Iberian Peninsula by the end of the 14th century or the beginning of the 15th.¹⁵²

The offspring of queen Philippa and king João is referred to by some historians as *the Ínclita Geração*¹⁵³, due to their personal and intellectual qualities. They benefited from the cultural interests of both parents and received a rich and varied education. Astrology, present in both cultures, would be a natural part of their education.

King Duarte (1391-1438), the elder son, was inclined to philosophy and deep thought. Luís Miguel Duarte, who wrote a biography of this monarch, called him “the king who enjoyed writing”¹⁵⁴. He used to keep a notebook to write down his thoughts, because “he trusted very little in his memory, and much more in the written word”¹⁵⁵. His writings are among “the most important works in Portuguese culture”¹⁵⁶.

His personal library had more than 80 titles¹⁵⁷, both in Latin and in vernacular, covering all kinds of topics and revealing a vivid and eclectic curiosity¹⁵⁸. Some of these books came from his father’s library¹⁵⁹; they reflect his varied interests, as they range from medicine to architecture, from cooking to diplomacy and religion¹⁶⁰. His library also included

¹⁵² For a study about this book refer to Buescu, Ana Isabel, “A *Confessio Amantis* de John Gower na livraria do rei D. Duarte”, *Actas do I Congresso Internacional de Estudos Anglo-Portugueses/ I International Conference for Anglo-Portuguese Studies*, Lisbon, Centro de Estudos Anglo-Portugueses, Faculdade de Ciências Sociais e Humanas, pp. 67-75.

¹⁵³ The term *Ínclita Geração*, roughly translated as “illustrious generation”, designates the offspring of king John I and queen Philippa of Lancaster, they are also called princes of Avis. They are: Duarte (1391–1438), king of Portugal from 1433 to 1438; Pedro (1392–1449), first Duke of Coimbra (1416), regent of Portugal from 1439 to 1448; Henrique (1394–1460), also called Henry the Navigator, first Duke of Viseu (1416), master of the Order of Christ (1420) and patron of the Portuguese discoveries; Isabel (1397–1471), duchess of Burgundy (third wife of Duke Philip III the Good and mother of Charles the Bold); João (1400–1442), Master of the Order of Santiago (1418) and Constable of Portugal (1431) and Fernando (1402–1443), Master of the Order of Avis (1434) and martyr saint of the Catholic Church (because he died in captivity, in Ceuta). For some historians, the designation also includes the natural son of John I and Inês Peres, Afonso (1377–1461), Duke of Barcelos, co-regent in the 1440s, first Duke of Braganza (1443).

¹⁵⁴ Duarte, Luís Miguel, *D. Duarte, Requiem por um rei triste*, Lisbon, Círculo de Leitores, 2005, p. 197.

¹⁵⁵ Duarte, Luís Miguel, *D. Duarte*, p. 207. Some of the notes from this book were turned into *Livro dos Conselhos de D. Duarte (Livro da Cartuxa)*.

¹⁵⁶ Duarte, Luís Miguel, *D. Duarte*, p. 207.

¹⁵⁷ Although quite modest when compared to the library of his brother-in-law, the duke Philip *the Good* of Burgundy (with more than 800 codices), Duarte’s library, with its 84 volumes, was nevertheless notable. (Data provided by Nascimento, Aires A., “As livrarias dos Príncipes de Avis”, p. 269.)

¹⁵⁸ Duarte, Luís Miguel, *D. Duarte*, p. 201.

¹⁵⁹ Duarte, Luís Miguel, *D. Duarte*, p. 201

¹⁶⁰ The list is reproduced in Duarte, *Livro dos conselhos de el-rei D. Duarte (Livro da Cartuxa)*, p. 206. Some of the titles of King Duarte’s library: *Commentarii de Bello Gallico* by Julius Caesar; *Dialectic* by Aristotle; *De*

two non-specified books of astrology – one “bound with white leather”, the other “with black leather”¹⁶¹ – as well as the *Segredo dos Segredos*¹⁶² by Pseudo-Aristotle, *Confessio Amantis* by John Gower¹⁶³ and of course, the Bible.

Regarding astrology, historian Luís Miguel Duarte considers him “a well known enthusiast”¹⁶⁴. True, King Duarte mentions astrology several times in his writings, but he expresses concerns about its practice and its philosophical principles, as it would be explored further in this chapter. Most especially, he seems to struggle with the concepts of fate and free will and his opinions reflect his perplexity¹⁶⁵.

Prince Pedro (1392-1449), the second son¹⁶⁶, studied the Liberal Arts¹⁶⁷, and he was obviously familiar with astrology. The topic is mentioned in a letter written by his brother Duarte, where it is clear that they disagree on this matter¹⁶⁸. In the coronation of his nephew, Afonso V, he asked the court astrologer to choose the best moment for the ceremony¹⁶⁹.

Officiis by Cicero; *De Re Militari* by Vegetius; *De Beneficiis* by Seneca; the works of Maximus Valerius; *De Regimine Principum* by Gil de Colona; the poems of Tristan and Iseu, of Galaz, the Tales of Count Lucanor, *Trovas* by king Dinis of Portugal and king Alfonso X of Castile; *Chronicle of Spain*; *Ordinationes* of Bártolo de Bolonha; *The Book of Marco Polo*; *The Fifth Essence*, attributed to Ramon Llull; several books of Geography by Arabic authors; books on Medicine by Avicenna; *Livro da Montaria* by his father, king João I; *Livro da Virtuosa Benfeitoria* by his brother Pedro; *Meditations* and *Confessions* by Saint Augustine; *Collections* by João Cassiano and *The Ecclesiastes*. For a complete study of Duarte’s cultural affiliations, refer to Nascimento, Aires A., “As livrarias dos Príncipes de Avis”, and to the PhD thesis: Dionísio, João, *D. Duarte, Leitor de Cassiano*, Lisboa, FLUL, 2000.

¹⁶¹ Buescu, Ana Isabel, “A Confessio Amantis de John Gower na livraria do rei D. Duarte”, pp. 67-75.

¹⁶² This book is presented in pp. 54-55.

¹⁶³ “[*Confessio Amantis* is] an unmistakable sign of the English presence at the Portuguese court”. Buescu, Ana Isabel, “A Confessio Amantis de John Gower na livraria do rei D. Duarte”, p. 74.

¹⁶⁴ Duarte, Luís Miguel, *D. Duarte*, p. 209.

¹⁶⁵ The topic of determinism will be addressed further on in this chapter.

¹⁶⁶ Intrigues at the court fuelled by Afonso (the bastard son of João I) turned the young king Afonso V against his uncle and regent. The disagreement escalated into an open conflict, and in May 20th 1449, Pedro and Afonso’s army engaged in battle. Pedro was killed during the confrontation. For this topic, refer to Moreno, Humberto, Baquero, *Infante D. Pedro, Duque de Coimbra*, Porto, Universidade Portucalense, 1997, pp. 45-47, 194-195; Scarlatti, Lita, *Os Homens de Alfarrobeira*, Lisbon, IN-CM, 1980, pp. 35-53; Coelho, Maria Helena, *O Baixo Mondego em Finais da Idade Média*, Lisbon, INCM, 1989, Vol. I, pp. 559-570; Marques, Alfredo Pinheiro, *Vida e obra do Infante D. Pedro*, 1946, Lisbon, Centro de Estudos do Mar, Luís de Albuquerque, 1996, pp. 26-28.

¹⁶⁷ Carvalho, Joaquim de, “Sobre a erudição de Gomes Eanes de Zurara”. In *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, pp. 185-308, p. 306.

¹⁶⁸ This will be explored in pp. 74-76.

¹⁶⁹ This incident, which will be detailedly addressed in pp. 118-119, was recorded by Rui de Pina. *Crónicas de Rui de Pina*, p. 589.

Pedro is the only prince of Avis whose birth time is mentioned in the chronicles.¹⁷⁰ There are no references to the birth times of his brothers although their birth dates are mentioned. Nonetheless, the chronicle does not include an interpretation of Pedro's horoscope (the only horoscope described in the chronicles is Henrique's).

Prince Henrique (1394-1460), the third *Infante* (prince) of Avis, is perhaps the most difficult to know from the historical point of view, due to the successive layers of myth attached to his image. Even his common designation, Henry the Navigator, is misleading, because he seldom navigated – he supervised the maritime enterprises, but he was not a sailor himself.¹⁷¹ Nonetheless, Henrique promoted the advances on navigation, which were largely supported by astronomical/astrological studies.

He is the only prince whose astrological chart is interpreted in a chronicle¹⁷² providing therefore an example of the official version of astrology¹⁷³, and also the only one who is explicitly mentioned as a practitioner of astrology. Talking about this astrological chart in *Cronica da Guiné*, chronicler Zurara affirms “*por pungimento de natural influencia, este honrado principe se inclinava a estas cousas*”¹⁷⁴ (by the drive of natural influence, this honoured prince was inclined to such things). According to Zurara, Henrique's horoscope promised “*conquistas altas e fortes*”¹⁷⁵ (high and mighty conquests) – a prophecy that probably encouraged him to conquer north-African territories. It may also have prompted his interest for astrology, which was usual in princes or noblemen of his time¹⁷⁶. Taking his interest on instruction even further, he made substantial donations to the University of

¹⁷⁰ Lopes, Fernão, *Crónica de D. João I*, Chapter 147, p. 320: “(...) *naceu o Yfante dom Pedro, na cidade de Lixboa, uha ora depois de meia noite, IX dias do mes de Dezembro de IIIC e XXXII annos (...)*” (*prince Pedro was born in the city of Lisboa, one hour after midnight, 9 days of Dezember, 1392*).

¹⁷¹ For a complete biography on prince Henrique, refer to Costa, João Paulo Oliveira e, *Henrique, o Infante*, Lisbon, Esfera dos Livros, 2009.

¹⁷² Zurara, Gomes Eanes de, *Crónica dos feitos notáveis que se passaram na conquista da Guiné por mandado do Infante D. Henrique*. 2 vols, Lisbon, Academia Portuguesa de História, 1978, pp. 46-47.

¹⁷³ Henrique's chart and its interpretation are presented in pp. 110-113.

¹⁷⁴ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, Lisbon, Academia Portuguesa de História, 1978, pp. 46, 47.

¹⁷⁵ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 146. For the predictions for Henrique's horoscope refer to Russel, Peter, *Henrique o Navegador*, Lisbon, Livros Horizonte, 2004, pp. 27-31.

¹⁷⁶ Carvalho, Joaquim de, “Cultura filosófica e científica – Período Medieval”, in *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, (pp. 220-305), p. 220: “*Desde os tempos de D. João I, como testemunha o Livro da Montaria, os conhecimentos astronómicos constituíram o objecto mais apreciado do saber natural*”.

Lisbon, in order to complete the teaching of all the chairs of the *Trivium* and of the *Quadrivium* (which included astrology), along with the studies on Theology¹⁷⁷. The course on Liberal Arts was instituted in 1431¹⁷⁸.

Princess Isabel (1397-1471), the only woman of the *Ínclita Geração*, had access to the same books and teachers as her brothers. She married Phillip the Good (1396-1467), Duke of Burgundy (it was her first marriage and his third), and became one of the most powerful women of the 15th century.¹⁷⁹ The astrologers from her court produced several dossiers containing the horoscopes of the main political figures of Burgundy and France¹⁸⁰. The courts of Burgundy and Portugal kept regular correspondence, and England also took part these exchanges, due to Isabel's English lineage. A good example of these interactions is the work of Roland l'Écrivain (*Rolandus Ulixponensis* or Roland of Lisbon): a physician, possibly of Portuguese descent, he first served the Duke of Bedford (Isabel's cousin) and later the Duke of Burgundy (Isabel's husband).¹⁸¹

King Afonso V (1432-1481) was only 6 years old when his father died of the plague, in September 1438. His uncle, prince Pedro, ruled the kingdom until from 1448¹⁸².

After the coronation (scheduled by Master Guedelha) and through Afonso's reign, Master Guedelha continued to perform his astrological and medical services. After his death (c. 1453), the position of court physician passed on to his son, Abraão Guedelha (d. 1471).

¹⁷⁷ Carvalho, Joaquim de, "A propósito da atribuição do Secreto de los Secretos". p. 158.

¹⁷⁸ Carvalho, Joaquim de, "A propósito da atribuição do Secreto de los Secretos". p. 145: "(...) a doação de 12 de Outubro de 1431, feita no início do novo ano escolar, sugere que o Infante [Henrique] instalou o ensino das artes em local próprio, não só para decoro do ensino mas também por haver completado o quadro docente das Artes".

¹⁷⁹ For more details about Isabel of Portugal, refer to Sommé, Monique, *Isabelle de Portugal, Duchesse de Bourgogne*, Paris, Presses Universitaires du Septentrion, 1998, pp. 479-483.

¹⁸⁰ Veenstra, Jan R., *Magic and divination at the courts of Burgundy and France: text and context of Lauren's Pignon Contre les divineurs* (1411), Leiden-New York-Koln, Brill, 1998, p. 119. This book also includes a notebook with horoscopes of major figures from Burgundian and French politics, namely John the Fearless (p. 123). There is a similar manuscript in the Portuguese national archives, Torre do Tombo, ANTT, *Manuscritos da Livraria*, Ms. 1711, *Almanaque ab anno 68 osque ad anno 80, Nativitates quorundam p.* This document presented in Appendix I.

¹⁸¹ Veenstra, Jan R., *Magic and divination at the courts of Burgundy and France*, p. 130.

¹⁸² For a biography refer to Gomes, Saul António, *D. Afonso V, o Africano*, Lisbon, Temas e Debates, 2009.

CHAPTER 5 – THE BOOKS ON ASTROLOGY IN THE ROYAL LIBRARIES

The dynasty of Avis brought a new impulse to the Portuguese cultural life, by increasing the exchange of ideas and the expansion of intellectual horizons¹⁸³. As a consequence of this new cultural input, the first royal library appeared in the reign of king João I, and expanded with his successors, kings Duarte and Afonso V¹⁸⁴.

In this section we shall concentrate on the *corpus* of astrological writings of the royal court. These books are either directly cited by the princes of Avis in their writings, or mentioned in the inventories of their libraries. One of the main sources of information comes from the *Livro dos Conselhos*, which contains a list of books from king Duarte's library.¹⁸⁵ Some were written much earlier, but they became a crucial part of medieval culture.

***Tetrabiblos*, Claudius Ptolemy**

The main source of astrological information in the medieval period is the book *Tetrabiblos*¹⁸⁶, written by Claudius Ptolemy.¹⁸⁷ He wrote two important treatises – *Almagesto* (also called *Al Majisti* or *Sintaxis Mathematica*) and *Tetrabiblos* (*Apothelesmatika*, *Quadripartitum* or *Liber quadripartitus*) – the first concerning astronomy and the second, astrology. In *Almagesto*, Ptolemy presents “*the aspects of the Sun, the Moon and the stars in relation to each other an to the Earth*” – that is, astronomy; in *Tetrabiblos* he studies “*the changes they provoke in all they encompass*”¹⁸⁸ – in other words, astrology, that is, the

¹⁸³ “Com a instauração da dinastia de Avis (...) a vida da nação renovou-se profundamente. (...) Se nos voltarmos para as livrarias encontraremos na sua nova feição o câmbio de ideias e o alargamento do horizonte intelectual. Foi no reinado de D. João I que se organizou a primeira livraria da Coroa, não meramente pessoal, que D. Duarte, D. Afonso e D. Manuel conservaram e aumentaram. (...)”. Carvalho, Joaquim de, “Sobre a erudição de Gomes Eanes de Zurara”, p. 218.

¹⁸⁴ Refer to Carvalho, Joaquim de, “Instituições da Cultura Medieval”, pp. 136-138, and to Nascimento, Aires, A., “As livrarias dos príncipes de Avis”, *Biblos*, Vol. LXIX, 1993 (pp. 265-287).

¹⁸⁵ *Livro dos Conselhos de D. Duarte (Livro da Cartuxa)*, pp. 206-208.

¹⁸⁶ Ptolemy, Claudius, *Tetrabiblos*. For the translations of *Tetrabiblos*, refer to the article Machado, Cristina de Amorim, “O *Tetrabiblos* na História: um percurso de traduções da obra astrológica de Ptolomeu”, 2nd Congresso Internacional de Tradução e Interpretação da ABRATES, 2007.

¹⁸⁷ Stuckrad, Kocku von, *História da Astrologia*, p. 122.

¹⁸⁸ Machado, Cristina Amorim, “O *Tetrabiblos* na História: um percurso de traduções da obra astrológica de Ptolomeu”, p. 9.

correlation between celestial cycles and terrestrial phenomena. Although establishing a clear distinction between these two fields of study, Ptolemy describes them as complementary parts of the study of the stars: astronomy quantifies it, by measuring the relative distance and velocity of the celestial bodies; astrology qualifies it, by conferring meaning to these configurations (following the rules of astrological interpretation). In general terms, Ptolemy addresses astronomy in *Almagesto*, leaving astrology to *Tetrabiblos*; but he doesn't draw a rigid separation between the two areas.

Tetrabiblos is, as the title shows, a compendium of four books. The first explains the basic principles of astrology, the second addresses mundane astrology, and the other two describe the practice of natal astrology.¹⁸⁹ The book connects astrology to Aristotelian natural philosophy, thus conferring unto it a scientific quality. To Ptolemy, “*astrology is a scientific study, because it operates according to the natural laws, and not a theology or mystic art*”¹⁹⁰ – a definition that establishes a clear differentiation between astrology and other practices. Based on this differentiation, he warns against false astrologers; he considers that the unworthy practitioners are detrimental to astrology: “*most [people], for the sake of gain, claim credence for another art in the name of this [astrology] and deceive the vulgar, because they are reputed to foretell many things, even those that cannot naturally be known beforehand (...)*”¹⁹¹. He is concerned with those who proclaim they can predict everything, and points out that though prediction is possible, not everything can be predicted. By establishing limits to prediction, Ptolemy distances astrology further away from the less reputed practices, and places it firmly into the realm of natural sciences. Then he draws a correspondence between astrology and another respected form of knowledge – philosophy – also plagued by bad practitioners. “*It is the same with philosophy – we need not abolish it because there are evident rascals among those that pretend to it*”¹⁹². In both cases, he claims that the bad practitioners should be blamed, not the practice itself. Ptolemy was probably aware of the criticism toward the predictive facet of astrology, and defends vigorously his astrological work.

¹⁸⁹ Stuckrad, Kocku von, *História da Astrologia*, p.123.

¹⁹⁰ Machado, Cristina Amorim, “O Tetrabiblos na História”, p. 10.

¹⁹¹ Ptolemy, Claudius, *Tetrabiblos*, pp. 13.

¹⁹² Ptolemy, Claudius, *Tetrabiblos*, pp. 13-15.

Ptolemy addresses almost all astrological rules known at his time and intends to be comprehensive, although he occasionally reveals some preference towards Babylonian techniques, in detriment of Egyptian traditions¹⁹³. Nonetheless, *Tetrabiblos* attained great recognition and became one of the most influential treatises of Late Antiquity. Because of it, astrology came forward as a more systematic form of knowledge¹⁹⁴.

Tetrabiblos is quoted by king João I in Livro de Montaria, and by Zurara.

El libro conplido en los iudizios de las estrellas, Ali ben Ragel

*El libro conplido en los iudicios de las estrellas*¹⁹⁵ (The complete book on the judgments of the stars), was written by Ali ben Ragel (‘Ali ibn Abir-Rijal or Abenragel Ali, 1016-1062), who lived in Tunis, at the court of the Zirid ruler al-Mu’izz ibn Badis.¹⁹⁶

The book addresses the general principles of astrology and its four main branches: individual horoscopes (both interpretation and prediction), mundane, horary and elections.¹⁹⁷ It was translated from the Arabic into Old Castilian in 1254 by a group of translators under the supervision of Yehuda Moshe, the physician of king Alfonso X of Castille.¹⁹⁸ This king offered a copy of this book, along with the astronomical tables (Alphonsine Tables), to his grandson, king Dinis of Portugal (1261-1325). The gift was part of a wider set of cultural

¹⁹³ Stuckrad, Kocku von, *História da Astrologia*, p. 124.

¹⁹⁴ Stuckrad, Kocku von, *História da Astrologia*, p. 124.

¹⁹⁵ Ragel, li Aben, *El Libro conplido en los iudicios de las estrellas*. The translation into Castilian was based on the manuscript 3065 of Biblioteca Nacional de Madrid, considered by the translator, Gerold Hilty, to be “undoubtedly from the 13th century” (Op. cit., p. LVII).

¹⁹⁶ Stuckrad, Kocku von, *História da Astrologia*, p. 193.

¹⁹⁷ Stuckrad, Kocku von, *História da Astrologia*, p. 193.

¹⁹⁸ Stuckrad, Kocku von, “Interreligious Transfers in the Middle Ages: The Case of Astrology”, p. 46. There are only four manuscripts in Castilian, being the most relevant the codex extant in Madrid National Library, Codex 3065 (referred by Hilty, Gerold, “A versão portuguesa do ‘Livro Cumprido’”, *Biblos*, Lisbon, Vol. LVIII, 1982, pp. 207-267), considered to be an original from the 13th century (Hilty. op. cit. p. 216). This codex only contains the first five parts of the total of eight. There are two other manuscripts, containing the 6th (Ms. 253 of Biblioteca de Santa Cruz de Valladolid) and the 8th (Ms. 115 of Archivo de la Catedral de Segovia) parts of this book (Hilty, Gerold, op. cit. pp. 217-219). A Portuguese copy of parts IV to VIII of this book, written in Hebrew characters and dating from the first half of the 15th century, can be found in the Bodleian Library (Codex Laud. or. 310). The colophon of book VII states: “Finished and ended – praise the creator of the world – by José son of Guedelha Franco, recitator of the synagogue, Thursday, four days of the month of Marchesvan, in the year of 5172 after the creation of the world” (October 22nd 1411); book eighth repeats the formula, with a different date: “Friday, two days from the beginning of the month of Elul in the year of (51)71” (which corresponds to August 21st 1411 of the common calendar) – op. cit. pp. 243, 244.

exchanges between the two kingdoms, which included the translation of books from Jewish, Christian and Muslim authors, and also the interchange of knowledge between the Iberian Peninsula and Central Europe.¹⁹⁹ The cultural development promoted by King Dinis, as a counterpart of his grandfather's project, would slow down after his death, to regain strength only in the dynasty of Avis.²⁰⁰

Contrarily to Ptolemy, Ali ben Ragel does not dwell in the dilemmas of determinism and free will – he simply presents the practical applications of astrology in all areas of life, leaving the philosophical concerns to the philosophers. He explores extensively the four main branches of astrology (nativities, mundane, horary and elections)²⁰¹, offering an overview of the astrological practices in the medieval period.

The first three parts of the book address the foundations of astrology and the horary practice, the fourth and the fifth parts explain the rules for interpreting nativities. The sixth and seventh parts (which are not translated into Castilian), concern prediction and elections, respectively. The eighth part, already translated, explains mundane astrology²⁰².

The horary section is in itself a valuable source of information about the role of astrology in medieval society. It encompasses questions about all the practical aspects of life, namely economy (commerce, money, agriculture) diplomacy (banquets, petitions, messages) personal relationships (marriage, sexuality, children and fidelity) and health (duration of a disease and possibilities of recovery). In Book 1, chapter 51²⁰³, for instance, the author explains as astrology can help to predict the outcome of a banquet. The art of entertaining and pleasing the guests was a crucial aspect of social life, as it allowed the founding of new alliances and the renewal of long-standing ties. The author explains the astrological rules to discover in advance the details of a given banquet, as well as its outcome²⁰⁴. According to ben Ragel, this technique allows the astrologer to predict, among other things, the quality of food

¹⁹⁹ Canas, António Costa e Ferrão, Maria Eugénia, *A matemática no tempo do Mestre José Vizinho*, Lisbon, Gradiva, 2009, pp. 15-24.

²⁰⁰ For Portuguese medieval culture and its institutions, refer to Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los Secretos de Astrologia ao Infante D. Henrique”, p. 141.

²⁰¹ This topic is explained in pp. 13-15.

²⁰² Ragel, Ali ben, *El Libro conplido en los iudicios de las estrellas*, Livro 8, Zaragoza, Gracento, 1988-1997.

²⁰³ Ragel, Ali Aben, *El Libro conplido en los iudicios de las estrellas*, p. 50: “*El L^o capitulo fabla en los conuidamientos para comer*”.

²⁰⁴ This branch of astrology, known as horary astrology or interrogations, is explained in p. 15.

and wine, as well as its quantity, the type of guests who will attend the meal, and most importantly, the possibilities of treason.

Book 2²⁰⁵ explores the topic of marriage. It addresses questions such as the wealth of the bride, her fidelity, her fertility and even her virginity. On the sensitive topic of sexuality²⁰⁶, the questions are very open, and sometimes even blunt: for instance, they may refer to sexual diseases, homosexuality, sodomy, bestiality, necrophilia, adultery and sex with pregnant women. The type of interrogations and the way they are addressed, suggest that astrology was mainly made *by* man and *to* male costumers. Nevertheless, there are also a few questions specifically addressing the woman's perspective.

Book 3²⁰⁷ focuses on the attainment of dignities and honors. The interrogations cover topics such as the possibility of obtaining from the king the rulership of given territory, how long will that dignity last and how much wealth it will bring.

All these examples demonstrate the pervasiveness of astrology in medieval life, and also offer a rich source for the study of medieval mentalities and every-day life.

This book was present in the libraries of kings João I, Duarte and Afonso V²⁰⁸.

***Tractatus de sphaera*, John of Hollywood (Johannes Sacrobosco)**

A concise and practical manual on astronomy/astrology, *Tractatus de Sphaera*²⁰⁹ (Treatise of the Sphere) was written in the 13th century to assist the study of *Quadrivium*. It also explains the main concepts of the astronomical system in a clear and concise

²⁰⁵ Ragel, Ali Aben, *El Libro conplido*, Book 2, part 2, chapters 14 to 31, pp. 74-83.

²⁰⁶ Ragel, Ali Aben, *El Libro conplido*, Book 2, part 2, chapter 24, p. 80.

²⁰⁷ Ragel, Ali Aben, *El Libro conplido*, Book 3, part 3, chapters 19 to 26, pp. 138-153.

²⁰⁸ Carvalho, Joaquim de, "Instituições de Cultura – Período Medieval", in *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, (pp. 128-219), pp. 137-138.

²⁰⁹ Thorndike, Lynn, *The Sphere of Sacrobosco and its commentators*, Chicago, The University of Chicago Press, 1949 (English translation: pp. 118-142).

language²¹⁰. Astrology was made accessible not only to academic students, but to anyone who could read – hence his popularity.

Sacrobosco, an English clergyman, was a teacher at the University of Paris in the 13th century. He wrote three books: *Algorismus*, *Computus* and *Tractatus de Sphaera*. They all disclose the fundamentals of the new teachings stemming from the Toledan School of Translators. He quotes Ptolemy among other authors and disseminates the Arabic numeration system.

The book describes the Earth as a sphere²¹¹ and tries to offer rational, non-religious explanations to natural phenomena. For instance, it refers to the eclipse that supposedly occurred during the Passion of Christ as *miraculous*, not because of any theological inference, but because it could not happen, according to natural laws (Jewish Passover always occurs during Full Moon, and solar eclipses only occur in the New Moon)²¹².

The book is referenced in *Livro de Montaria*²¹³, written by king João I in the 15th century, but it had possibly been circulating for some time before. With the impulse of maritime discoveries, it came to be the main book for the instruction of pilots and sailors – it was concise, direct, practical, and did not require complex neither an advanced mathematic thought nor a philosophical mind.

²¹⁰ “O conceito dominante de Astrologia fora o da Ciência da Esfera, como a havia definido Afonso o Sábio e discriminado Sacrobosco” (The dominant concept of astrology was the one of the Science of the Sphere, as it had been defined by Afonso the Wise and specified by Sacrobosco) Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los Secretos”, pp. 177-178.

²¹¹ Thorndike, Lynn, *The Sphere of Sacrobosco and its commentators*, p. 121. Sacrobosco understands that the Earth *seems to be flat*, but in reality is round, and presents a complete array of reasons to explain that apparent discrepancy.

²¹² According to the Jewish tradition, the holiday of Pessach (the Jewish Passover) is celebrated in the first Full Moon of the month Nisan (end of March/beginning of April). As the solar eclipses can only occur during the New Moon, it is impossible to witness a solar eclipse during Pessach (the only eclipse possible would be a lunar eclipse). In the words of Sacrobosco: “Eclipse during the Passion: Miraculous - From the aforesaid it is also evident that, when the sun was eclipsed during the Passion and the same Passion occurred at full moon, that eclipse was not natural – nay, it was miraculous and contrary to nature, since a solar eclipse ought to occur at new moon or thereabouts. On which account Dionysius the Areopagite is reported to have said during the same Passion, “Either the God of nature suffers, or the mechanism of the universe is dissolved.” Thorndike, Lynn, *The Sphere of Sacrobosco and its commentators*, p. 142.

²¹³ João I, *Livro de Montaria*, in *Obras dos Príncipes de Avis*, Porto, Lello & Irmão – Editores, 1981, Livro de Montaria: (1-232), pp. 73-77. This book will be addressed in pp. 61-68.

Livro de Magika, Juan Gil

In chapter 18 of *Livro da Montaria* (The Book of Boar Hunting), king João I mentions a book written by the great astrologer Juan Gil²¹⁴. Some historians argue that this book is *Livro de Magika* (Book of Magic), a compilation of astrology extensively inspired on *Tetrabiblos*²¹⁵. There is a copy in Biblioteca Columbina, Sevilha,²¹⁶ under the designation of *Lybro de Magyka - La parte terceira del libro de Iuan Gil que fabla en los nascimientos*. The manuscript is here binded in a miscellanea²¹⁷, together with *De Sphera* by Johannes Sacrobosco and *Almanach Perpetuum*, by Abraham Zacuto.

This book was present in the libraries of kings João I, Duarte and Afonso V²¹⁸.

Segredo dos segredos, Pseudo-Aristotle

Segredo dos Segredos, also referred to as *Secretum* or *Secreta secretorum* (the Secret of Secrets)²¹⁹, is the translation of the Arabic *Kitab sirr al-asrar* (Book of the science of government, on the good ordering of statecraft). The Latin translation takes the form of a

²¹⁴ João I, *Livro de Montaria*, p. 73.

²¹⁵ Silva, Luciano Pereira da, “O Astrólogo João Gil e o ‘Livro da Montaria’”, *Lvsitania Revista de Estvds Portugveses*, Vol. II (1924), Coimbra. The identity of the author, Juan Gil, has not been established yet. Luciano Pereira da Silva (in op. cit. p. 7) considers that the author of *O Livro de Magika* (The Book of Magik, Bodleian Ms. Laud or. 282) could be an Aragonese court official, Juan Gil de Castiello, but a note at the end of the manuscript states that it was composed by *goan gil de burgos* (*Juan Gil from Burgos*).

²¹⁶ The copy in Biblioteca Columbina (ref. 5-2-32) is described as *Tratado de la esphera / copilado por maestre Iohan de Sacrobosco del maestro Tolomeo e de los libros de Alfragano e Tebich* — S. XVI.

²¹⁷ The compilation includes three books: 1. *De Sphera* by Johannes Sacrobosco (*Aqui comiença el Tratado de la esphera copilado por maestre Iohan de Sacrobosco del maestro Tolomeo e de los libros de Alfragano e Tebich*). 2. *Almanach perpetuum* by Abraão Zacuto (*Tabule tabularum celestium motuum astronomi Zacuti nec non stellarum fixarum longitudinem ac latitudinem ad motus veritatem mira diligentia reducte ac in principio canones ordinatisime incipiunt felice sidere / trasladadas de abrayco en latin e de latin en romance por maestre Iusepe*). 3. *Lybro de Magyka* by Juan Gil (*La parte terceira del libro de Iuan Gil que fabla en los nascimientos*). MS 5-2-32 of Biblioteca Columbina, Seville.

²¹⁸ Carvalho, Joaquim de, “Instituições de Cultura – Período Medieval”, in *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, pp. 128-219, pp. 137-138.

²¹⁹ Pseudo-Aristotle, *Segredo dos Segredos*, Lisbon, Faculdade de Letras da Universidade de Lisboa, 1960. The Portuguese version of this book (mistakenly attributed by some to Prince Henrique the Navigator), is the *long* or *oriental* version of the text, corresponding to the complete Latin version from the 13th century. For an English edition, as well as eight other versions of the *Kitab sirr al-asrar*, refer to M. A. Manzalaoui, *Secretum secretorum: nine English versions*, Vol. 1, Oxford, Oxford University Press (1977).

letter, supposedly written by the philosopher Aristotle to Alexander the Great, during his campaign in Persia.

The book was a part of king Duarte's library, and it was possibly also in the library of prince Henrique²²⁰. It is also mentioned by the chronicler Gomes Eanes de Zurara in *Crónica da Guiné*.²²¹

Segredo has four parts, the first being an instruction for princes, the second (where most of the astrological references are included) a set of rules to keep or to recover health, the third, a small compendium about the art of governing in times of war, and the fourth, a treatise on Physiognomy²²².

Although not a book about astrology, *Segredo dos Segredos*, presents it as an indispensable asset for a king, due to its precautionary value: “muito pois ual saber os tempos por vijr por que melhor podem os homens desujar os males quando as cousas por vijr conhocem”²²³ (much, therefore, is worth to know the times to come, for much better can men avoid the evils, when the things to come they [already] know). In short, if the king can predict the adversities, he can also take the appropriate precautions and prepare the remedies to avoid, or at least diminish, the problems.

The book also presents some specific guidelines for the application of mundane astrology to a situation of war. For instance, he says: “*Quando pois quiseres consegujr firmeza do proposito da disposicam das cousas celestiaees constitue o ascendente ou nascente Em liam e ordena a lua e o seu asenhorador E que seja em boo lugar do ascendente*”²²⁴ (for when you want to achieve steadfastness an purpose from the celestial things, place the ascendant, or rising point, in Leo and arrange the Moon and its lord [ruling planet] and make it be in a good place from the ascendant).

²²⁰ This matter is discussed in the introduction of Pseudo-Aristotle, *Segredo dos Segredos*, pp. XIII-XV.

²²¹ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta*, p. 118.

²²² The book is analyzed by Joaquim de Carvalho, who states that the Latin version (translated by Toledan translator João Hispalense from an Arabic original by al-Batrik) may have been dedicated to queen Teresa (Tarasia, d. 1130), daughter of Afonso VI of Castile, wife of count Henrique of Burgundy and mother of Afonso Henriques, the first Portuguese king. Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los Secretos de Astrologia ao Infante D. Henrique”, p. 140, footnote 6. This hipotesys is also presented in Sidarus, Adel, “Arabismo e Traduções Árabes em meios Luso-moçárabes”, in *LusoSophia*, Covilhã, Universidade da Beira Interior, 2009, pp. 1-21, pp. 9-11., and by Mattoso, José, *Naquele Tempo, Ensaio de História Medieval*, Lisboa, Círculo de Leitores, 2009, p. 241.

²²³ Pseudo-Aristotle, *Segredo dos Segredo*, pp. 24-25.

²²⁴ Pseudo-Aristotle, *Segredo dos Segredos*, pp. 80-8.

Several works by Abraham Zacuto

Rabbi Abraham ben Samuel Zacuto (1452-c.1520) wrote an almanac and one book on astrology (combining nativities and eclipses)²²⁵. His work suggests that astrological practice remained essentially the same throughout the medieval period and beyond.

Born in Salamanca, in 1452²²⁶, Zacuto taught astronomy at the universities of Salamanca, Zaragoza and Cartagena. As the Spanish laws against the Jews became increasingly harsh, he took refuge in Lisbon, Portugal, where he was well received. King João II (1455-1495) nominated him *Royal Astronomer and Historian*, a position he held during João's reign and for some time during king Manuel's reign. Zacuto's role in the maritime discoveries is reported in the chronicle by Gaspar Correia in *Lendas da Índia*.²²⁷ The impending threats of forced conversion led him to flee from Portugal. He died in 1515 in Jerusalem, or, according to some reports, in 1520 in Damascus.

²²⁵ For the books written by Zacuto and for his biographical data refer to Carvalho, Joaquim de, "Dois inéditos de Abraham Zacuto", in *Revista de Estudos Hebraicos*, Vol. 1, Lisbon, 1928 (pp. 95-183).

²²⁶ Birth data presented in Chabrás, José, Goldstein, Bernard R. *Abraham Zacuto: Supplemental Note for a Biography*, Darby, Diane Publishing, 2000, pp. 6-11.

²²⁷ Correia, Gaspar, *Lendas da Índia*, Porto, Lello e Irmão, 1975, vol. I, p. 10: "(...) era inclinado às cousas de astronomia, mandou chamar a Beja hum Judeu seu muito conhecido, que era grande estrolico, chamado Çacoto, com o qual falou em seu segredo muito lh'encarregando que trabalhasse de saber, se lhe aconselhava que entendesse no descobrimento da Índia (...)" ([the king] was inclined to the things of astronomy, he called from Beja a Jew he knew, who was a great astrologer, called Çacoto [Zacuto], to whom he revealed his secret, asking him to find out if it was advisable the discovery of [the maritime way to] India); also in op. cit. vol I, p. 23: "Vasco da Gama antes de sair de Lisboa, no mosteiro, falando com o Judeu Çacuto a sós, lhe deu muita informação do que fizessem na viagem (...)" (Vasco da Gama [the king's chief navigator], before leaving Lisbon, at the monastery, talking to the Jew Çacoto alone, [he] gave him much information of what should be done during the journey); and op. cit. vol. I, p. 261: "Elrey era muito inclinado à Estrolomia, polo que muytas vezes praticava com o Judeo Çacuto, porque em todo achava muy certo (...)" (The king was much inclined to astrology, so he practiced many times with the Jew Çacoto, for in all things he found him very accurate). These passages suggest the practice of horary astrology (when the king asks Zacuto to "find out if it was advisable" the journey to India), and possibly also the practice of elective astrology (to determine the best moment to launch the ships). The insistent mentions to Zacuto's religious affiliation reveal the increasing religious tension in king Manuel's reign (which would culminate in the massacres of 1506), but which did not impede the exchanges of astrological information. For the place of astrology in the exchanges between religions, refer to Stuckrad, Kocku von, "Interreligious Transfers in the Middle Ages: The case of Astrology", pp. 34-59.

1. *Almanach perpetuum celestium motuum*

The *Almanach perpetuum celestium motuum* (Perpetual almanach of the celestial movement)²²⁸, also called *Tabule tabularum celestium motuum astronomi Zacuti nec non stellarum fixarum longitudinem ac latitudinem ad motus veritatem mira diligentia reducte ac in principio canones ordinatisime incipiunt felice sidere*, was written between the years of 1473 and 1478. It was translated from the Hebrew language into Latin by Zacuto's disciple, José Vizinho, and printed in 1496, in Leiria²²⁹.

2. *Tratado breve en las ynfluencias del cielo*

The book *Tratado breve en las ynfluencias del cielo*²³⁰ (Concise treatise on the celestial influences) was ordered by Dom Juan de Zuniga Pimentel²³¹ in 1486. It was written “*para con este mas se ayudasen los medicos de su señoria sy fueren astrologos*”²³² (to with it better assist the physicians of his lordship, if they are astrologers).

It is organized in five parts: preface; signs, planets and stars; rules for the physicians; changes in the weather, lunar mansions, nativities and “revolutions of the year”; appendix on eclipses (addressed separately). In the preface of his work Zacuto quotes Ptolemy, Aristotle, Hippocrates and the Old Testament. He considers astrology a natural complement of medicine, and attributes it a prophylactic function. Health is achieved through the application of preventive actions before the problem has appeared. He considers that “*la anima sabia puede ayudar a la ynfluencia del cielo como se ayuda el sembrador com la... de la tierra*”²³³ (the wise soul can help the influence of the heavens, the same way one can help a farmer with the [illegible word]²³⁴ of the land). For Zacuto, astral determinism is relative; the beforehand

²²⁸ The source for this work was the version included in the article Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, (pp. 95-183). The copy from Biblioteca Colombina, in Sevilha, presents the designation: *Tabule tabularum celestium motuum astronomi Zacuti nec non stellarum fixarum longitudinem ac latitudinem ad motus veritatem mira diligentia reducte ac in principio canones ordinatisime incipiunt felice sidere / trasladadas de abrayco en latin e de latin en romance por maestre Iusepe.*

²²⁹ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 96, footnote 3.

²³⁰ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, *Tratado Breve* is in pp. 109-177.

²³¹ Juan de Zuniga Pimentel (d. 1504) was the son of the dukes of Areválo and the last Grand Master of the Order of Alcántara.

²³² Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 111.

²³³ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 110.

²³⁴ From the context of the sentence, it is possibly “seed”, “plantation” or some term of similar meaning.

knowledge of events enables the astrologer to ameliorate, or even prevent, the undesirable events (namely infirmities).

3. *De los eclipses del Sol y la Luna*

*De los eclipses del Sol y la Luna*²³⁵ (Of the eclipses of the Sun and the Moon) is a compilation of teachings from several authors²³⁶. It is an appendix of *Tratado breve* but, as it addresses a different branch of astrology, it will be treated separately. It interprets the solar and lunar eclipses in each of the twelve signs, the interaction between the eclipses and the planets and the affect of eclipses in individual horoscopes. It is an incursion into mundane astrology, which deals with the collective effects of the eclipses, and an attempt to connect mundane and individual astrology.

Other books of astrological relevance:

A complete study of all the books containing astrological references would be out of the scope of this work. Among the authors who were a reference for the astrological practice we can count the names of Abraham ben Ezra (*The Beginning of Wisdom*)²³⁷; Gossouin de Metz (*Image du Monde*)²³⁸; Bartholamaeus Anglicus (*De proprietatibus rerum*)²³⁹.

²³⁵ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, *De los eclipses*, is in pp. 177-183.

²³⁶ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 178.

²³⁷ Ezra, Abraham ben, *The beginning of wisdom*, Mansfield, Ascella Publications, 1939.

²³⁸ Gossouin de Metz, *Imagem do Mundo* (The image of the World), Margarida Santos Alpalhão (apres., ed. e trad.), Lisbon, Instituto de Estudos Medievais, 2011

²³⁹ *De Proprietatibus Rerum* (On the Order of Things) is an encyclopedia dating from the 13th century. It addresses theology and astrology, as well as the natural sciences (as understood in 1240). Long, R. James. *On the Properties of Soul and Body: De Proprietatibus Rerum Libri III et IV*. Toronto: Pontifical Institute of Medieval Studies, 1979.

CHAPTER 6 – ASTROLOGY IN THE PERSONAL WRITINGS OF THE HOUSE OF AVIS

In this section we discuss the applications of astrology presented in two different types of sources: books written by the princes of Avis for the learned public and collections of heir private notes²⁴⁰. Although written with different purposes (and, concerning astrology, not necessarily agreeing on the same topics), they all show the pedagogic intent to educate and build the king's character, "by defining a set of functions and duties pertaining to the art of ruling"²⁴¹. Although it cannot be considered a systematic philosophy, the pedagogical literature produced in the court of Avis expresses the main philosophical views of that period, and represents a major impulse for the Portuguese culture.²⁴²

Livro da Montaria

*Livro da Montaria*²⁴³ (Book of Boar Hunting), is a small compendium about the hunt of the wild boar, written by king João I, with the assistance of hunting experts and writers. The book addresses the main aspects of this activity: hunt strategies, the best suited weapons, the art of following the boar's trails, and the appropriate management of scouts, dogs and horses.

Astrology, mentioned in Book 1, Chapter 18²⁴⁴, seems somewhat unexpected in this context. The chapter explains how the trail of the wild boar can reveal the animal's location, and how the *monteiros* (hunt-scouts) can get to wrong conclusions if they do not understand the signs correctly. It points out that there are several factors to be taken in account, namely the humidity or dryness of the trail. At first glance, the interpretation of the trail is simple and straightforward: if it is moist, it means it is recent, and so it can be inferred that the boar is

²⁴⁰ Compiled in the book *Obras dos Príncipes de Avis*, Porto, Lello & Irmão – Editores, 1981.

²⁴¹ Buescu, Ana Isabel, "A Confessio Amantis de John Gower na livraria do rei D. Duarte", p. 1.

²⁴² Gama, José "A geração de Avis", pp. 379-411.

²⁴³ João I, "Livro da Montaria", in *Obras dos Príncipes de Avis*, (pp. 1-232).

²⁴⁴ João I, "Livro da Montaria", Book 1, Chapter 18, pp. 69-79: "*Capitulo xvij, das cousas que aos tempos fazem, que nom possam os monteiros conhecer de que horas he o rasto que querem aprazar.*" (On the things that sometimes hinder the scouts to know from what time is the trail they want to evaluate).

still close by; if, on the contrary, the trail is dry, it means it is old, and so it can be concluded the boar is long gone²⁴⁵.

Then, somewhat unexpectedly, the king mentions a book on astronomy written by Juan Gil, to whom he refers in admiring terms²⁴⁶. He dedicates several pages to this matter, addressing different topics: philosophical principles, the geocentric model, astrology and the winds, and clarification of misconceptions. The whole set clearly reveals that king João had quite a deep knowledge of astrology (at least in its meteorological applications), being able to discuss several theories and authors.

1. Philosophical principles

- The nature of creation

King João starts to acknowledge the distinction between the nature of God (*natura naturans*) and the nature of God's creation (*natura naturada*)²⁴⁷. Then he mentions the primordial matter, which he calls *ille*; he says that this matter originated the four elements “*e tambem ceos, como as pranas, e signos, e estrelas (...) feitas destes elementos*”²⁴⁸ (and also heavens, like the planets, and signs, and stars (...) made from these elements).

He conceives Nature as a part, or a manifestation, of God's will, existing not in a plane of autonomy, but of contingency: it has no volition, being therefore totally subdue to the will of God and to the natural laws (the plan of secondary causes, of which astrology is a direct expression)²⁴⁹.

²⁴⁵ João I, “Livro da Montaria”, pp. 69-70.

²⁴⁶ João I, “Livro da Montaria”, p. 74: “*Joham Gil o grande estrologo no seu grande liuro disse...*” (*Juan Gil the great astrologer in his great book said...*).

²⁴⁷ João I, “Livro da Montaria”, p. 73. This is the first reference in Portuguese literature to the distinction between *natura naturans* (God) and *natura naturada* (the Creation, Nature). Gama, José “A geração de Avis” in Calafate, Pedro, *História do Pensamento Filosófico Português*, Lisbon, Caminho, 1999 (p. 379-411), p. 419.

²⁴⁸ João I, “Livro da Montaria”, p. 73. This is reference to hylomorphism, the Aristotelian theory according to which “all things perceived by the senses are constituted by simple matter (prime matter) and by the respective qualities (form)”. For this theory, refer to Stuckrad, Kocku von, *História da Astrologia*, p. 177.

²⁴⁹ For a comprehensive analysis of the philosophical principles implied on this work (and, in general terms, in all the works of the House of Avis”, refer to Gama, José “A geração de Avis”. pp. 379-411.

- The nature of the winds

The king discusses the winds and its qualities. He briefly ponders on the several theories about the origin of the winds, and then focuses on the practical aspects of the subject²⁵⁰, for these are relevant for the explanation that will follow.

2. The geocentric model of the universe and its astrological correlations

King João starts by mentioning the colours associated with the planets (red is related to Mars; white to Mercury and the Moon, golden yellow to the Sun, Jupiter and Venus and black is related to Saturn)²⁵¹. This topic seems to be unconnected to the rest of the chapter, for he never mentions it again.

Then he enumerates the qualities of each planet (cold to Saturn, dry to Mars, hot to the Sun, hot and moist to Venus, cold and dry to Mercury, cold and moist do the Moon)²⁵² and moves on to another topic – the motion of the seven planets²⁵³ concisely describing the geocentric (aristotelian–ptolemaic) model of the Universe²⁵⁴. Instead of enumerating all the planetary cycles, he mentions only three: the Moon, which is closest to Earth, the Sun, in the middle of the spheres, and Saturn, placed in the furthest sphere. He seems to expect the reader to know, or at least to deduce, the cycles of the planets in the intermediary spheres. As the planetary cycles are different, the planets are never all conjunct (that is, together on the same point of the Zodiac); according to king João, the conjunction of all planets happened only once, “*des o primeiro tempo que começou o mundo*”²⁵⁵ (since the first time [when] the World began).

Having offered sufficient explanation about the planets and their cycles, king João focuses his attention “*no ceeu octauo*” (the eighth heaven, that is, the sphere of the Zodiac), which is divided into twelve signs²⁵⁶. He correlates the four cardinal points and their

²⁵⁰ João I, “Livro da Montaria”, p. 75.

²⁵¹ João I, “Livro da Montaria”, p. 74.

²⁵² João I, “Livro da Montaria”, p. 74.

²⁵³ In ancient astronomy/astrology, the Sun and the Moon were often called planets, or planet-stars, in the etymological sense of the word *planet* (*errant* star, as opposed to *fixed* star). To differentiate the Sun and the Moon from the other planets, these were called *luminaries* (for they emitted light).

²⁵⁴ João I, “Livro da Montaria”, pp. 73-74, and 75-76.

²⁵⁵ João I, “Livro da Montaria”, p. 76.

²⁵⁶ João I, “Livro da Montaria”, p. 74.

respective qualities to the signs, according to their elements: hot and oriental to Aries, Leo and Sagittarius; cold and occidental to Gemini, Libra and Aquarius; dry [and presumably meridional, although he doesn't mention it] to Taurus, Virgo and Capricorn; moist and septentrional to Cancer, Scorpio and Pisces.²⁵⁷ It is interesting to see that Ptolemy, who is cited in this chapter²⁵⁸, offers a different set of correlations: he relates the qualities not to the signs, but to the cardinal points: the East to dryness; the West to moist; the South to heat; the North to cold²⁵⁹. In fact, the difference is more formal than real, because ultimately the signs are also related to the cardinal points, through the elements. King João (quoting Gil's book) states that heat is related to the Oriental signs: *a Aries deu que era quente, e o meesmo a sagitario e a leo, ca estes tres deu que eram orientaes* (to Aries it was bestowed [the ability] to be hot, and the same to Sagittarius and to Leo, for these three were oriental); cold is associated to the Occidental signs: *geminis frio, e libra e aquario, e que eram occidentaes* (Gemini cold, and Libra and Aquarius, and they were occidental); dry is correlated to the Southern (or Meridional) signs: *tauro, e a uirgo, e a capricornio secos* (to Taurus, and to Virgo, and to Capricorn, dry); moist is the quality of the Northern (Septentrional) signs: *cancer, escorpio e a pisces humedos, que eram setemprionaes* (Cancer, Scorpio and Pisces, moist, and that they were septentrional).²⁶⁰

Ptolemy associates the East (related to the signs Aries, Leo and Sagittarius) to dryness: winds “*without moisture and drying in effect*”²⁶¹, the West (Gemini, Libra Aquarius) to moist: “*fresh and moist*”²⁶² winds; the South (Taurus, Virgo, Capricorn) to heat: “*hot and rarefying*”²⁶³ winds; and the North (Cancer, Scorpio, Pisces) to cold: winds of “*cold and condensing effect*”²⁶⁴.

²⁵⁷ João I, “Livro da Montaria”, p. 74.

²⁵⁸ João I, “Livro da Montaria”, p. 74: “*disse Joham Gil, e Albnamazar no seu liuro das deferenças e dos juizos, e Tolomeu [Ptolemy] no seu almagesto (...) e Ali abem ragel no seu liuro dos juizos, e o autor da spherã*”.

²⁵⁹ Ptolemy, Claudius, *Tetrabiblos*, p. 61.

²⁶⁰ João I, “Livro da Montaria”, p. 76.

²⁶¹ Ptolemy, Claudius, *Tetrabiblos*, p. 61.

²⁶² Ptolemy, Claudius, *Tetrabiblos*, pp. 61-63.

²⁶³ Ptolemy, Claudius, *Tetrabiblos*, p. 63.

²⁶⁴ Ptolemy, Claudius, *Tetrabiblos*, p. 63.

Comparing the two sources:

Table 6: Qualities of the signs and cardinal points according to King João I and Ptolemy		
	Livro de Montaria King João I (15 th century)	Tetrabiblos Ptolemy (2 nd century)
Aries, Leo, Sagittarius Eastern or Oriental	Hot	Dry
Gemini, Libra, Aquarius Western or Occidental	Cold	Moist
Taurus, Virgo, Capricorn Southern or Meridional	Dry	Hot
Cancer, Scorpio, Pisces Northern or Septentrional	Moist	Cold

It seems that Juan Gil (who is the king's source for astrological information) was not following *Tetrabiblos* to the letter. Ordering the sources in chronological order, it becomes clear that the concept increased in complexity.²⁶⁵

Table 7: Qualities of the signs and cardinal points through time				
	Tetrabiblos Ptolemy (2 nd century)	Livro Conplido Ali ben Ragel (11 th century)	Livro Montaria King João I (15 th century)	Tratado Breve Abraham Zacuto (16 th century)
Aries, Leo, Sagittarius Eastern or Oriental	Dry	Fire	Hot	Hot and dry as fire
Gemini, Libra, Aquarius Western or Occidental	Moist	Air	Cold	Hot and moist as air
Taurus, Virgo, Capricorn Southern or Meridional	Hot	Earth	Dry	Cold and dry as earth
Cancer, Scorpio, Pisces Northern or Septentrional	Cold	Water	Moist	Cold and moist as water

Ptolemy and King João relate each sign to one single quality (and notably, they choose different qualities), while Ragel connects each sign to one of the four elements. Zacuto synthesizes these concepts, attributing to each sign a pair of qualities *and* the corresponding element. He attributes not only one but two qualities to each element: Fire is

²⁶⁵ For the complexification of astrology, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 180-198 and pp. 205-213.

hot and dry; Air, hot and moist; Earth, cold and dry and Water, cold and moist. He diverges from Ptolemy in the quality attributed to the South/Earth (considered to be hot instead of cold) and from king João in the element Air (cold instead of hot).

The interaction between signs and planets, according to the theory of the elements, is relevant to the proper understanding of the meteorological conditions. The king explains that if a planet, moving along its natural path, enters a sign of similar qualities (for instance, a hot planet entering a hot sign) its power increases; but if it moves into a sign of opposite qualities (i.e. a cold sign), its power decreases²⁶⁶. Referring again to Gil's book, king João offers examples of planetary positions favorable to dryness²⁶⁷.

All this extensive explanation leads the reader to the king's main purpose: determining of the wind's qualities by astrological means.

3. Correlating the astrological principles and the quality of the winds

Finally, the king returns to his initial topic – boar hunting²⁶⁸. He explains that the trails left by the boar can be altered by the different winds, as some bring moist and others, dryness²⁶⁹. Excessive dryness in the wind (caused, for instance, by the placement of the Sun, which is hot and dry, in a dry sign) can make the trail dry out rapidly, therefore making it look older than it really is. In these cases, the hunt-scout would mistakenly conclude that the boar would be further away than it really was. On the other hand, the presence of moist planets (like for instance Venus²⁷⁰) in a moist sign adds moist to the wind, allowing the trail to keep its humidity and, consequently, to look more recent than it really is. This would also lead the scout to a wrong conclusion, as they would consider the boar to be closer than he really was. The king considers this apparent contradiction “*muy maa de conhecer*”²⁷¹ (very

²⁶⁶ João I, “Livro da Montaria”, p. 76.

²⁶⁷ João I, “Livro da Montaria”, pp. 76-77: Sun and Moon conjunct (that is, the New Moon) at 9° Capricorn; Saturn at 4° Sagittarius; Jupiter at 6° Aquarius and forming a sextile to Saturn; Mars and Mercury at 17° Capricorn. Quoting Gil's book the king states that under these conditions “*que fara grande vento dabrego, e que non chouera com elle, e se chover que sera pouco*” (it will come a strong south wind and it will not bring rain, and if it does, it will be scarce). It is unclear if he means that all these conditions must occur simultaneously, or if one is enough to induce the dry weather.

²⁶⁸ João I, “Livro da Montaria”, p. 77.

²⁶⁹ João I, “Livro da Montaria”, p. 77.

²⁷⁰ Refer to p. 22, Table 1: The planets and the luminaries, Venus is “cold and moist”.

²⁷¹ João I, “Livro da Montaria”, p. 77.

difficult to understand) but nonetheless indispensable to determine the precise distance covered by the boar.

At this point, the reason why astrology was mentioned is finally revealed: king João considers the knowledge of the astrological configurations and their meteorological consequences (the winds), as crucial factors to the art of following trails.²⁷² He offers this information because – as he declares – he feels “*grande piadade daquelles que nom teem quem nos ensine*”²⁷³ (great sympathy of those who don’t have anyone to teach them). He intends to provide the hunters with the means to interpret the different planetary positions (regarding their meteorological consequences). The correct assessment of the qualities of the dominant winds (dry, moist, hot or cold), will allow them to understand the trails correctly and by doing so, they will be able to determine the exact distance covered by the boars.

4. Clarifying misconceptions

Again quoting Gil’s book, the king explains that the signs derive their names from some animals “*nom por elles teerem as proprias figures dellas, mais por auerem estas animalias as calidades que am que assemelhrom os signos*” (not because they [the respective constellations] look like them, but because these animals have the qualities which are more similar to the signs)²⁷⁴. With this remark, the king seems to be addressing the common belief that the signs’ names were inspired by the shape of the respective zodiacal constellations²⁷⁵. According to this widespread concept, the constellation of Aries (the ram) should resemble the shape of a ram, Taurus (the bull) like a bull, Gemini (the twin brothers) like two twin children, and so on.²⁷⁶ King João was perhaps anticipating – and refuting in advance – this criticism. He explains that the signs were named after those animals because these are the ones who better display the signs’ qualities, not because they bear a physical resemblance to the respective constellation. This misconception was probably common in the 15th century,

²⁷² King João seems to be echoing the words of Ptolemy, who states that this knowledge can “*enable one to form a complete judgement of the temperatures in individual instances*” (*Tetrabiblos*, page 63).

²⁷³ João I, “*Livro da Montaria*”, p. 79.

²⁷⁴ João I, “*Livro da Montaria*”, p. 74.

²⁷⁵ This misconception still remains to the present day and it is still evoked by some critics of astrology, namely some astronomers, as a “proof” of its irrelevance. It is interesting to see that the astrologers have been trying to clarify this confusion for centuries, with little results.

²⁷⁶ This brings us to another misconception: the confusion between signs and constellations, a topic that is out of the reach of this work.

because by then astrology had become quite popular (in the literal sense of the word), and not all of its practitioners were equally learned and experienced²⁷⁷.

For king João the distinction between constellations and signs is quite clear, while for other authors, like Johannes Sacrobosco, writing two centuries earlier, it is not that obvious. Sacrobosco starts by describing the Zodiac in the same terms as the king: “*That circle is called zodiac from zoe, meaning life, because all life in inferior things depends on the movement of the planets beneath it.*”²⁷⁸. But then he adds an alternative explanation: “*Or it [the name zodiac] is derived from zodiac, which means animal, because, since it is divided into twelve equal parts, each part is called a sign and has its particular name from the name of some animal, because of some property characteristic of it and of the animal, or because of the arrangement of the fixed stars there in the outline of that kind of animal.*”²⁷⁹ Sacrobosco hesitates between the two explanations, while king João seems to be not only certain of the “right” explanation, but also very aware of the confusion surrounding this topic.

***Livro dos Conselhos* (“*Livro da Cartuxa*”)**

*Livro dos Conselhos de D. Duarte*²⁸⁰ – the Book of King Duarte’s Counsels – a collection of personal notes, offers a vivid image of the interests and concerns of king Duarte. Some of the themes outlined in this book are resumed and developed in the king’s other book, *Leal Conselheiro*, which will be addressed later.

The king’s interests are fairly eclectic²⁸¹, varying from philosophical dissertations about virtue and sin²⁸², prayers²⁸³ or even an exorcism²⁸⁴, to more practical concerns, as the

²⁷⁷ The demand for treatises on astrology had been steadily growing since the 12th century. Stuckrad, Kocku von, *História da Astrologia*, p. 205.

²⁷⁸ Thorndike, Lynn, *The Sphere of Sacrobosco*, p. 124.

²⁷⁹ Thorndike, Lynn, *The Sphere of Sacrobosco*, p. 124.

²⁸⁰ Duarte, *Livro dos Conselhos*, Lisbon, Imprensa Nacional – Casa da Moeda, 1996.

²⁸¹ His multiple interests are also revealed by his personal library (which is reproduced in page 206 of *Livro dos Conselhos*): *Viatico*, *Miracula Sanctorum*, Aristotle’s *Dialectic*, the Portuguese and Spanish chronicles, *Confessio Amantis*, *Livro de Montaria*, *O Segredo dos Segredos*, the songs written by King Dinis (1261-1325), *Livro da Lepra*, a collection of the Portuguese cities and villages, *History of Troy*; as to the authors, they are, among others, Marco Polo, Avicenna, Seneca, Saint Augustine, Julius Cesar. This eclectic list also includes two unspecified books of astrology (“*one covered in white leather, the other in black*”) and of course, the *Bible*.

²⁸² Duarte, *Livro dos Conselhos*, p. 145, 233

²⁸³ Duarte, *Livro dos Conselhos*, pp. 220, 242 and 246.

recipe to cure teeth ache²⁸⁵, a practical technique to read books and retain their teachings²⁸⁶, the best way to translate from Latin into common language,²⁸⁷ and the best way to store fish²⁸⁸. José Mattoso states “one could almost restructure our views about the [medieval] period using this book as the only source”²⁸⁹. The book also includes astronomical and astrological references, grouped four main topics: birth data, meteorology, poetical references and astrology as an argument in a family discussion.

1. Data for astrological calculation

The birth dates and times of Duarte’s sons and daughters are carefully annotated²⁹⁰. He mentions the day, the time and the place of birth – the three references that make possible to calculate an astrological chart²⁹¹. He presents the data of all his children except of princess Joana, who was born six months after his death²⁹². Of his heir, Afonso V, he says “*Naçeu o Jfante dom afonso em syntra xb dias de Janeiro terça feyra tres oras e .3º ante meio dia era de 1432*” (Prince Afonso was born in Sintra 15 days of January, Tuesday, three hours and a third before mid-day, era of 1432). He also mentions his daughter Leonor, who later married emperor Frederick III: “*Naceu a Jfante dona Lyanor em torres uedras xbij dias de setembro, terça feira amanheçente tres oras depois de meia noite*” (Princess Leonor was born in Torres Vedras, 18 days of September, Tuesday dawning, three hours after mid-night). Many years later, her astrological chart was calculated by Regiomontanus²⁹³.

²⁸⁴ Duarte, *Livro dos Conselhos*, p. 240.

²⁸⁵ Duarte, *Livro dos Conselhos*, p. 259.

²⁸⁶ Duarte, *Livro dos Conselhos*, p.148.

²⁸⁷ Duarte, *Livro dos Conselhos*, p. 151.

²⁸⁸ Duarte, *Livro dos Conselhos*, p. 284.

²⁸⁹ Duarte, *Livro dos Conselhos*, Preamble, pag VII.

²⁹⁰ Duarte, *Livro dos Conselhos*, p. 146.

²⁹¹ Luis Miguel Duarte affirms that these annotations were written with the intent of “*allowing the specialists to elaborate with precision the astrological chart of the princes*”. Duarte, Luis Miguel, *D. Duarte*, p. 210.

²⁹² Princess Joana of Avis was born in in March 20th 1439, six month after her father’s death; therefore, her birth date could not be mentioned in Duarte’s list in *Livro dos Conselhos*, p. 146.

²⁹³ Johannes Müller von Königsberg (1436–1476), known by his Latin name Regiomontanus, German mathematician, astronomer, astrologer, translator and instrument maker. For the matrimonial politics of the House of Avis, refer to Coelho, Maria Helena da Cruz, “A política matrimonial da dinastia de Avis: Leonor e Frederico III da Alemanha”, *Revista Portuguesa de História*, t. XXXVI (2002-2003) pp. 41-70 (vol. 1).

Returning to *Livro dos Conselhos*, we can see that similar attention was given to the registration of battles, natural disasters and important political events²⁹⁷. Duarte details the record of Ceuta's conquest in 1415: “*quarta feyra ora de meo dia xxi dias do mes dagosto foy filhada a çidade de çepta*” (Wednesday noon, 21 days of August it was captured the city of Ceuta...); “*segunda feira noue dias d outubro // oras de 3.^a foy desçercada çepta*” (Monday nine days of October, hour of terce²⁹⁸, it was un-besieged Ceuta...).

He also notes the date of his father's death in 1433 “*duas oras despois de meia noute amanhecendo hua sesta feira xiiij dias d agosto vespera de santa maria em a çidade de lisboa se fynou o sobre ditto senhor rey dom [João]*” (two hours after mid-night, dawning Friday 14th August, eve of Saint Mary, in the city of Lisbon, the aforementioned lord and king [João I] expired)²⁹⁹. These are the only data which reference to the exact time the events occurred.

In the same section he also mentions a solar eclipse, in May 17th 1379, and ads that “king Henrique and the Pope of Rome” both died in that year³⁰⁰, suggesting a correlation between celestial and terrestrial events. He is probably referring to king Henrique of Castille (Henry of Trastámara, January 13th 1334 - May 29th 1379) and to Pope Gregory XI (1336 - March 27th 1378)³⁰¹.

16th). A clarification of Leonor's birthday is out of the scope of this article. The study of this data provides an example of how astrological documents may assist historical research.

²⁹⁷ The following events are mentioned in Duarte, *Livro dos Conselhos*, pp. 202, 203.

²⁹⁸ Intermediary canonical hour of midmorning prayer; approximately 9 am.

²⁹⁹ The official date of King João's death, August 14th 1433, remained undisputed for a long time. Armindo de Sousa refers that this mention in Duarte, *Livro dos Conselhos* might have been written not by king Duarte, but by a biographer or a compiler. He points out that if king Duarte was writing directly, he would not have used such terms to refer his father and to himself; also, he would not have omitted his mother's death from the list of events. (Sousa, Armindo de, *A morte de D. João I*, Lisbon, Fio da Palavra Editores, 2009, pp. 53, 54.) In any case, king João either died on the last hours of August 13th or on the first hours of August 14th. For propagandistic purposes, it would have been more favorable to choose the 14th, for it coincided with the day of the Battle of Aljubarrota (1385), a decisive event for the second dynasty.

³⁰⁰ Duarte, *Livro dos Conselhos*, p. 202. The NASA calculations confirm that there was a solar eclipse in Gemini, in May 16th 1379, around 17:30, Lisbon (universal time). Data obtained at NASA's website, Five Millennium Catalog of Solar Eclipses: <http://eclipse.gsfc.nasa.gov/SEcat5/SE1301-1400.html>

³⁰¹ Duarte refers both events as if they happened in the same year, but actually Pope Gregory died in 1378, some time before the eclipse. Perhaps king Duarte is counting the beginning of the year in March (as the astrological year, connected to the natural cycles, would begin in the Spring Equinox), but the Pope would have still died *before* the eclipse, and therefore his death could not be a consequence of the event.

2. Meteorology and calendar calculation

King Duarte establishes a correlation between the conditions of the New Moon and the weather: “Quando parecer a lua noua toda vermelha significa muitos uentos. Se a ponta mais alta for escura significa chuyva. Se resplandeçer como agoa que leuantam os remos significa que sera çedo tormenta no mar. Se for escura no meo significa que fara nom tempo quando for chea.”³⁰² (Whenever the Moon appears all red, it means [there will be] many winds. If the upper point [of the crescent] is dark, it means rains. If it glitters like water [when] stirred by the oars, it means that soon there will be a storm at the sea. If it is dark in the middle, it means that the weather will be good by the Full Moon). He also writes down the opinion of the court astrologer, Master Guedelha³⁰³, about the hour of sunset in the longest and shortest days of the year: “No mayor dia que he aos quinze dias de Junho / he o crepusculo da tarde duas oras e mais hu pouco. Aos quinze dias de março he o cepusculo da tarde hua ora e terço e mais hu pouco. E em o meo Setembro outro tanto quasy. E o mais pequeno dia do ano he aos quinze dias de dezembro hua hora e .3^o.”³⁰⁴ (In the longest day of the year, which is the 15th June, the evening dusk [sunset] happens at two hours and a little bit more. At the 15th of March, dusk is at one hour and a third and a bit more. In the middle of September it is similar. And [in the] the shortest day of the year [dusk] is at 15th December, [at] one hour and one third.). Master Guedelha is determining, respectively, the Summer solstice (June, the longest day), the Spring equinox (March), the Autumn equinox (September) and the Winter solstice (December, the shortest day). These calculations were indispensable for the practice of mundane astrology, because of the need to calculate the seasonal ingresses.

The book also includes a table “*para saber as horas*”³⁰⁵ (to know the hours) calculated by master Guedelha.

³⁰² Duarte, *Livro dos Conselhos*, p. 147.

³⁰³ Master Guedelha is Gedaliah ben Shlomo ibn Yahia (c.1400-c.1453), a member of the powerful Negro family. For more information about this family, refer to pp. 35-37.

³⁰⁴ Duarte, *Livro dos Conselhos*, p. 156.

³⁰⁵ Duarte, *Livro dos Conselhos*, p. 296. He is referring to the solar or natural hours (12 hours for the day, measured from sunrise to sunset, and 12 for the night, from sunset to sunrise). As they depend on the Sun, their length varies along the year; for instance, the hours of the day are longer in Summer and shorter in Winter. In astrology, each hour was ruled by a planet, these are called the planetary hours; the day would be ruled by the

3. A poem with astrological references

Another important passage is the poem *O que tomamos da Terra* (What we seize from the Earth)³⁰⁶ Duarte mentions several factors, which can contribute to personal traits:

Da terra compreison

Do leyte e viandas criaçom

Dos parentes Naçom

Das doenças e acontecimentos occasiom

Dos planetas constellaçom

Do senhor e amigos conuersaçã

De noso senhor deus per especial Inspiração nos he outorgada condiçom e discreçom

Daquesto se deue tomar non falando da especial graça de noso senhor que per sy so faz mudar todas condições e discreções que cada hua per sy non he tam poderosa que das outras partes non receba torva ou ajuda.

(From the Earth [we seize] complexion

From milk and meat, sustenance

From relatives, nation

From illness and happenings, occasion

From the planets, constellation³⁰⁷

From the sovereign and [from] friends, conversation

planet ruling the first hour of that day: for example, the first hour of Sunday (Sun's day) is ruled by the Sun, and the first hour of Monday (Moon's day), by the Moon.

³⁰⁶ Duarte, *Livro dos Conselhos*, p. 157. An extended version of this poem is presented in Duarte's book *Leal Conselheiro* (pp. 150-154).

³⁰⁷ Joaquim de Carvalho affirms that the word *constellation* means, in this context, "the influence of some given celestial conjunctions". Carvalho, Joaquim de, "A propósito da atribuição do Secreto de los Secretos", p.179, footnote 83. The term is related with the natural tendency indicated in the chart.

From our lord God, by special inspiration, it is conceded upon to us [social] condition and discretion³⁰⁸

Of these things one must seize, not to mention the special grace for our lord who, by himself, causes all conditions and discretions to change, as each by itself is not as powerful that, from the others, it would not receive hindrance or assistance.)

King Duarte is presenting the several factors capable of determining personal traits and conditions³⁰⁹: the Earth (that is, the place of birth), sustenance, family, physical condition (namely illnesses) and social relations (the sovereign and friends). The astrological factor is one among many – not by far the only one. This complex perception of the personal circumstances is somewhat similar to Ptolemy’s views on the matter: “*in an inquiry concerning nativities and individual temperaments in general, one can see that there are circumstances of no small importance and of no trifling character, which join to cause the special qualities of those who are born*”³¹⁰. For Ptolemy, the special qualities are constituted by a complex set of circumstances, which join together at birth. Those circumstances interact with the characteristics depicted by the horoscope, reinforcing some and moderating others. So, if two individuals born with similar horoscopes are raised in different environments, their personal traits (although similar at birth) may develop differently. To explain this, Ptolemy uses the metaphor of similar seeds developing in different grounds: “*for if the seed is generically the same, human for example, and the condition of the ambient [the horoscope] the same, those who are born differ much, both in body and soul, with the difference of countries.*”³¹¹ And to the physical causes he adds yet another, more imponderable factor: “*In addition to this, all the aforesaid conditions be equal, rearing and costumes contribute to influence the particular way in which a life is lived.*”³¹² In short, Ptolemy considers the ambient, the country and the rearing/costumes as factors to be taken in account when interpreting the astrological chart. He is emphasizing the importance of a “group spirit”, or regional character, which overlaps (and often overrides) the personal tendencies.

³⁰⁸ In the sense of good judgment.

³⁰⁹ Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los Secretos”, p. 152.

³¹⁰ Ptolemy, Claudius, *Tetrabiblos*, p. 17.

³¹¹ Ptolemy, Claudius, *Tetrabiblos*, p. 17.

³¹² Ptolemy, Claudius, *Tetrabiblos*, p. 17.

King Duarte also takes several of these factors into account, but he recognizes still another influence, capable of overriding all others – the power of God. He states: “*o poder todo de nosas obras a deus somente deue ser dado*” (the whole power of our achievements, to God alone must be given)³¹³, and he repeatedly that “*todo vem de Nosso Senhor*” (all comes from Our Lord)³¹⁴. As to Ptolemy, he considers the ambient (the horoscope) as the most relevant factor in a hierarchy of influences, for it determines all others: “*unless each one of these things is examined together with the causes that are derived from the ambient [that is, the horoscope], although this latter can be conceded to exercise the greatest influence (for the ambient is one of the causes for these things being what they are, while they in turn have no influence upon it), they can cause much difficulty for those who believe that in such cases everything can be understood, even things not wholly within its jurisdiction, from the motion of the heavenly bodies alone.*”³¹⁵ In sum, Ptolemy considers the astral influence to be predominant over all others, but he also recognizes the existence of other factors actively participating in the shaping of an individual’s life; these add certain traits that cannot be attributed to the astral influence. The acknowledgement of these influences is crucial to determine the power of astrology, and therefore to avoid disproportionate demands upon it. By establishing limits, Ptolemy seeks again to place astrology within the field of natural sciences, while king Duarte is above all concerned with the position of the Church towards this matter, not with the validity of astrology by itself.

³¹³ Duarte, *Livro dos Conselhos*, p. 53.

³¹⁴ For instance, in D. Duarte, *Leal Conselheiro*, p. 213.

³¹⁵ Ptolemy, Claudius, *Tetrabiblos*, p. 19.

4. A moral sermon on the power of astrology

In a letter written by king Duarte to his younger brother, Fernando, about their brother Pedro, astrology is used to make his point in a family argument³¹⁶. Duarte is aggravated by Pedro's behavior, but doesn't want to confront him directly, so he chooses to write to Fernando, suggesting that he should send a message to Pedro³¹⁷. It had come to Duarte's knowledge that Pedro was displeased with their father, king João I, because of the arrangements for Pedro's wedding³¹⁸. Duarte disapproves of this attitude. He had suffered a similar contrariety by the time of his own wedding, one year earlier³¹⁹: although he had prepared a grandiose celebration in Évora, his father and brothers (including Pedro) insisted he should postpone it, because of the plague. Forced to comply, but frustrated by the family's imposition, Duarte agreed to change the date and the place of the ceremony. This last-minute adjustment had cost him a great amount of money, spent in arrangements for the wedding (food, wine, fabrics, decorations and garments³²⁰), and many of these things were "*sem nenhum recobrimento*"³²¹ (with no refund) – as he insists on reminding his brother. He married the princess some time later, in the city of Coimbra, without his father's presence (the king decided not to go, possibly for political reasons³²²) and without all the beautiful apparel he had prepared to impress his bride. In short, Duarte was not at all pleased with his wedding, as he expected it to be much more opulent, but still he complied with his father's orders without (much) protest. Therefore, he expects his brother Pedro to do the same. He writes to Fernando: "*e tal conselho qual me ele a mym daua que eu filhey e açhey por muyto bom deue filhar pera sy*" (and that his counsel that he [Pedro] gave me and I accepted and considered very good, so should he accept it for himself)³²³.

³¹⁶ The complete contents of this letter, written in May 1st 1429, is presented in *Livro de Conselhos*, p. 50. For a detailed account of this incident, refer to Duarte, Luís Miguel, *D. Duarte*, p. 114.

³¹⁷ Luís Miguel Duarte states that prince Fernando, the youngest of the princes, was much closer to Pedro than Duarte. When Pedro went away from the kingdom for three years, Fernando was left in charge of his lands. Duarte, Luís Miguel, *D. Duarte*, Lisbon, p. 127.

³¹⁸ Pedro married Isabel of Aragon, countess of Urgel, in September 1429.

³¹⁹ Duarte married Leonor of Aragon in September 1428.

³²⁰ Duarte, Luís Miguel, *D. Duarte*, p. 115.

³²¹ Duarte, *Livro dos Conselhos*, p. 52.

³²² The reasons for the king's absence are discussed in Duarte, Luís Miguel, *D. Duarte*, pp. 113 to 115.

³²³ Duarte, *Livro dos Conselhos*, p. 53.

Then he adds a comment about astrology, which seems somewhat out of place in the general context of the letter; he is probably replying to some previous conversation or reacting to some comment from Pedro. While still preaching about the importance of obeying the king, he says, “... *do que toca de Crença da estrologia e que por eso mesmo me estoruou que non fosse a ele a esto lhe respondo que esto foy tardada do moço e a peste que andaua no extremo como el bem sabe...*”³²⁴ (regarding the belief in astrology, and that because of which it had stalled me to meet him [Pedro], to this I reply that it was [caused by] the valet’s delay and the plague that was striking the borderlands, as he knows well...). The context of this sentence is not easy to grasp. Duarte seems to be explaining that he could not meet Pedro, who was returning from a long journey abroad, because he was stalled by mundane issues (the valet³²⁵ and the plague) and not due to any hindrance of astrological nature. He is possibly disputing some remark from Pedro about their failure to meet. Maybe Pedro had made some comment about Duarte’s absence, attributing it (perhaps sarcastically) to astrological reasons. Duarte rejects this possibility and, since he started talking about astrology (a contentious issue between the two brothers), he seizes the opportunity to criticize Pedro. He states that part of Pedro’s complaining come from “*algu desordenado sentymento de seu coração*”³²⁶ (rough feelings in his heart [i.e. resentment]) – a remark that could have been made by a modern-day psychologist. Then he returns to the topic of astrology, again to dismiss it – and above all to dismiss Pedro’s comment: “*lembresse que o homem sabedor Se asenhorea das estrelas, e elas non podem mais fazer que dar nos tentaçom ou algumas relinações de deseJos, mais escrito he que noso senhor non consentyra seremos tentados mais do que sabe que por boa vontade se qujsermos poderemos resystir*”³²⁷ (remember that the wise man takes dominance over the stars, and they cannot do more than to cause us temptation, or suggest [us] some wishes, and it is written that Our Lord will not consent us to be tempted more than [what He] knows that, by our good will, we could resist). The sentence “the wise man takes dominance over the stars” can be found (with minor variants) in several documents of this period.³²⁸ King Duarte repeats it in his book *Leal Conselheiro*³²⁹, and

³²⁴ Duarte, *Livro dos Conselhos*, p. 53.

³²⁵ This *valet* was possibly a messenger. For this subject, refer to Duarte, Luís Miguel, *D. Duarte*, p. 127.

³²⁶ Duarte, *Livro dos Conselhos*, p. 53.

³²⁷ Duarte, *Livro dos Conselhos*, p. 53.

³²⁸ This quote has been attributed to Ptolemy, supposedly from *Almagest*, but it does not appear in any of Ptolemy's writings. It is mentioned by Albertus in several of his books including *Speculum*, *De fato*, *De natura*

Zurara also uses it³³⁰ – but they seem to confer different meanings to this statement. For Duarte, *dominance* is a form of rejection of astrology’s determinism. It relies on the recognition the power of God, which rules above all others, and in the proclamation of man’s free will; he believes that these forces together may overcome the *natural inclination* indicated by the stars. For Zurara (and Ptolemy), *dominance* is a form of knowledge.

Eager to dismiss Pedro, Duarte closes his arguments with a demolishing sentence: “o poder todo de nosas obras a deus somente deue ser dado, e a nos per aquela parte do liure aluidrio que nos outorgou e das estrelas nem estrolomjia nenhu bom homem devue curar, saluo naqueles casos que a geral vsança da terra costumam”³³¹ (the whole power of our achievements to God alone must be given, and to us, by the part of free will that He granted us, and of stars and astrology³³² no good man should care, except in those situations where the general custom of the land use to [accept it]”). He urges Pedro to stay away from astrological matters: “e dele bem çerto som que o asy fara”³³³ (and of him I am quite sure that he will do so). He expects Pedro to comply; but, as we will see, Pedro did not follow his advice.³³⁴

- *Leal Conselheiro*

*Leal Conselheiro*³³⁵ – The Loyal Counsellor – is a text on government and moral behaviour, compiled by king Duarte by request of his wife, queen Leonor of Aragon, “*per boo regimento de nossas consciencias e vontades*”³³⁶ (by good governance of our consciousness and will). It has a prologue and 103 chapters, some of them written by the

locorum and the *Summa theologiae*, and by other authors, including Thomas Aquinas in *Summa theologiae*. For the latter, refer to Stuckrad, Kocku von, *História da Astrologia*, p. 217.

³²⁹ Duarte, *Leal Conselheiro*, p. 151.

³³⁰ Refer to pp. 94-95.

³³¹ Duarte, *Livro dos Conselhos*, p. 53.

³³² The exact word he uses is *estrolomia*, which is neither astronomy (*astronomia*) nor astrology (*astrologia*), but probably encompasses both. This term, and the variant *astrolomia* is often found in medieval documents. For a study on this term, refer to Machado, Cristina de Amorim, “Quatro textos e algumas idéias sobre o papel da tradução da e ‘astrolomia’ na expansão marítima portuguesa nos anos quatrocentistas e quinhentistas”, *Revista Brasileira de História da Ciência*, v. 1, n. 2, pp. 211-234, Rio de Janeiro, July-December 2008.

³³³ Duarte, *Livro dos Conselhos*, p. 53.

³³⁴ Refer to pp. 118-119.

³³⁵ Duarte, *Leal Conselheiro*, Lisbon, Imprensa Nacional-Casa da Moeda, 1998.

³³⁶ Duarte, *Leal Conselheiro*, p. 7.

king, others copied from different authors³³⁷. Luís Miguel Duarte suggests that the book is roughly organized in three parts, with distinct styles and extents: chapters 1 to 72 are well structured and address the topic of sins, vices and virtues; chapters 73 to 90 talks of the feelings of contentment and dissatisfaction and of the five parts of the human heart (from the psychological point of view); chapters 91 to 103 address assorted topics.³³⁸

In the book's prologue, written in the form of a letter to his wife, he suggests the name *loyal counsellor* because the book "*lealmente é todo scripto*"³³⁹ (it is all loyally written). But the intended reader is not just his wife but also the courtesans, most especially, those who are willing to live a virtuous life³⁴⁰. The book also includes personal content, which for king Duarte represents no apparent contradiction: "*mais escrevo por que sinto e vejo na maneira de nosso viver, que per estudo de livros nem ensino de letrados*"³⁴¹ (I write more from what I feel and see in the ways of our life, than from the study of books or the teachings of scholars). He gives priority to his personal experience, apparently discarding, or at least diminishing, the scholastic tradition.

Being a collection of diverse thoughts, the book reveals "the true structure of Duarte's personal vision about Man"³⁴² and reflects the medieval tradition "within the lines of the Ptolemaic-tomist model"³⁴³, while at the same time displays the first signs of "a more autonomous and more self-aware way of its ability to philosophize"³⁴⁴. It is considered "a book of great modernity", because of its analysis of "psychological situations, feelings and the dispositions of the soul", and also for its incipient "norms of aristocratic behaviour, of which the prince should be the prime model"³⁴⁵.

Concerning astrology, the book includes five main topics: melancholy, determinism and free will, belief and disbelief, astrology versus sorcery and astrology as a natural science.

³³⁷ Pope Gregorius Magnus, Cicero and Cassianus are among the authors whose work is transcribed.

³³⁸ Duarte, Luís Miguel, *D. Duarte*, pp. 204, 205.

³³⁹ Duarte, *Leal Conselheiro*, p. 8.

³⁴⁰ This book is an example of the "*ethicist conception of power*" that is reflected in many writings of princes and other sovereigns, including Prince Pedro. For this topic refer to Calafate, Pedro, "O infante D. Pedro", (pp. 411-444), p. 414.

³⁴¹ Duarte, *Leal Conselheiro*, p. 9.

³⁴² Gama, José, "A geração de Avis – I. D. Duarte", in Calafate, Pedro (dir.), *História do Pensamento Filosófico Português*, Vol. 1, Lisbon, Editorial Caminho, 2003, (pp. 379-409), p. 383.

³⁴³ Gama, José, "A geração de Avis – I. D. Duarte", p. 402.

³⁴⁴ Gama, José, "A geração de Avis – I. D. Duarte", p. 407.

³⁴⁵ Buescu, Ana Isabel, "A *Confessio Amantis* de John Gower", p. 1.

1. Melancholy³⁴⁶

King Duarte intends to provide a useful guide for those suffering from melancholy, because he anticipates “que muitos foram, som, e ao diante seram tocados deste pecado de tristeza que procede da vontade desconcertada (...) doença de humor manencorico”³⁴⁷ (that many were, are, and in the future will be touched by this sin of sadness that comes from the mismanagement of will (...) the illness of melancholic humor).

Being a melancholic himself, he displays remarkable insight by saying that “nom é pequeno conforto e remedio aos que som desto tocados saberem como os outros sentirom o que eles padecem, e houverom comprida saude, porque uu dos seus principaes sentimentos é pensarem que outrem jamais sentiu nunca tal sentio que fosse tornado o seu boo stado em que antes era”³⁴⁸ (it is of no small comfort and remedy, to those who by this are touched, to know how others felt what they suffered, and how their health was restored, because one of their strongest afflictions is to think that [no] one ever felt [this], never felt that they were returned to their previous good condition, as they were before). He wants to offer a first-hand account of his own melancholic illness (what could nowadays be called a depression) and, most importantly, he wants to share his own recovery, back to joy and health. Then he goes on to explain how he succumbed to melancholy, due to excessive work, accumulated with emotional losses and, above all, his persistent fear of death (because of the plague)³⁴⁹. His cure – he declares – came not from the traditional remedies prescribed by the doctors (wine,

³⁴⁶ It is possible that king Duarte’s melancholy was in fact what we now call a depression. For king Duarte’s melancholy, refer to Luís Miguel, *D. Duarte*, Lisbon, Círculo de Leitores, 2005 (pp. 87-93); and to Saraiva, António José, *O Crepúsculo da Idade Média em Portugal*, Lisboa, Gradiva, 1998 (pp. 229-235). For a complete study of the medieval concept of melancholy within the context of king Duarte’s life, refer to McCleery Iona, Both “illness and temptation of the enemy”: melancholy, the medieval patient and the writings of King Duarte of Portugal (r. 1433–38), *Journal of Medieval Iberian Studies*, Vol. 1, No. 2, June 2009, 163–178. Refer also to Klibansky, Raymond; Panofsky, Erwin; Saxl, Fritz, *Saturn and Melancholy*, *Studies in the History of Natural Philosophy, Religion and Art*, Kraus Reprint (Kraus-Thomson Organization Limited) Nendeln/ Liechtenstein 1979.

³⁴⁷ Duarte, *Leal Conselheiro*, p.73.

³⁴⁸ Duarte, *Leal Conselheiro*, p. 73.

³⁴⁹ This situation is analyzed in McCleery, Iona, Both ‘illness and temptation of the enemy’, pp. 163–178: “During the preparations for the conquest of Ceuta in North Africa (1413–15), his father João I instructed him to govern the kingdom in his place. Aged twenty-two and accustomed to a life of hunting and courtly pursuits, the burden of state business made his heart joyless and filled him with groundless imaginings. After about ten months of continuing to work hard (with no outward change in him), plague broke out in Lisbon; Duarte became ill and was convinced that he was going to die. (...) This continued until his mother Philippa of Lancaster died of plague in 1415. Focusing on the reality of her death allowed Duarte to stop thinking so much about his own, and he gradually began to recover. The whole episode lasted for more than three years but at the time of writing he says that he feels happier than ever before”, p.164.

leisure and the company of women)³⁵⁰, but from the emotional shock caused by the death of his mother, Queen Philippa of Lancaster (June 18th 1415). “E estando em tal estado, a mui virtuosa Rainha, minha senhora e madre que Deos haja, de pestelencia se finou, do que eu filhei assi grande sentimento que perdi todo o receo (...). E aqesto foi começo the minha cura, porque sentindo ela, leixei de sentir a mim”³⁵¹ (And being in that state [of melancholy], the virtuous queen, my lady and mother, God guard her, succumbed to the plague, [and because] of that I caught such a deep suffering that I surpassed all fear (...). And this was the beginning of my healing, because as I suffered [because of] her, I stopped suffering [for] myself). King Duarte claims that his commitment to his mother made him overcome his fears of death – again an example of the power of will and self-discipline overcoming the personal limitations, a concept very dear to him.

However, this spontaneous recovery from melancholic illness was not at all commonplace. In most cases, the melancholic humor had to be counterbalanced by the appropriate remedies. As melancholy burdened the body with the cold and dry qualities, the physicians attempted to restore balance through the judicious use of food and drink of the opposite nature. Wine was considered a good antidote, if consumed with moderation. But King Duarte rejected this treatment, alleging that wine could never bring the perfect cure³⁵², for it was a mere subterfuge: “*por embargar o entender faz o coração nom sentir tam rijo aquel cuidado que o mais atormenta*” (by hindering the mind, it makes the heart feel less intensely the worry which torments it)³⁵³; besides, the excess of wine could bring men “*na servidõe da bevedice*”³⁵⁴ (into the servitude of drinking). The best remedy for melancholic humor was “*viver bem e virtuosamente*”³⁵⁵ (to live well and virtuously). In short, he relied more on self-discipline, healthy habits, and will power, than on remedies.

These two ways of balancing the humor – will power and remedies – reflect two different attitudes: on one hand, the traditional treatment, which requires the excessive humor to be balanced by a remedy of opposite qualities (in this case the cold and dry qualities of melancholy would be balanced by the hot and moist qualities of wine); on the other, a new

³⁵⁰ For a discussion about Duarte’s medical history refer to Duarte, Luís Miguel, *D. Duarte*, pp. 87-93.

³⁵¹ Duarte, *Leal Conselheiro*, p. 76.

³⁵² Duarte, *Leal Conselheiro*, p. 78.

³⁵³ Duarte, *Leal Conselheiro*, p. 78.

³⁵⁴ Duarte, *Leal Conselheiro*, p. 78.

³⁵⁵ Duarte, *Leal Conselheiro*, p. 80.

attitude, carried out by king Duarte, of lucid introspection, self discipline and voluntarism. For him, these qualities seem to be somewhat adverse to astrology (or at least to astrological determinism) but for other authors, it is not necessarily so.

2. Determinism and free will

King Duarte addresses the topic of astrology mainly in the context of the determinism-versus-free will debate³⁵⁶. In a chapter about the value of prudence³⁵⁷, Duarte asserts his position against determinism, and particularly against the habit of asking the counsel of astrologers before making any decision. In this aspect, he specifically disagrees with the book *Segredo dos Segredos*, which appeals to the extensive use of astrological advice: “*nenhua cousa faças sem o conselho de baram sabedor n’arte das strellas*”³⁵⁸ (do not thing without the counsel of a man learned in the art of the stars). To this, he replies: “*em esto me parece que devemos estar a determinaçom da Sancta Madre Igreja*”³⁵⁹ (to this I consider that we should comply to te determination of the Holy Mother Church). But even this pious obedience should not be blind, but modulated by personal judgement: “*onde ela [a Igreja] outorgar, e nom contradisserem seus conselhos ao que pertence a nosso boo estado, nom devem em todo seer deprezados*” (where it [the Church] rules, and if its counsels do not contradict what pertains to our good state, they should not at all be despised). Regarding astrology, his main concern seems to be the possibility of conflict between the rules of the church and the advices offered by astrologers. When this contradiction occurs, he counsels, “*a Nosso Senhor que é sobre todos estrolagos e melhor sabe escolher os tempos e as horas, devemos todos nossos feitos comendar /, nom desobedecendo a el por obedecer nem seguir outro conselho d’estrologos (...)*”³⁶⁰ (to Our Lord, who is above all astrologers and knows how to choose the time and the hours, we should all our endeavors commend, [and we should] not disobey Him to obey or to follow another [diverging] advice of astrologers). In other words: if the priest and the astrologer offer similar advice, there is no problem to follow

³⁵⁶ A complete study about king Duarte’s position on this topic is presented in Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los Secretos”, p. 179-180.

³⁵⁷ Duarte, *Leal Conselheiro*, p. 212.

³⁵⁸ *Pseudo-Aristoteles, Segredo dos Segredos* p. 24.

³⁵⁹ Duarte, *Leal Conselheiro*, p. 217.

³⁶⁰ Duarte, *Leal Conselheiro*, pp. 216-217.

it, but if they diverge, it is more prudent to follow the priest. These remarks refer to the practice of elective astrology (the choice of the better hour), which can be a sign of prudence.

The issue of determinism seems to trouble him, to the point of seeking advice from Diogo Afonso Manganha.³⁶¹ Manganha's reply to the king is included in *Livro dos Conselhos*; he considers that “*qualquer astrologo pode Julgar polas constelações todas as cousas naturaes que se per elas fazem asy como seca çhuyua / Inclinações d Homens, acertos azos saude Jnfirmdade...*”³⁶² (any astrologer can judge by the constellations all natural things that are made by them [the constellations], be it the draught, the rain or the inclinations of men, certain circumstances, health, infirmity...). In other words – as long as the astrologers remains within the realm of natural astrology and of the general inclinations of men, his practice is licit and without sin. But he must acknowledge God's power and never judge the nativities “*nas obras dos homens que tem livre arbítrio*”³⁶³ (in the works of man [in] which [they] have free will).

3. Belief and disbelief

Regarding astrology, Duarte again chooses a position of caution: he does not dismiss it altogether, but he always leaves room for doubt. “*Da estronomia e outras sciencias ou artes, quem pode muito afirmar, veendo algumas vezes precalçar per elas tam grandes verdades e d'outras tantas falecer?*”³⁶⁴ (Of astronomy [astrology] and other sciences or arts, who can much assure, seeing that sometimes they attain high truth and other times fail?) In face of this unreliability, he chooses to rely on demonstration, that is, in what he can verify by his own senses, in other words – he demands first-hand proof. His counsel is “*que nom se cream por as mentiras que alguus que parecem d'outoridade, sobr'ellas afirmam*”³⁶⁵ (one should not trust the lies of some just because they claim authority over the matter) – a position that clearly differs from medieval scholastic thought. But he does not dismiss them as a whole, rather preferring an attitude of systematic doubt: “*nem de todo se contradigam, por as mui maravilhosas que se fazem, e devem-se de trazer em dúvida, mais inclinados a as nom*

³⁶¹ Duarte, *Livro dos Conselhos*, p. 204 (For the practical aspects of this letter, refer to p. 15).

³⁶² Duarte, *Livro dos Conselhos*, p. 204.

³⁶³ Duarte, *Livro dos Conselhos*, p. 204.

³⁶⁴ Duarte, *Leal Conselheiro*, p. 146

³⁶⁵ Duarte, *Leal Conselheiro*, p. 147.

*crer que as afirmar, temendo aquela sentença ‘Quem de ligeiro cree, é de leve coração’*³⁶⁶ (nor should they be totally contradicted, in account of the many wonders accomplished, and they should pondered with some doubt, more inclined to disbelief than to affirm them, fearing the proverb ‘he who lightly believes is light at heart’). He applies these stances to all the natural sciences (in which astrology was included), and to all he recommends a cautious approach, neither accepting nor rejecting them without further proof. This judicious consideration, however, does not apply to the ordinary forms of prediction, which he clearly rejects: “*d’agoiros, sonhos, daa a voontade, sinais do ceo e da terra, alguu boo homee nom deve fazer conta...*”³⁶⁷ (of omens, dreams, to give the will³⁶⁸, signs from the heavens and the earth, any good man should not take notice).

He also warns against those who use astrological excuses to avoid hard work in order to attain their goals. “*Contra os que a ventura, constelaçom de pranas encomendam e leixam seus feitos, eu lhes digo que, se bem consiiraram, que todo vem de Nosso Senhor.*”³⁶⁹ (Against those who to chance [and] constellation of planets commend and leave their accomplishments, I say that, if they correctly consider, [they will see that] all comes from Our Lord).

4. Astrology versus sorcery

King Duarte differentiates between astronomy/astrology, which he considers a part of the “natural sciences”, and other practices, which are closer to sorcery (namely astrolatry, geomancy, necromancy, visions, dreams and omens). Although he is not particularly favorable to either of them, he gives some credit to the first, and none to the latter. Of witchcraft he says that it should be considered an absurd “*pois o nunca vi e a razom mo nom consente, nem per a Igreja é mandado que o crea*”³⁷⁰ (for I never saw it [working], neither the reason allows it, neither by the Church is ordained that I [should] believe it). Again, his first criteria for rejection is the lack of direct experience (“I never saw it”) followed by logic (reason) and finally, the position of the Church.

³⁶⁶ Duarte, *Leal Conselheiro*, p. 147.

³⁶⁷ Duarte, *Leal Conselheiro*, p. 147.

³⁶⁸ This uncommon term may refer to some form of popular magic.

³⁶⁹ Duarte, *Leal Conselheiro*, p. 213.

³⁷⁰ Duarte, *Livro dos Conselhos*, p. 146.

The difference between astrology and less reputed practices is not exclusive to the medieval period; in fact, it comes from much earlier: Ptolemy, writing in the 2nd century, warns the reader against false astrologers, as we have seen³⁷¹. Saint Isidore of Seville (560-636) established a clear distinction between *astrologia superstitiosa* and *astrologia naturalis*, being the latter a “scientific” form of knowledge, which by no means opposes the Christian doctrine³⁷². Also king Alfonso X of Castile ordered that only those who had concluded their studies in astrology could predict the future by the stars³⁷³; he forbade other forms of divination and even decreed the capital punishment³⁷⁴ for those who insisted on their practice. Meanwhile, Gerbert de Aurillac (Pope Silvester II, c. 940-1003) had established another, subtler, distinction, within the astrological practices: he differentiated the casting of natal horoscopes, which he rejected as forbidden superstition, and natural astrology, which he endorsed as an important contribution for natural science³⁷⁵. This position towards the various astrological practices is very similar to the one recommended, centuries later, by Diogo Afonso Mangancha³⁷⁶.

The fracture within the astrological practices would expand in the following centuries; the Church intensified it, to the point of totally rejecting the natal and horary branches of the astrological practice (at least officially), while it accepted the natural approach (weather forecast and possibly elections).

5. Astrology as a natural science

As in Ptolemy, the placement of astrology within the group of natural sciences confers it more credibility. This acknowledgement is also manifest in the way king Duarte refers to king Alfonso X of Castile, “*aquele honrado rei dom Afonso estrologo*”³⁷⁷ (that honored king Alfonso, astrologer), as an example of culture and intelligence. Apparently, the astrological interests of the Castilian king were not derogatory to Duarte’s eyes.

³⁷¹ Ptolemy, Claudius, *Tetrabiblos*, pp. 13-15.

³⁷² Ptolemy, Claudius, *Tetrabiblos*, pp. 201.

³⁷³ Stuckrad, Kocku von, *História da Astrologia*, pp. 197-198.

³⁷⁴ Stuckrad, Kocku von, *História da Astrologia*, p. 198.

³⁷⁵ Stuckrad, Kocku von, *História da Astrologia*, p. 204.

³⁷⁶ For this letter, refer to p. 13-15 and p. 84.

³⁷⁷ Duarte, *Leal Conselheiro*, p. 111.

As a natural science, astrology was accounted as one among many factors, all concurring to certain phenomena. It is the case of the plague, to which king Duarte attributes four causes: “*especial sentença do Senhor Deos*” (special decree of the Lord God), “*geral constelação como foi a pestellença grande que ante per muyto tempo dos estrollogos foi prenosticada*” (general constellation, as it was the great pestilence that long before [it happened] had been predicted by the astrologers), “*corrupçom da guas*” (corruption of the water) and by “*apagamento*” (weakening).³⁷⁸ In his account, the general constellation – that is, the astrological configurations determining the general events of a given period³⁷⁹ – is one of the many factors causing the plague. The constellations were frequently evoked in the prediction of general events of this type, as king Duarte’s remark suggests.

- Livro da Virtuosa Benfeitoria

Written by prince Pedro with the assistance of his confessor, Friar João da Verba, *Livro da Virtuosa Benfeitoria*³⁸⁰ (the Book of Virtuous Benefit) reveals the strong influence of Seneca³⁸¹ and has the clear purpose to educate and doctrine, in the context of a “*profoundly ethicist concept of power*”³⁸².

The astrological references, although sparse, reveal that Pedro, like his father, “was no stranger to the elements of the theory of the sphere”³⁸³. He explains that “*o mundo sensyuel he departido em duas partes*”³⁸⁴ (the sensorial world is divided into two parts); the first is “*do çirculo da lua pera çima, em a quall som stendidos os çeeos, e as strellas dam o seu splendor, e os planetas se mudam com desvayrados cursos*”³⁸⁵ (from the circle of the Moon up, were the heavens are extended, and the stars bestow their splendor, and the planets

³⁷⁸ Duarte, *Leal Conselheiro*, pp. 223-224.

³⁷⁹ As explained in the section about mundane astrology, pp. 13-14.

³⁸⁰ Pedro, *Livro da Virtuosa Benfeitoria*, in *Obras dos Príncipes de Avis* (pp. 525-765).

³⁸¹ Calafate, Pedro, “D. Pedro”, in *História do Pensamento Filosófico Português*, Vol. I, Lisbon, Caminho, 2003, (pp. 412-445), p. 412.

³⁸² Calafate, Pedro, “D. Pedro”, in *História do Pensamento Filosófico Português*, Vol. I, Lisbon, Caminho, 2003, (pp. 412-445), p. 414.

³⁸³ Carvalho, Joaquim de, “A propósito da atribuição do Secreto de los Secretos”, p. 178.

³⁸⁴ Pedro, *Livro da Virtuosa Benfeitoria*, p. 680.

³⁸⁵ Pedro, *Livro da Virtuosa Benfeitoria*, p. 680.

change in their diverse courses); and “*des o çirculo da lua pera baixo*”³⁸⁶ (from the circle of the Moon down); this part contains “*os quatro elementos e plantas e anymalias que per ele rreçebem vida*”³⁸⁷ (the four elements and plants and animals which by it [the heavens] receive life). Then he states that “*todallas cousas que em ella uiuem e creçem ou ham sentimento, rreçebem da parte primeyra per canaaes nom sensiuees uertuosas enfluências*”³⁸⁸ (all things that leave in it [the inferior circle] and grow and feel, receive from the first [the superior circle], by non-sensitive channels, virtuous influences). In his conception of the Cosmos, there is a defined influence of the celestial circle over the sublunar sphere; what is more, this *influence* is exerted through “non-sensitive” channels.

He considers Man as a part of the sublunar world, therefore subjected to its contingencies: “do mouimento dos çeeos continuado, se faz em a terra mudança do tempo, e uiuendo em elle as cousas corruptivees, sofrem em seus stados desvayradas minguas”³⁸⁹ (from the continuous movement of the heavens, arises in Earth the change in weather, and as the corruptible things live in it [in Earth], they suffer in it diverse necessities). The way to achieve order in this corruptible world is to understand the changes in the celestial cycles: “sse nom fossem estas cousas, nom poderya seer ordenança”³⁹⁰ (if it were not for these things, there could not exist order). The planetary cycles are, ultimately, the key to maintain order in the sublunar world. This stratified conception “justified, from the philosophical point of view, the astral influence, along with moral liberty and divine grace”.³⁹¹

Apparently, prince Pedro sees no conflict between astrology and free will. When Afonso V's was made king, Pedro deliberately used astrology to determine the best moment for the ceremony of allegiance. While Duarte considered incorrect, and perhaps impious, to make such choices (as revealed by the episode of his own coronation), prince Pedro (according to the chronicles), saw elective astrology as a wise application of free will.

³⁸⁶ Pedro, *Livro da Virtuosa Benfeitoria*, p. 680.

³⁸⁷ Pedro, *Livro da Virtuosa Benfeitoria*, p. 680.

³⁸⁸ Pedro, *Livro da Virtuosa Benfeitoria*, p. 680.

³⁸⁹ Pedro, *Livro da Virtuosa Benfeitoria*, p. 635.

³⁹⁰ Pedro, *Livro da Virtuosa Benfeitoria*, p. 636.

³⁹¹ Carvalho, Joaquim de, “Sobre a erudição de Gomes Eanes de Zurara”, pp. 307-308.

PART IV – ASTROLOGY IN THE PORTUGUESE MEDIEVAL CHRONICLES

“segundo os antigos escreverão este nome, scilicet, crónica principallmente ouve o seu orige e fundamemto de Saturno, que quer dezer tempo, esto porque em grego se chama este planeta Cronõ ou Cronos, que synyfica tempo, assy como no latym este nome quer dezer tempus, e dhy se deriva crónica, que quer dezer estoria ”

(according to what the ancients wrote, this name – that is, chronicle – had its origin and foundation in Saturn, which means time, and this because in Greek it is called Chrono or Chronos, which means time, was well as in Latin this name means time, and from that it is derived chronicle, which means history).

Gomes Eanes de Zurara, *Crónica do Conde D. Pedro de Meneses*³⁹²

³⁹² Zurara, Gomes Eanes de, *Crónica do Conde D. Pedro de Meneses*. Edição por Maria Teresa Brocardo. Lisbon, Fundação Calouste Gulbenkian, 1997, p. 173.

This section addresses three Portuguese chroniclers of the 15th century: Fernão Lopes (c. 1385 – after 1459), Gomes Eanes de Zurara (c. 1410-1474) and Rui de Pina (1440–1521). They are all closely connected to the dynasty of Avis, and in their writings they organized and developed the memories of the previous kings³⁹³.

Given the political context in which they are written the chronicles can be seen as instruments of power, “affirming the authority of the monarchy and contributing to the legitimization of that same authority.”³⁹⁴ They are incorporated within a wider *program* of validation, which included “the building of tombs, the founding of royal chapels, and the construction of palaces (such as Sintra) and the Monastery of Santa Maria da Batalha, which evoked the victory over the Castilian armies at the Battle of Aljubarrota (14 August, 1385)”³⁹⁵. Regardless of their political affiliations, the chronicles stand as valid sources to understand the use of astrology as a political asset (as a validating argument to the actions and decisions mentioned therein).

This section also includes a reference to the temperaments from *Crónica dos Lóios*³⁹⁶. Although not a royal chronicle, it contains a relevant allusion to the theory of the temperaments (relating astrology and medicine).

The combined study of these sources – the books and writings presented in Part III, and now the chronicles – offers a more comprehensive understanding of the role of astrology in the court and in its practical application in everyday life.

³⁹³ “In Portugal, the royal chronicles as such first started and gained importance from the early 15th century onwards, being closely linked to the new Avis dynasty, which began with João I (1385-1433). It is true, however, that there are some previous historiographic examples that can be said to foreshadow the emergence of the genre. The most famous example that can be cited as an antecedent is the *Crónica Geral de Espanha de 1344*, not so much because it was penned by a royal bastard, Pedro Afonso, Count of Barcelos and son of King Dinis (1297-1325), but because of the way it clearly demarcates the Portuguese kingdom from its neighbor, Castile, and the enhanced value it attaches to the Portuguese monarchy, which is treated autonomously within the context of the Iberian Peninsula. Nevertheless, the conceptions of a feudal nobility are often superimposed here on what we may call the monarchic ideology.” Sousa, Bernardo Vasconcelos e, “Medieval Portuguese Royal Chronicles”, p. 1.

³⁹⁴ Sousa, Bernardo Vasconcelos e, “Medieval Portuguese Royal Chronicles”, p. 1.

³⁹⁵ Sousa, Bernardo Vasconcelos e, “Medieval Portuguese Royal Chronicles”, p. 3.

³⁹⁶ Portalegre, Paulo de, *Novo Memorial do Estado Apostólico. Primeira Crónica dos Lóios*, Edição Crítica por Cristina Sobral, Lisbon, Roma Editora, 2007, pág. 130-140.

CHAPTER 7 – ASTROLOGICAL KNOWLEDGE OF THE CHRONICLES

- Fernão Lopes (c. 1385 – after 1459)

Appointed in 1434 as the first royal chronicler, Fernão Lopes wrote extensively about the history of Portugal, but only a part of his work remained. An autodidact, he had a unique, vivid style. Valuing truth over all (although he was at the service of the Avis dynasty), he tried to anchor his works on documental proof³⁹⁷. He lived during the reigns of João I, Duarte I, and Afonso V. In his old age, he witnessed the beginning of Portugal's maritime expansion.

He authored *Chronicle of king Pedro I*³⁹⁸ (r.1357-1367), *Chronicle of king Fernando I*³⁹⁹ (r.1367-1385) and the first two parts of the *Chronicle of João I*⁴⁰⁰ (1385 up to year 1412). Some historians believe him to be the author of *Chronica do Condestável de Portugal D. Nuno Álvares Pereira*⁴⁰¹ and *Crónica dos Sete Primeiros Reis de Portugal* (Chronicle of the first Seven Kings of Portugal)⁴⁰².

He mentions astrological occurrences on occasion, although not as often as his successor, Zurara. One of his references is connected to the natal chart of constable Nuno Álvares Pereira (*the Holy Constable*; 1360-1431)⁴⁰³, the other to the eclipse of August 1384, during the besiegement of Lisbon (these references are addressed in chapter 8).

³⁹⁷ “Fernão Lopes’ construction of discourse, the narrative sequence, the liveliness of the style, the conception of history, the rationality of the argumentation and the care taken to find grounds for his version of events, all become more original and credible when considered in relation to the objectives he sought to reach and his own very strong convictions.” Sousa, Bernardo Vasconcelos e, “Medieval Portuguese Royal Chronicles”, p. 3.

³⁹⁸ Lopes, Fernão, *Crónica de D. Pedro*, Lisbon, Imprensa Nacional – Casa da Moeda, 2ª Edição, 2007.

³⁹⁹ Lopes, Fernão, *Crónica de el-rei D. Fernando*, first published 1816 in J.F. Correia da Serra, editor, Collecção de livros ineditos de historia portugueza, Vol. IV, Lisbon, Academia das Ciências de Lisboa

⁴⁰⁰ Lopes, Fernão, *Crónica de D. João I*, 2 Vol. Barcelos, Livraria Civilização, 1983.

⁴⁰¹ Lopes, Fernão, *Chronica do Condestável de Portugal D. Nuno Álvares Pereira*, Lisbon, Sá da Costa, 1961.

⁴⁰² *Crónica dos Sete Primeiros Reis de Portugal* (1952 title) or *Crónica de Portugal de 1419* (1998 title) (manuscript cod. 965, dated from 1419, discovered in archives of Casa Cadaval). The attribution to this Chronicle to Fernão Lopes is, however, disputed: “The question of the authorship of the *Crónica de 1419* remains open, but, in the wake of the critical edition by Adelino de Almeida Calado, it is no longer really acceptable to attribute it to Fernão Lopes”. Sousa, Bernardo Vasconcelos e, “Medieval Portuguese Royal Chronicles. Topics in a Discourse of Identity and Power”, p. 2.

⁴⁰³ Lopes, Fernão, *Crónica de D. João I*, 2 Vol. Barcelos, Livraria Civilização, 1983, p. 58.

- Gomes Eanes de Zurara (c. 1410-1474)

The main astrological references in the Portuguese chronicles come from Gomes Eanes de Zurara, who lived in the court of kings João I, Duarte and Afonso V. A cultured man, he succeeded Fernão Lopes in the royal library.⁴⁰⁴

He wrote *Chronica del Rei D. Joam I. Terceira parte em que se contem a tomada de Ceuta*⁴⁰⁵; *Chronica do Descobrimento e Conquista de Guiné*⁴⁰⁶; *Chronica do Conde D. Pedro (de Meneses)*⁴⁰⁷; *Chronica do Conde D. Duarte de Meneses*⁴⁰⁸.

Zurara's writing style differs from his predecessor's, Fernão Lopes. He enjoys to display his erudition (which he probably obtained later in life)⁴⁰⁹, by mentioning the leading classical, early Christian and medieval writers. He was acquainted with some notable chronicles and romances of Europe and had studied Italian and Hispanic authors⁴¹⁰.

The depth of his astrological knowledge is debatable⁴¹¹. Writer Mateus de Pisano, Zurara's personal friend, calls him a "bom gramático, notável astrologo e grande cronista"⁴¹² (good grammatician, notable astrologer and grand chronicler). Some Portuguese

⁴⁰⁴ A comprehensive analysis about Zurara's erudition can be found in Carvalho, Joaquim de, "Sobre a erudição de Gomes Eanes de Zurara", pp. 184-308.

⁴⁰⁵ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta por el-rei D. João I*, Coimbra, Imprensa da Universidade, 1915.

⁴⁰⁶ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis que se passaram na conquista da Guiné por mandado do Infante D. Henrique*. 2 vols. Introdução e notas Torquato de Sousa Soares. Lisbon: Academia Portuguesa de História, 1981.

⁴⁰⁷ Zurara, Gomes Eanes de, *Crónica do Conde D. Pedro de Meneses*, ed. Maria Teresa Brocardo, Lisbon, Fundação Calouste Gulbenkian, 1997.

⁴⁰⁸ Zurara, Gomes Eanes de, *Crónica do Conde D. Duarte de Meneses*, ed. Larry King, Universidade Nova de Lisboa, Lisbon 1978.

⁴⁰⁹ Carvalho, Joaquim de, "Sobre a erudição de Gomes Eanes de Zurara", in *Obra Completa de Joaquim de Carvalho*, Vol. II, 1948-1955, Lisbon, Edições Gulbenkian, 1983, pp. 184-308.

⁴¹⁰ Among the authors mentioned by Zurara, we find the Bible, the *holy priests* (St. John Crisostomus, St. Gregory, St. Jeronimus, St. Augustine, St. Bernard, St. Thomás Aquinas, Albertus Magnus), greek writers (Homer, Hesiodus, Herodotus, Aristotle, Josephus e Ptolemy), roman writers (Cesar, Titus Livius, Marcus Tullius Cicero, Ovidio, Salustio, Valerio Máximus, Pliny, Lucano, the two Senecas, Vegetius), medieval writers (Paulus Orosio, Isidoro of Sevilha, Lucas of Tuy, Rodrigo of Toledo, Pedro d'Ailly Egidius, Friar Gil of Rome, John Duns Scot), Italians (Dante, Bocaccio, Marco Polo) and Arabs (Alfraganus e Avicenna); he also reveals the influence of the chivalry romances. An extensive study on Zurara's sources can be found in Carvalho, Joaquim de, "Sobre a erudição de Gomes Eanes de Zurara", pp. 184-308.

⁴¹¹ Carvalho, Joaquim de, "Sobre a erudição de Gomes Eanes de Zurara", pp. 184-308.

⁴¹² Pinto, Correia Roberto (ed.), *Livro da Guerra de Ceuta escrito por Mestre Mateus de Pisano em 1460*, Coimbra, Imprensa da Universidade de Coimbra, 1915, p. 21. Pisano states that Zurara is "bom gramático, notável astrólogo e grande cronista".

historians⁴¹³ agree with these words, but others refer to his astrological erudition in more moderate terms. Joaquim de Carvalho considers that Zurara's testimony confirms "the high esteem that astrology enjoyed in the chronicler's youth" and "explicitly show the doctrinal contents attributed to that science".⁴¹⁴

To determine the planetary positions mentioned referred in his chronicles, Zurara could have consulted (or asked an astrologer to consult) one of the two astronomical tables available to Iberian astrologers from the 13th, 14th and 15th centuries: the tables of Isaac ibn Sid, from Toledo, written in 1252 by order of Alfonso X of Castile, or the tables of Jacob Carsono (ai-Carsi), written in the 14th century by order of Pedro IV of Aragon⁴¹⁵. The practical use of these tables is not direct; it requires some calculations, which suggests that Zurara might have had some mathematical skills (or, alternatively, he could have asked some astrologer to calculate the positions). On the other hand, he seems to be familiar with the basic astrological concepts, and he probably read the work of Ptolemy⁴¹⁶. However, not all historians agree on this point; Duarte Leite states that he "ignored the cosmography of Ptolemy and probably also the book *Almagesto*"⁴¹⁷. As an example of this lack of knowledge, he points out that Zurara does not mention the Ptolemaic theory on the sources of the Nile, although he addresses this topic⁴¹⁸. Also Joaquim de Carvalho refers that Zurara's

⁴¹³ For a comprehensive debate on this topic, refer to Carvalho, Joaquim de, "Sobre a erudição de Gomes Eanes de Zurara", p. 185.

⁴¹⁴ Carvalho, Joaquim de, "A propósito da atribuição do Secreto de los Secretos", p. 181: "*a astrologia aparece nas páginas de Zurara como ciência descritiva da Esfera e como fundamento de prognósticos astrológicos*"; in the same page: "*o seu testemunho serve fundamentalmente para corroborar o apreço em que pela juventude do cronista era tida a Astrologia e para mostrar, mais explicitamente que outrem, o conteúdo doutrinal que então se atribuía a esta ciência*".

⁴¹⁵ The sources consulted by Zurara are debated in *Crónica da Tomada de Ceuta*, pp. xviii-xx. For the topic of translation, refer to Thorndike, Lynn, *A History of Magic and Experimental Science*, Vol. 2, pp. 66-93.

⁴¹⁶ "*É de presumir que os conhecimentos de Zurara sobre astrologia tenham sido adquiridos pelo estudo da famosa obra de Cláudio Ptolomeu (100-170), Opus Quadripartitum de Astrorum Judiciis e da célebre Syntaxis Mathematica, vertida, no século IX, do grego para o árabe, por Almamon, califa de Bagdad desde 813 a 833, ficando desde então a obra conhecida sob o nome de Almagesto, o mais importante livro na história da astronomia, um livro que simultaneamente obliterou todas as obras que o precederam e se tornou a referência central de astronomia teórica durante mais de mil anos. Esta obra, posteriormente traduzida para latim, bem conhecida de Zurara, foi uma das mais lidas e conhecidas no Portugal da Idade Média*". Fernandes, Adriano, "*Crónica do Conde D. Duarte de Meneses de Gomes Eanes de Zurara Estudo histórico-cultural e edição semidiplomática*", PhD dissertation in Portuguese Culture, University of Trás-os-Montes em Alto Douro, 2007, p. 309.

⁴¹⁷ Santos, João Marinho dos, Silva, José Manuel Azevedo e, *A historiografia dos descobrimentos através da correspondência entre alguns dos seus vultos*, Coimbra, Imprensa da Universidade de Coimbra, 2004, pp. 257-258 (Cartas de Duarte Leite a Joaquim de Carvalho, 6 de Novembro de 1933).

⁴¹⁸ Santos, João Marinho dos, Silva, José Manuel Azevedo e, *A historiografia dos descobrimentos*, p. 257.

astrological knowledge was “not very vast nor very solid”⁴¹⁹ and justifies this by his manifest “deficiency, if not absence, of mathematical knowledge”⁴²⁰.

Another evidence of Zurara’s astrological shortcomings is his reluctance to provide specific details when interpreting the astrological data. It is possible that he had transcribed the notes of an astrologer, and that something was lost in the transcription. Duarte Leite advocates that Zurara took his knowledge from “a medieval book on judiciary astrology, perhaps the one written by João Gil”⁴²¹ (*Livro de Magika*, mentioned by king João).

When it comes to astrology Zurara makes some mistakes, both in form and in content.

On one hand, he mentions planetary positions that clearly don’t match the respective dates. For instance, when describing the conquest of Ceuta, in August 21st 1415, he says, “*quando estava o soll em seis graaus do syno de Virgo, e a luua sobre o primeiro quarto do seu crescimento, no primeiro graao dos dous gemeos, que ssam Pollos e Castor filhos de Leda*”⁴²² (when the Sun was at six degrees of the sign of Virgo, and the Moon upon the first quarter of its growth, at the first degree of the two twins [Gemini], who are Pollux and Castor, sons of Leda). Apart from the unnecessary display of knowledge on classical culture (as for astrological purposes there was no need to mention Pollux, Castor and Leda – Gemini would suffice) the sentence is partially wrong. Though the Sun was indeed between the 5th and the 6th degree of Virgo in August 21st 1415, the Moon was *not* in the first degree of Gemini. It was in Pisces, just starting its 3rd quarter, right after the Full Moon⁴²³. (In fact, this configuration – Sun in Virgo and Moon in Gemini *in its first quarter* – can never happen, due to the natural sequence of the signs – Gemini, Cancer, Leo and Virgo).⁴²⁴ This means that

⁴¹⁹ Carvalho, Joaquim de, “Sobre a erudição de Gomes Eanes de Zurara”, p. 263.

⁴²⁰ Carvalho, Joaquim de, “Sobre a erudição de Gomes Eanes de Zurara”, p. 263.





⁴²¹ Santos, João Marinho dos, Silva, José Manuel Azevedo e, *A historiografia dos descobrimentos*, pp. 257-258: “*Seus conhecimentos de astronomia foram provavelmente colhidos num livro medieval de astrologia judiciária, talvez o Dr. João Gil.*”

⁴²² Zurara, Gomes Eanes da, *Crónica da Tomada de Ceuta por el rei D. João I*, p. 233-235: “*Vinte e huu dias eram do mes dagosto, quando amdaua a era dAdam que he o anno do mundo (...) quando estava o soll em seis graaus do syno de Virgo, e a luua sobre o primeiro quarto do seu crescimento, no primeiro graao dos dous gemeos, que ssam Pollos e Castor filhos de Leda.*”

⁴²³ In the Summer of 1415 the Moon was in Gemini between July 30th and August 1st (with the Sun at 14°, 15° and 16° of Leo), and again between August 26th and 28th (with the Sun at 10°, 11° and 12° of Virgo); in both cases, the Moon was waning, in its 3rd and 4th quarters. This data on planetary positions, as well as all the other data of the same kind mentioned in this work, were obtained using the software *Solar Fire*, for astrological calculation.

⁴²⁴ The natural sequence of the signs makes this configuration impossible to happen. If the Sun is in Virgo, the Moon in the first quarter *has to be* in one of the signs *following* the one the Sun is in, that is, either in the end of Virgo, Libra, Scorpio or in the beginning of Sagittarius. In other words, the Moon in the first quarter has to be

either Zurara had a wrong table, or he copied it wrong from another source or, more simply, he was so thrilled with the possibility of displaying his mythological knowledge about the constellation of Gemini, that he forgot the basic rules of astrology. There is also the possibility that he had confused the symbols of Gemini and Pisces, due to their similitude – which suggests that Zurara was, in fact, copying from another document and/or he was not very knowledgeable in this matter.

Table 8 – The symbols for Gemini and Pisces		
Source:	Gemini	Pisces
Horoscope of Empress Leonor, by Regiomontanus ⁴²⁵		
MS 1711, Torre do Tombo, Portuguese National Archive ⁴²⁶		

Gemini is represented by the Roman numeral 2 (II), while Pisces is symbolized by two semi-circles united by a dash. Although different, these symbols can be easily confused.

On the other hand, Zurara is sometimes unclear in his astrological interpretations. For instance, he reports the homily of friar João Xira’s before the conquest of Ceuta, and details the astrological data mentioned by that clergyman⁴²⁷. Some of his remarks don’t make much sense from the astrological point of view. In his account of Xira’s homily, he writes: *“por entrar Martes em sua exaltaçom em casa de Venus de ssahimento do Soll, e a Saturno emtomçe que he signo de Libra, significador das cousas rrenembradores, mostra que a memoria desto ha de durar, e sse ha de poer em escripturas, cujo tresumto será leuado a*

positioned in the left side of the Sun (from the observer’s point of view). It is a waxing Moon, moving away from the New Moon (that is, the conjunction to the Sun), and following the order of the signs (counter-clockwise). On the other hand, if the Sun is again in Virgo, the Moon *has to be* in its 3rd or 4th to be in Gemini. It is a waning Moon, moving *towards* the conjunction of the Sun.

⁴²⁵ Regiomontanus, Johannes, *Joannis Regiomontani Opera Collectanea*, Zusammengestellt und mit einer Einleitung herausgegeben von Felix Schmeidler, O. Zeller Verlag, Osnabrück, 1972

⁴²⁶ ANTT, *Manuscritos da Livraria*, Ms. 1711, *Almanaque ab anno 68 osque ad anno 80, Nativitates quorundam p.*

⁴²⁷ The episode is explained further in pp. 103-105.

*mujtas partes em rrenembrancha de uossos boos feitos*⁴²⁸ (because Mars was entering its exaltation in the house of Venus of departure of the Sun, and to Saturn, which is the sign of Libra, significator of memorable things...). The astrological data he provides seems incoherent: Mars in the exaltation of the Sun and in the house of Venus and of departure of the Sun. There are several possible explanations for this awkward sentence, but the thorough exploration of these possibilities would be out of the scope of this thesis; in any case, it may relate to a specific degree of the sign Capricorn.⁴²⁹

Sometimes Zurara uses astrology as a literary device and not so much as an interpretative system – which could explain, at least partially, his lack of precision.

Other times, he mentions the position of the planets in a given day simply to clarify a date, without any astrological interpretation. For instance, about in the day of queen Philippa's death, July 19th 1415, he says: "*Os Iffantes teueram seu comselho açerqua da emterraçam da Rainha, e acordarom porque o tempo era queemte, ca era quamdo o soll estaua em dous graaos do signo do liom, que a soterrassem de noue*"⁴³⁰ (The princes had their counsel about the funeral of the queen, and they agreed that, because the weather was hot – as this was when the Sun was at two degrees of Leo – that she would be buried during the night). The queen died in July 19th 1415, only a few days before the departure to Ceuta. It became imperative to hasten the funeral, to avoid hindering the departure, and also to prevent contamination from the plague. The excessive heat (suggested by the comment about the Sun in Leo, the sign of the middle of summer)⁴³¹ was a good excuse for the haste⁴³².

⁴²⁸ Zurara, Gomes Eanes da, *Crónica da Tomada de Ceuta*, p. 164: "*E porque disse em cima que a memoria desto duraria pêra todo sempre amtre os homees, quero que saybaes que sse os juizos estrollogos som uerdadeiros, segumdo apremdi dalguus sabedores, que sabiam a ora em que sse primeiramente este feito determinou, por entrar Martes em sua exaltaçom em casa de Vénus de ssahimento do Soll, e a Saturno emtomçe que he signo de Libra, significador das cousas rrenembradores, mostra que a memoria desto ha de durar, e sse ha de poer em escripturas, cujo tresumto será leuado a mujtas partes em rrenembrancha de uossos boos feitos.*" This topic will be resumed in pp. 103-105.

⁴²⁹ He is probably referring to the *term* of Venus and the *face* of the Sun (*term* and *face* are two minor planetary dignities used in medieval astrology; a complete explanation about the astrological system of planetary dignities is out of the scope of this thesis). Part of this sentence is analysed on pp. 103-105.

⁴³⁰ Zurara, Gomes Eanes da, *Crónica da tomada de Ceuta*, p. 139.

⁴³¹ The mention to "Sun in Leo" suggests hot weather, the hottest period of the year. In the year 1415 the Sun was in the sign of Leo between July 15th and August 15th. Data obtained with the Solar Fire software.

⁴³² The *sacred* dimension of Ceuta's conquest is addressed in Rosa, Maria de Lurdes, *Longas Guerras, longos sonhos africanos*, Porto, Fio da Palavra, 2010, pp. 94-96. The special role of prince Henrique in this conquest is addressed in op. cit. pp. 132-133.

Regarding determinism, Zurara seems less concerned with moral dilemmas than king Duarte. Yet, he is aware of the theological difficulties inherent to the topic⁴³³; the preamble to prince Henrique's horoscope reveals his concerns. Before presenting Henrique's chart, Zurara explains his position on this matter. He starts by accepting the power of free will: "*posto que seja escrito que o barão sabedor se assenhorará das estrelas, e que os cursos dos planetas, segundo boa estimação dos Santos Doutores, não podem impecer ao bom homem*"⁴³⁴ (although it is written that the wise man will dominate the stars, and that the paths of the planets, according to the good judgement of the Holy Doctors, cannot hinder the good man); then he counter-argues: "*manifesto que é porém que são os corpos ordenados no mistério de nosso senhor Deus, e correm por certas medidas e a desvairadas fins, reveladas aos homens por sua graça, por cujas influencias os corpos mais baixos são inclinados a certas paixões*"⁴³⁵ (it is however manifest that the bodies are ordered in the mystery of the lord God, and they move by certain rules and to different ends, [which are] revealed to men by His grace, and by which influences the lower bodies are inclined to certain passions). In short, he admits that astrological conditioning can be overcome by certain individuals, but he also points out that conditioning does exist, and acts mainly upon the "lower bodies".

Then he emphasizes the importance of the grace of God when dealing with negative conditionings: "E por assim é falado como católicos, que as contrairas predestinações das rodas do ceu, por natural juízo, com alguma divinal graça, se podem estorvar"⁴³⁶ (and so it is, speaking as Catholics, that the contrary predestinations of the heavenly wheels, by natural judgement [and] with some divine grace, can be hindered). Divine grace can also increase the positive outcomes: "muito mais de razão está que as proveitosamente predestinadas forem, por essa mesma graça, não somente seguirão seu curso, mas ainda se acreditarão muito mais"⁴³⁷ (much more reasonable it is [to admit] that the profitable predestinations, by that same [divine] grace, not only they will follow their course, but they will be much more noticeable). In short; grace diminishes the difficulties and improves greatly the benefits. For Zurara, (and also for Duarte), divine grace could only be attained by good men – that is, by those who, through their faith and effort, could rise above the lower passions.

⁴³³ Carvalho, Joaquim de, "A propósito da atribuição do Secreto de los Secretos", p. 181.

⁴³⁴ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

⁴³⁵ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

⁴³⁶ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

⁴³⁷ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

It is interesting to notice that Zurara never mentions any astrological data regarding king Duarte, although he gives Pedro's birth data, and describes part Henrique's astrological chart. This cannot be attributed to lack of knowledge, because he was obviously aware of the charts of the royal family. Perhaps king Duarte prohibited the chroniclers to disclose any information related to his astrological chart, due to his uneasiness on this topic. Even so, it is surprising that the supposed prohibition could persist for so long after Duarte's death.⁴³⁸

- Rui de Pina (1440–1521)

Pina's works are compiled in *Crónicas de Rui de Pina*⁴³⁹.

He was a secretary at the embassies sent by King João II to Castile in 1482, and to Rome (Pope Innocent VIII) in 1484, and one of the commissaries dispatched to Barcelona by John II to negotiate the Treaty of Tordesillas (1494). He attested the will of king João II (Afonso V's son), and he witnessed his death, on October 25th 1495. The new king, Manuel I (1469-1521), appointed him chief-chronicler of the kingdom in 1497, keeper of the archives of Torre do Tombo and royal librarian⁴⁴⁰.

Pina is not always accurate in his astrological comments. For instance, when describing the coronation of king Duarte⁴⁴¹, he mentions incoherent astrological positions.

The coronation took place in August 15th 1433⁴⁴², probably in the first hours of the day, as it can be deduced by Pina's account. According to him, Master Guedelha asked the king to postpone the ceremony for a few hours, "*atee passar o meo dia*" (until after mid-day) to avoid an unfortunate configuration and benefit from a better one – so it is obvious that it was scheduled for the morning. Incidentally, this is a clear reference to the practice of elective astrology. According to Pina, the astrologer said "*pesso-vos por merce que este auto dilates atee passar o meo dia, e nisso prazendo a Deos farees vosso proveyto, e sera bem de*

⁴³⁸ King Duarte died in 1433; Zurara was appointed as successor of Fernão Lopes only in 1454.

⁴³⁹ Pina, Rui de, *Crónicas de Rui de Pina*, Porto, Lello & Irmão – Editores, 1977

⁴⁴⁰ Pina, Rui de, *Crónicas de Rui de Pina*, pp. V-XXIII.

⁴⁴¹ Pina, Rui de, "Chronica do Senhor Rey D. Duarte", in *Crónicas de Rui de Pina*, pp. 492-493. This full account of this incident, and its philosophical consequences, will be explored in this chapter

⁴⁴² Pina, Rui de, "Chronica do Senhor Rey D. Duarte", pp. 492: "Ao outro dia depois do fallecimento d'ElRey, que eram quinze dias de Agosto [1433]."

*vosso Reyno, porque estas horas em que fazees fundamento seer novamente obedecido mostram seer muy perigosas, e de muy triste constellaçam, caa Jupiter estaa retrogado, e o Sol em decaymento com outros sinaees que no Ceeo parecem assaz infelices*⁴⁴³ (I ask you as a favour to postpone this event until after mid-day, and in that [delay], pleasing God, you will have your benefit, and it will be beneficial to your kingdom, because these hours that you decided to be newly [that is, for the first time] obeyed, reveal to be very dangerous, and of a very sad constellation, because Jupiter is retrograde, and the Sun is in decay, with other signs in the heavens that seem very unfortunate).

He mentions Jupiter, the great benefic⁴⁴⁴, and the Sun, a symbol of royalty and power, to point out that they are both weak – in other words, the mains symbols of power of the chart are in bad condition, therefore making it a bad moment for a coronation.

By comparing the information provided in the chronicle to the astrological configuration of the day (August 15th 1438), it becomes evident that the first argument mentioned by Pina – Jupiter retrograde⁴⁴⁵ – is actually wrong. By the time Duarte was crowned, Jupiter was in direct motion (as opposed to retrograde motion); it had been direct since February 25th and it remained so until November 28th of 1433.

This error suggests that the chronicler was not familiar with the astrological chart of the event, and probably relied on a second-hand report. Alternatively, he might also have decided to substantiate his account with a few astrological remarks, but he lacked the knowledge to do it properly. In short – it is possible that he made it up, at least partially.

In spite of the inaccurate planetary positions, his choice of arguments reveals some basic knowledge of the astrological symbolism. By comparing⁴⁴⁶ his account with *Libro Conplido de los Iudicios de las Estrellas*, we verify that Ali ben Ragel considers that the best moment “*para receber coronas, reinos y grandes dominios o señorios*” (to receive crowns,

⁴⁴³ Pina, Rui de, “Chronica do Senhor Rey D. Duarte”, pp. 492-493.

⁴⁴⁴ As explained in Table 1 – The planets and the luminaries, p. 22.

⁴⁴⁵ Retrograde: the apparent backward movement of a planet when observed from Earth; it is explained in Appendix 1, footnote 7. In astrological terms, retrogradation is considered to be a negative condition.

⁴⁴⁶ Gerold Hilty also suggested this comparison, to clarify Pina’s speech. He specifically mentioned chapter 81 of part 7 in *Libro Conplido de los Iudicios de las Estrellas* (fol. 166v^o11-167v^o9). Hilty, Gerold, *A versão portuguesa do “Livro Cumprido”*, Biblos, Lisbon, Vol. LVIII, 1982 (pp. 207-267), p. 263.

kingdoms, large domains or honors), is when “*la Luna esté clara, limpia y salva*”⁴⁴⁷ (the Moon is clear, clean and safe [that is, not afflicted by malefic planets]). In the present case, the Moon does not qualify as suitable, because it is too close to the Sun, a position that is called *combust* (that is, obliterated – literally *burned* – by the Sun’s power and light). Talking about the planets in an elective chart for honors and coronations, Ben Ragel specifically states, “*se estuviera combusto, significa muchos esfuerzos e miedos*”⁴⁴⁸ (if it were combust, it means many efforts and fears). In short, the Moon’s condition was not favorable to the event.

The second reason he presents – the Sun in decay – is more direct. Although not a specific term in astrology, *decay* is easily related with the Sun’s position in the 12th house (the sector of the sky directly above the eastern horizon), normally described as *unfortunate*⁴⁴⁹. The suggestion to postpone the coronation until after mid-day makes sense, as it allows the Sun to culminate (reach its maximum height) in the 10th house (Midheaven) – a position of power and visibility, very favorable to the intended coronation.

Pina’s account the coronation of Afonso V, Duarte’s son, is much more plausible, from the astrological perspective. He mentions a specific day: September 10th 1438⁴⁵⁰ (the day after Duarte’s death), and a specific hour: “*á bespora do dito dia*”⁴⁵¹ (by the evening of the aforesaid day) which allows us to calculate a reasonably accurate chart.

The chart has Pisces as the ascending sign (that is, rising in the eastern horizon). The planet ruler of Pisces, Jupiter, is close to the Mid-heaven (the culmination point) in the sign of Sagittarius (which it also rules, being therefore strong). This is an excellent configuration: Jupiter, the greater benefic⁴⁵², ruler of the two main angles of the chart, is posited in the sign

⁴⁴⁷ Ragel, Ali ben, *Livro Conplido*, Livro VI, Zaragoza, Gracentro, 1988-1997, Book 7, chapter 81, p. 117: “*Alfadal, hijo de Zahel, dijo: Son buenas elecciones para recibir coronas, reinos y grandes dominios o señorios, cuando la Luna esté clara, limpia y salva (...)*”.

⁴⁴⁸ Ragel, Ali ben, *Libro conplido* (ed. Gracentro), Book 7, chapter 81, p. 120.

⁴⁴⁹ Refer to Table 3, p. 26. and also to Appendix 2 – The astrological houses.

⁴⁵⁰ Pina, Rui de, “Crónica do Senhor Rey D. Afonso V” in *Crónicas de Rui de Pina*, p. 588. “*Era quinta-feira logo seguinte, dez dias do dito mez*”.

⁴⁵¹ Pina, Rui de, “Crónica do Senhor Rey D. Afonso V”, p. 588.

⁴⁵² Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 124: “*Jupiter buena planeta, fortuna mayor (...)* y significa la rriqueza y y la honrra y todo bien” (Jupiter is a good, the greater fortune (...) and signifies wealth, and honour and all good); for more significances of Jupiter, refer to Table 1, p. 22.

of Sagittarius⁴⁵³ (in which it has all its *strength*) and close to the Mid-heaven, the highest point of the chart, related to power and royalty⁴⁵⁴.

Based on Pina's account, we can speculate that master Guedelha choose the best possible moment, considering that he had a very limited time-frame. In this case (and contrarily to the previous one), the astrological recount of the chronicle seems correct, or at least, plausible.

⁴⁵³ For the signs, refer to table 2, p. 24.

⁴⁵⁴ For the houses and their significances refer to table 3, p. 26, and also to Appendix 2.

CHAPTER 8 – THE USES OF ASTROLOGICAL KNOWLEDGE IN THE CHRONICLES

This section presents a commented survey of the relevant astrological references, ordained according to the context in which they appear. The astrological references usually fall under one of the following topics: 1. validation of power, 2. temperaments, 3. determinism versus free will.

1. Validating power: battles and noble figures

This is one of the most obvious applications of astrology in the chronicles. The astrological events are interpreted in a way that is favorable to the Portuguese and very unfavorable to their enemies. But in any case, the interpretation follows the astrological rules, as they are presented in the books previously mentioned. It is significant that the main data on this topic relates to the two principal conquests of the House of Avis, the dynastic crisis of 1383-85 and the conquest of Ceuta, respectively the beginning and the apex of their power.

1. 1. Battles

1.1.1. The besiegement of Lisbon, 1384 (by Fernão Lopes)

Following the death of king Fernando I⁴⁵⁵ in 1383, a succession crisis took place; the king of Castile, Juan I, besieged the city of Lisbon. By the middle of August a solar eclipse occurred. The Portuguese astrologers interpreted it as a bad omen for the Castilian: “*Seguiosse estonçe que aos dez e nove dias do dito mes foi o ssoll eclipse ao meo dia, e*

⁴⁵⁵ Fernando I (1345-1383) was the legitimate heir of king Pedro I (1320-1367); he was also the half-brother of João de Avis, who became João I, the first king of the second dynasty.

perdeo sua claridade, e estando emtom em o sino de Leo, a quall cousa foi espanto a todos; e deziã os astrollogos, que senificava em casa rreall gram mortiidade de gente homrrada; e assi acoteceu depois dos grandes senhores delRei de Castella, segundo adeante ouvirees”⁴⁵⁶ (it happened then, on the 19th day of the said month [August 1384] the Sun became eclipsed at noon, and lost its light, and being then in the sign of Leo, that happening was amazing to all; and the astrologers said that it meant great mortality of honored people in a royal house; and so it happened to the great lords of the king of Castile, as you will learn further [in this chronicle]). The besiegement of Lisbon ended a few weeks later, due to many casualties inflicted by the plague to the Castilian army.

The account of the chronicler is not totally precise: the eclipse happened in August 17th (not 19th), and in the beginning of Virgo (not Leo)⁴⁵⁷. This suggests a second-hand account of the events or an incorrect use of the planetary tables. Nevertheless, the astrological interpretation is correct. Furthermore, this is an example of the practical application of the astrology, as it follows the rules taught by Ali ben Ragel almost to the letter.

The chronicler considers the eclipse to be unfavorable to Castile for two reasons. Firstly, it occurs at noon when the Sun is in the 10th house (or Mid-heaven), its most elevated position, therefore related to power and royalty. Ali ben Ragel states, “*Esta es la casa del rey. E significa alteza e rey e regno e sennorio e alcaidia e la nobleza*”⁴⁵⁸ (this is the house of the king, and kingdom, and lordship, and government, and nobility). Secondly, it occurs in the sign of Leo (according to the chronicle), which is related to royalty because it is ruled by the Sun, symbol of the king. Ben Ragel states “*Leon, que es signo conueniente al sennorio, e el Sol, so sennor, en el*”⁴⁵⁹ (Leo is a sign convenient [to] all lordship, and the Sun, its lord, in it). In sum, there is a powerful royal symbol – the Sun – which is eclipsed (obscured) in the height of its daily trajectory, in a sign of royalty. These factors point to the defeat of a king; as Portugal was without a king (as João was only a suitor to the throne), the defeat should fall upon the only king involved in the events – Juan of Castile – and upon his royal house.

⁴⁵⁶ Lopes, Fernão, *Crónica de D. João I*, Cap. CXXXVIII, p. 242.

⁴⁵⁷ The data relative to the eclipse was obtained at NASA’s website, Five Millennium Catalog of Solar Eclipses: <http://eclipse.gsfc.nasa.gov/SEcat5/SE1301-1400.html>. This mistake is in fact only by a few degrees as Leo and Virgo are contiguous signs. The inaccuracy was probably related to the unfamiliarity of Fernão Lopes with the exact date for the passage of the Sun from Leo to Virgo.

⁴⁵⁸ Ragel, Ali ben, *Libro conplido*, Book 3, chapter 19, page 138.

⁴⁵⁹ Ragel, Ali ben, *Libro conplido*, Book 3, chapter 24, page 151.

1.1.2 Ceuta (by Zurara)

a) The omens of the Portuguese victory

According to Zurara, the conquest of Ceuta was preceded by a lunar eclipse, which clearly announced the defeat of the Muslims. So evident was the celestial configuration that even the Muslim astrologers were forced to predict their own defeat.⁴⁶⁰

It is not clear which eclipse he is referring to, as no specific date is given. None of the eclipses of the year 1415 occurs near the Ramadan of that year (February 23rd 1415); they all happened several months before or after that date⁴⁶¹. Besides, it is not certain that Zurara is referring to the year 1415. This imprecision can originate from a second-hand description or simply from the chronicler's imagination; it must also be considered that the report may be a fabrication (complete or partial), embedded in the chronicle with the purpose of enhancing the predestined nature of this conquest. Nevertheless, it is a relevant example of the use of astrology as a validating factor to a political decision.

Zurara recounts that “*naquelle Ramadam que ja dissemos, forom três partes da lúa criz. e pareço logo seguinte na nouidade da outra lúa 'huúa estrella açerqua dela*”⁴⁶² (that Ramadan, that we have mentioned, three parts of the Moon were dark; and it appeared a star right after the other New Moon [that is, in the following month], close to it). According to this description, there are two different signs – both worrying – appearing in sequence: a lunar eclipse, coinciding with Ramadan⁴⁶³, and one month later, the sighting of a new star (possibly a comet⁴⁶⁴).

As to the star, it appeared in the days following the New Moon and remained visible during “*toda a circulaçam da lua*”⁴⁶⁵ (the whole circulation of the Moon [that is, an entire

⁴⁶⁰ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, pp. 171-174.

⁴⁶¹ During the years of 1414 and 1415 the lunar eclipses occurred at July 3rd and December 26th (1414) and June 22nd (1415). Data obtained at NASA's website, Five Millennium Catalog of Lunar Eclipses: <http://eclipse.gsfc.nasa.gov/LEcat5/LEcatalog.html>.

⁴⁶² Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, pp. 171-174.

⁴⁶³ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, p. 171. “*E diremos primeiramente o que aconteceu naquelle março passado, em que ell esteuerom o seu Ramadam, o qual se começara a xxvij dias de feureiro*” (and we will say firstly what happened in that past month of March, when they were in their Ramadan, which had began at 27 days of February).

⁴⁶⁴ A supernova would also be a possibility, but there is no record of such an event at this time.

⁴⁶⁵ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta*, pp. 171.

month]). It was “*de mayor grandeza e rresplandeçimento, que outra nehuúa que ouuesse no çeo*”⁴⁶⁶ (of greater size and bright than any other in the Heavens).

Worried by the combination of the eclipse and the new star, the governor of Ceuta summoned several wise men, to ask their opinion about these signs, among them a famous astrologer, Azmede ben Filhe. According to Zurara, Azmede started his lengthy testimony⁴⁶⁷ by pondering the diverse factors involved: “*Verdade he que o cris da lua traz muitas vezes pestelença, outras vezes fome ou discórdia, mas estrella nunqua foy homem que a visse ante a face da terra senam agora*”⁴⁶⁸ (it is true that the obscuration of the Moon often brings pestilence, other times famine and discord; but the star was never seen by Man over the face of the Earth until now). He recognizes the eclipse as a common, although worrying, event, and relates it with the usual ailments – famine, pestilence and war. The new star is a more distressing sign, because it was never seen before; it was an irregular phenomenon, unfamiliar to the natural order of the spheres. His greater worries come from the *combination* of the eclipse and the new star.

According to the chronicler, the Muslim astrologer studied the position of Venus (the planet of the Muslims⁴⁶⁹) in search of ameliorating factors, but he was not able to find any. Quite on the contrary, he discovered more bad omens: “*Vénus que he nossa planeta vejoa triste e fora de toda alegria*”⁴⁷⁰ (Venus, which is our planet, I see it sad and out of all joy). So, according to Azmede (as reported by Zurara), there was no hope for the Muslims.

⁴⁶⁶ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, pp. 171.

⁴⁶⁷ Which will not be analysed integrally, as it would be out of the scope of this study.

⁴⁶⁸ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, pp. 173.

⁴⁶⁹ Zurara’s is referring to the correlations between the monotheistic religions and the planets: Muslims were associated to Venus, Jews to Saturn and Christians to Jupiter. This correlation was relevant with regard to identity formation, and relations between religions. These correlations can be found in Abraham ben Ezra (Ezra, Abraham ben, *The beginning of wisdom*, Mansfield, Ascella Publications, 1939). About the Muslims, he affirms (p. 199): “*its peoples are the Arabs and all those who believe in the Mohammedan religion*”. Another obvious correlation between Venus and the Arab/Muslim people is their religious holiday – Friday, the day attributed to Venus. About Saturn, he says (op. cit., p. 194): “*its groups of people embraces the Moors, the Jews, the natives of Barbary (...)*”. Ali ben Ragel confirms the association of Saturn to the Jewish people, by saying that the planet is “*so ley iudiega*” (under Jewish law). (Ragel, Ali ben, op. cit., p. 12). Also, the holiday for the Jewish people is Saturday (the *shabbat*), the day of Saturn. As to the Christians, the correlation is not so direct: ben Ezra states that Jupiter represents “*the judges, the scholars, those who serve God, the meek, the noble and the just*” (p. 195), but Jupiter rules Thursdays, while the Christian holiday is Sunday, the day of the Sun. These correlations were applied in mundane astrology, as in the present example; if an eclipse, a comet or an important conjunction of planets would fall close to these planets, the phenomenon would be correlated to the correspondent religious group.

⁴⁷⁰ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, p. 173.

With this dramatic account, Zurara uses astrological arguments to legitimize the Portuguese conquest of Ceuta – the celestial configuration was so evident and so impelling that the Muslims spontaneously admitted that they were fated to be defeated by the Portuguese. Regardless of the political implications, it must be noted that Zurara might have fully endorsed this prediction, as astrology was a crucial part of his perception of the world. For Zurara (as for most cultured man of his time) astrology was not just a rhetorical device to justify political choices, it was a natural part of life.

b) The decision to conquer Ceuta

In *Crónica da Tomada de Ceuta por el rei D. João I*⁴⁷¹, Zurara, recounts an homily pronounced by friar João de Xira⁴⁷², in the city of Lagos, short before the departure to Ceuta. In this sermon, friar Xira evokes several astrological reasons to predict success to the expedition to Ceuta⁴⁷³. As the days preceding the departure were haunted by bad omens (as mentioned: the plague, an eclipse and the death of the queen), much encouragement was necessary to restore the morals. After a long and rather conventional sermon, where he mentions several biblical examples, he affirms that the conquest of Ceuta will be remembered throughout the ages. Xira then asks, rhetorically, what proof can he present to his assembly, as they are “*fiees nembros de Jesu Christo, comprados pollo seu samgue precioso*”⁴⁷⁴ (faithful members of Jesus Christ, reclaimed by His precious blood). Xira is reassuring the audience of their spiritual salvation, because he is about to present “proof” of an astrological nature, which probably is not well accepted by some members of the audience. “*E porque disse em cima que a memoria desto duraria pêra todo sempre antre os homeés, quero que saybaaes que sse os juizos estrollogos som uerdadeiros, segundo apremdi dalguís sabedores, que sabiam a ora em que sse primeiramente este feito determinou*”⁴⁷⁵ (and because I said before that the memory of this [conquest] will last for ever before [the eyes of] men, I want you to know that, if the judgements of the astrologers are true, as I have learned from some wise men who knew the time when this endeavor was decided).

⁴⁷¹ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, p. 164.

⁴⁷² Friar João de Xira was a Franciscan priest and one of the confessors of king João I.

⁴⁷³ A study Xira’s sermons can be found in Carvalho, Joaquim de, “Sobre a autenticidade dos sermões de frei João Xira”, in *Obra Completa de Joaquim de Carvalho*, Vol. II, pp. 341-346.

⁴⁷⁴ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, p. 164.

⁴⁷⁵ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta*, p. 164.

Xira presents the astrological practice as reinforcement to the theological reasons; in his speech, astrology it does not contend with Christian faith – on the contrary, it supports it.

This remark implies that, by the time the king had decided to conquer Ceuta, a chart had been calculated, in order to evaluate the chances of success. It alludes to the practice of horary, the branch of astrology that determines the outcome of a given event by examining the horoscope calculated for the moment it was decided⁴⁷⁶. Friar Xira (or Zurara) describes that chart, and presents the correspondent astrological interpretation.

It is interesting to notice that there is no attempt to contradict the bad omens brought by the eclipse, the plague and the death of the queen; in fact, these topics are never addressed. Instead, the audience is presented to another astrological chart, which was cast long before the bad omens occurred, in the very first moment the decision was made. As this chart represents the symbolic birth of the endeavor to conquest Ceuta, it has a primordial importance in the determination of the final outcome. It precedes – and overcomes – all posterior omens, having therefore a superior power of determination.

The approximate date of this first decision is indirectly mentioned in *Crónica da Tomada de Ceuta*.⁴⁷⁷ Zurara says that right after the negative omens have manifested (the plague, the eclipse and the death of queen Philippa), some courtesans contemplated the possibility of postponing, or even giving up, the plan to conquest Ceuta. But none of them dared to approach the king with such request, for they feared his anger. The king would not want to give up the conquest of Ceuta, because the project had already consumed much time and resources. The noblemen were very aware of that: “*Quem (...) ha de teer atreuimento de fallar a elRey em tall cousa, ca mais de três anos auia, que elle tijnha este feito começado, e ajmda nom sabia outrem senam os Iffamtes e o prioll*”⁴⁷⁸ (Who (...) will dare to speak to the king about such thing [giving up the conquest of Ceuta], for there were three years that he has began this endeavor, and no one knew about it, except the princes and the prior). As the ships were launched in July 1415, the first decision would have been made, according to this comment, before the summer of 1412.

⁴⁷⁶ As explained in p. 15.

⁴⁷⁷ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta*, p. 151.

⁴⁷⁸ Zurara, Gomes Eanes de, *Crónica da Tomada de Ceuta*, p. 151.

Friar Xira's homily confirms this possibility, by referring the astrological configurations of the moment when the decision was made: "*por entrar Martes em sua exaltação em casa de Vénus de ssahimento do Soll, e a Saturno emtomçe que he o signo de Libra, significador das cousas rrenembradores, mostra que a memoria desto ha de durar, e sse ha de poer em escripturas, cujo tresumto será leuado a mujtas partes em rrenemramça de uossos boôs feitos*"⁴⁷⁹ (because Mars was entering its exaltation, in the house of Venus and the departure of the Sun, and Saturn which is [the ruler] of the sign of Libra, significator of things of remembrance, [so this] shows that the memory of this will last, and it will be recorded in writing, which will be taken to many parts, in remembrance of your good achievements).⁴⁸⁰ Mars is *in exaltation* in the sign of Capricorn, as Ptolemy explains: "*Mars, which by nature is fiery and becomes all the more so in Capricorn because in it he is the farthest south, naturally received Capricorn as its exaltation.*"⁴⁸¹

If the chronicler is correct in this statement, we can deduce that Mars was in Capricorn by the time the endeavor was decided, which allow us to place the event in a specific time frame⁴⁸². By calculating the zodiacal position of Mars, we verify that it was in Capricorn between November and December 1411, that is, a little more than three years before the departure to Ceuta.

It is clear that Friar Xira was aware of the astrological procedures – or at least the chronicler, Zurara, was skilled enough to embed some astrological remarks in his discourse, in order to support the sermon. The practical use of this type of rhetoric suggests that a significant part of the listeners could understand the astrological technicalities, or at least that they would grant them some legitimacy.

⁴⁷⁹ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, p. 164.

⁴⁸⁰ The references to Saturn evoke the correlation between this planet and memory, therefore reinforcing Xira's arguments. The correlation between Saturn, the planet of time (Chronos), and the chronicles (the instruments of remembrance) is clearly established by Zurara in Zurara, Gomes Eanes de, *Crónica do Conde D. Pedro de Meneses*, p. 173. The quotation from Zurara can be found in p. 86.

⁴⁸¹ Ptolemy, Claudius, *Tetrabiblos*, p. 91.

⁴⁸² Mars was in Capricorn from December 1410 to January 1411, from November to December 1412 and from October to December 1414. From these three possibilities, the second is the most probable, because in another part of the chronicle it is stated that the enterprise had been prepared for three years (as it will be explained in the next footnote); counting from the date of the ships' departure, July 1415 (and taking the chroniclers words to the letter) the date of the decision would be around 1412. As to the rest of the sentence, its explanation requires a previous explanation, which is out of the scope of this study. Data obtained by software Solar Fire.

c) The secret knowledge of the conquest

The plan to conquer Ceuta was probably less secretive than the king had hoped for. According to Zurara, the preparation of the ships originated much speculation about what could be the king's plan⁴⁸³. There were many different opinions about, but few – if any – could imagine that the plan was to conquer Ceuta⁴⁸⁴. The true purpose of the enterprise was revealed ahead of time by Judah Negro⁴⁸⁵, a Jewish courtesan and a minstrel. He sent a letter with a song to his friend Martim Afonso de Atouguia (who happened to be prince Pedro's squire), describing all the speculation in the court, and stating that some wise men thought that the king's goal was Ceuta⁴⁸⁶. Martim Afonso did not keep the information to himself, and soon the rumor was circulating. In the court, it was assumed that Judah Negro "*nom soubera tamto por nehuú sinall certo que uisse, soomente per juizo destrellomia em que elle mujto husaua*"⁴⁸⁷ (knew [about the project] not by any clue he had seen, but solely by the judgement of astrology, of which he practiced often).

The most relevant detail here is the automatic assumption that Judah Negro, being an astrologer and an educated Jew, would be able to guess the king's plan, resorting only to astrology (although it would be more logical to assume that he had learned it from a courtesan or from the royal family – perhaps from the queen herself, for he was close to her).

This episode is a reference to the practice of horary astrology (the branch of *interrogations*), which was probably very common in the royal court.

⁴⁸³ Apparently, only a few knew of the king's decision. Zurara states (*Crónica da tomada de Ceuta*, p. 151). "*Quem (...) ha de teer atreuimento de fallar a elRey em tall cousa, ca mais de três anos auia, que elle tijnha este feito começado, e ajmda nom sabia outrem senam os Iffamtes e o prioll?*" (Who would be so bold to address the king about this matter, as for three years he had initiated this endeavor, and no one knew of it yet, except for the princes and the prior). This sentence provides two important clues about the expedition: its supposed secrecy and the approximate date of its beginning (explained in the previous note).

⁴⁸⁴ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, p. 92.

⁴⁸⁵ Judah Negro was the paternal uncle of Master Guedelha; his brother Shlomo was Guedelha's father (as mentioned in p. 37).

⁴⁸⁶ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, pp. 92-93: "*no derradeyro pee da quarta troba*" (in the final foot of the fourth ballad) Yuda Negro stated "*os mais ssesudos emtemdiam que elRey hiria sobre a cidade de Cepta*" (the wisest among them thought that the king would go over the city of Ceuta).

⁴⁸⁷ Zurara, Gomes Eanes de, *Crónica da tomada de Ceuta*, pp. 92-93.

1.2. The achievements of great men

Astrological configurations also explained the achievements of princes and noblemen.

1.2.1. Nuno Álvares Pereira (by Fernão Lopes)

Constable Nuno Alvares Pereira (1360-1431) commanded the Portuguese troops of João I in several battles against the Castilians, namely the battle of Aljubarrota (August 14th 1385). This battle marked the victory of the Portuguese and assured João as king of Portugal. The Constable's proximity to the new dynasty was reinforced by the marriage of his daughter, Beatriz Pereira de Alvim (1380-1415), with the king's natural son, Afonso count of Barcelos and later Duke of Braganza (1443-1461). Later in life, after the death of his wife and daughter. Constable Nuno took religious vows. In 1423 he became a Carmelite, under the name of friar Nuno de Santa Maria; his piety granted him the title of *Holy Constable*.⁴⁸⁸

Given the political and social importance of Constable Nuno, it is no surprise that the chroniclers describe him as predestined figure – and his astrological chart would be presented as the first sign of his predestination. According to Fernão Lopes, it was Nuno's father, the prior Álvaro Gonçalves Pereira⁴⁸⁹, who first discovered that his son was fated for glory. Lopes states that his father was “*sizudo e emtemdido, assi dizem que era astrollogo e sabedor, e quando lhe alguus filhos naçiam trabalhavasse de vaer as nascemças delles; e per sua sçiemçia emtemdeu que avia daver huu filho, o quall seeria sempre vemçedor em todollos feitos darmas em que sse açertasse, e que numca avia de seer vemçido*”⁴⁹⁰ (serious and sage, so some say he was an astrologer and wise, and when some of his children were born, their birth [chart] was studied, and by his science he realized that he would have a son that would always be a winner in every combat he would participate in, and will never be defeated). Again we find a connection between wisdom/education and the practice of

⁴⁸⁸ For the figure of Constable Nuno, refer to Saraiva, António José, *O Crepúsculo da Idade Média em Portugal*, Lisboa, Gradiva, 1998, pp. 205-216.

⁴⁸⁹ Nuno Álvares Pereira was the son of Álvaro Gonçalves Pereira, Prior of Crato, and Iria Gonçalves do Carvalhal.

⁴⁹⁰ Lopes, Fernão. *Cronica del rei Dom Joham I*, Cap. XXXIII, p. 58.

astrology: as the prior was a cultured man, some people would automatically consider him an astrologer. The practice of astrology is associated with wisdom (as it required mathematic calculations and complex interpretation) and clearly differentiated from common sorcery. Once again, it seems that the calculation of natal charts was common among the nobility.

But not all accounts credit the “discovery” of Nuno’s military vocation to his father’s astrological skills; some attribute them to a friend of the family. He was “*huu gram leterado e mui profundo astrollogo, que chamavom meestre Thomas. E per este comtom que soube o Prioll que huu de seus filhos avia de seer veemçedor de batalhas, e que este era NunAllvarez Pereira*⁴⁹¹ (a great scholar and deep astrologer, who they called Master Tomas; (...) by him the prior knew that one of his sons would be a winner in battles, and that this [son] was Nuno Álvares Pereira). Again, the correlation between culture, nobility and astrology is reinforced.

1.2.2. Henrique *the Navigator* (by Zurara)

In *Crónica dos feitos notáveis que se passaram na conquista da Guiné*⁴⁹², the same chronicler presents the five reasons which impelled prince Henrique the Navigator to pursue the conquest of new lands in the coast of Guinea.⁴⁹³ Then he adds a sixth reason, “*que parece que é raiz donde todas as outras procedem: e isto é, a inclinação das rodas celestiaes*”⁴⁹⁴ (which seems to be the root from which all others come from: that is, the inclination of the celestial wheels). In this sentence, Zurara mentions two important concepts connected to astrology: on one hand, he describes the astrological chart as the *root*, that is, the origin of everything. The term *root* is often used by astrologers as an equivalent of natal chart, because the nativity is considered to be the origin of all things. For instance, ben Ragel says “*Por la raiz sabrás las obras del nascido y su sustancia y valor, aumento e decrecimiento de precio, y salud en los tiempos de su vida*”⁴⁹⁵ (by the root you shall know the works of the native, and his substance and value, increase and decrease of esteem, and [his] health in [all] the periods

⁴⁹¹ Lopes, Fernão. *Cronica del rei Dom Joham I*, Cap. XXXIII, p. 58.

⁴⁹² Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 44-45.

⁴⁹³ The five reasons: 1) to know what was beyond Cape Bojador; 2) to find Christian kingdoms with whom the Portuguese could trade; 3) to ascertain the true power of the Moors in those lands; 4) to seek for Christian allies within the Moorish lands; 5) to expand Christian faith.

⁴⁹⁴ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

⁴⁹⁵ Ragel, Ali ben, *Livro Conplido*, Livro VI, Zaragoza, Gracento, 1988-1997.

of his life). But on the other hand, Zurara argues that the chart only confers *inclination*, which leaves enough room to accommodate both the notion of determinism and the exercise of free will. In Zurara's concept of astrology (which, all things considered, is not so different from Ptolemy's concept) these apparently contradictory notions co-exist without conflict.

He goes on to describe the prince's horoscope: "*o seu ascendente foi em Áries, que é casa de Marte, e exaltação de sol, e que seu senhor está em a XIª casa, acompanhado do sol*"⁴⁹⁶ (his Ascendant was in Aries, which is the house of Mars and the exaltation of the Sun, and its ruler is in the 11th house together with the Sun). The description begins by the Ascendant (the sign rising in the eastern horizon), which is relevant, because the Ascendant was considered to be the most important point of the astrological chart. Zacuto states about the 1st house (another designation for the Ascendant): "*la casa primera significa la complision y el gesto y la vida y la ciencia y es universal pera todas las cousas y pensamientos*"⁴⁹⁷ (the first house means the complexion, and manner, and life, and knowledge, and it is universal for all things and thoughts).

Referring to Mars, the ruler of the ascendant sign, Zurara provides more information: "E porquanto o dito Marte foi em Aquario, que é casa de Saturno, e em casa de esperança, significou que este senhor se trabalhasse de conquistas cobertas aos outros homens, e secretas, segundo a qualidade de Saturno, em cuja casa ele é."⁴⁹⁸ (And because the aforesaid Mars was in Aquarius, which is the domicile of Saturn, and in house of hope, this signified that this Lord would endeavor in high and mighty conquests, concealed to other men, and secret, according to the quality of Saturn, in which house it [Mars] is). Zurara then turns his attention to Mars, ruler of Aries, Henrique's ascendant sign. The planet is traditionally associated military achievements. About Mars, Ragel says, "es planeta de las batallas"⁴⁹⁹ (it is the planet of battles). By emphasizing the qualities of Mars in Henrique's horoscope, Zurara enhances the prince's military prowess. These are not common conquests, though: they are secret and unattainable to the common man. The secrecy is due to Saturn (the farthest of the planets and the one of dimmer bright, therefore related to hidden things): as

⁴⁹⁶ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

⁴⁹⁷ Carvalho, Joaquim de, "Dois inéditos de Abraão Zacuto", p. 119.

⁴⁹⁸ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 45.

⁴⁹⁹ Carvalho, Joaquim de, "Dois inéditos de Abraão Zacuto", pp. 124-125.

Mars is positioned in Aquarius, a sign ruled by Saturn, Zurara considers that the actions represented by Mars (conquests, battles) are tinted by the qualities of Saturn (hidden things).

The position of Mars in the 11th house implies honors and dignities, because it is considered a fortunate place. Zacuto declares: “*la onzena casa es casa de buena fama y de los caualleros. y de la esperança. (...) Si en esta casa esta el sol o otras planetas o la parte fortuna allj resciben grand dignidad y fuerça y buenas signjficaciones en el nascimjento*”⁵⁰⁰ (the 11th house is house of good fame and of knights and of hope. (...) If in this house we find the Sun, or other planets, or the Part of Fortune, they hereby receive great dignity and strength and good significations in the nativity).

Zurara carries on the interpretation: “E por ser acompanhado do sol, como disse, e o sol ser em casa de Júpter, significou todos seus trautos e conquistas serem lealmente feitas e a prazer de seu Rei e senhor”⁵⁰¹ (And because it was accompanied by the Sun and, as I said, the Sun was in the domicile of Jupiter, it signified that his achievements and conquests were loyally accomplished to the delight of his king and lord).⁵⁰² The involvement of the Sun, a symbol of royalty, and Jupiter, the greater benefic the most favorable planet⁵⁰³, and signifying temperance and justice, describes the actions of the prince as honorable and loyal.

This is a good example of the complexity of the astrological interpretations, where the contributions of different planets and signs are combined according to certain rules and priorities, in order to reach a practical conclusion.

The data provided is not sufficient to determine Henrique’s birthday, but that it is well known – 4 March 1394. On the other hand, it discloses the probable hour of the prince’s birth: by stating that the Sun is in the 11th house, Zurara means that he was born in the morning, some time after sunrise, but still long before noon. The Sun was therefore rising in the sky, mid-way between the area immediately above the eastern horizon (which corresponds to the 12th house), but still far from its culmination (10th house or mid-heaven).

⁵⁰⁰ Carvalho, Joaquim de, “Dois inéditos de Abraão Zacuto”, p. 172.

⁵⁰¹ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 146.

⁵⁰² In Henrique’s chart the Sun is indeed in the domicile of Jupiter, as he is in Pisces, one of the signs ruled by this planet. The domiciles of the planets are: Saturn – Capricorn and Aquarius, Jupiter – Sagittarius and Pisces, Mars – Aries and Scorpio, Venus – Taurus and Libra, Mercury – Gemini and Virgo, the Moon – Cancer, the Sun – Leo (Carvalho, Joaquim de, “Dois inéditos de Abraão Zacuto”, pp. 116, 117).

⁵⁰³ Carvalho, Joaquim de, “Dois inéditos de Abraão Zacuto”, p. 124: “*Jupiter buena planeta, fortuna mayor (...) y significa la riqueza y la honrra y todo bien*” (Jupiter is a good, the greater fortune (...) and signifies wealth, and honour and all good).

Quite unsurprisingly, the astrological interpretation is very favorable. There is no “down side” in this chart – only excellent qualities and prognosis. According to Zurara, the chart reveals the prince’s inclination to discover and conquest new lands. The chronicler seems to be perfectly aware of the sensitivity of the topic, as it can be seen in the cautious preamble preceding the chart’s interpretation⁵⁰⁴.

2. Temperaments – explaining manners and behavior

Astrology could also explain manners, habits and health issues. The theory of the temperaments provided the key to integrate medicine and astrology (and, in a sense, natural philosophy).⁵⁰⁵

2.1. Henrique *the Navigator* (by Zurara)

Zurara refers to prince Henrique’s temperament when describing his manners and behavior. “Foe home de grande conselho e autoridade. auisado e de boa memorya. mais em algumas cousas vagaroso, já seia que fosse pollo senhoryo que a freima auya e sua cõpreissom, ou por enliçõm de sua vootade, mouida a algua certa fim aos homees nom conhecida”⁵⁰⁶ (He was a man of great counsel and authority, wise and of good memory, but in some things slow, either by the power that phlegm had over his complexion, or by choice of his will, driven by some aim unknown to other men). Once again, Zurara combines determinism and free will. According to him, prince Henrique had two distinct reasons to act slowly (that is, solemnly, austerely): his phlegmatic temperament (in other words, the natural tendency of his character), and his own choice (that is, free will). For Zurara, both reasons seem to co-exist with no conflict whatsoever.

⁵⁰⁴ Presented in pp. 94-95.

⁵⁰⁵ Refer to pp. 30-33.

⁵⁰⁶ Zurara, Gomes Eanes de, *Crónica dos feitos notáveis*, p. 29.

2.2. Count Pedro de Meneses (by Zurara)

The astrological reasons can also work as an excuse to personal faults. In the biography of Count Pedro de Meneses (1370-1432)⁵⁰⁷, governor of Ceuta, Zurara mentions one of his flaws – inconstancy – and relates it to astrological factors⁵⁰⁸.

After many years governing Ceuta, Count Pedro travelled back to the kingdom of Portugal and transferred the government of the city to his son, Duarte (1414-1464)⁵⁰⁹. Before his departure, he promised Duarte that he would grant him the government of Vila Real (a city in Algarve). But this promise was soon to be broken. In Portugal, his older daughter, Beatriz, persuaded him to give Vila Real to her husband. Count Pedro promptly indulged his daughter's plea, forgetting the promise he had made to Duarte.

The chronicler explains this lack of coherence by several factors: the influence of master Josepe (Beatriz's Jewish physician), the advanced age of count Pedro (which made him easier to persuade), and his astrological inclination. Of the latter, he states "*a natureza daquelle conde que era de mudauees propositos ca nacera em signo de dous corpos na triplicidade do fogo*"⁵¹⁰ (the nature of that count was of changeable purposes, for he was born in a sign of two bodies in the triplicity of fire). According to Ptolemy, the signs of two bodies⁵¹¹ are "*Gemini, Virgo, Sagittarius, and Pisces*"⁵¹². As to the triplicity of fire, Ali ben Ragel states that it assembles "*Aries, Leo and Sagittarius*"⁵¹³. This is also confirmed by Abraham Zacuto: "*Los communes y de dous querpos son geminis. virgo. sagittarius picis*" (the common [signs] and of two bodies are Gemini, Virgo, Sagittarius and Pisces) and "*aries*."

⁵⁰⁷ Pedro de Meneses (1370-1437), the 2nd Count of Viana do Alentejo, 1st Count of Vila Real and the first Portuguese governor of Ceuta.

⁵⁰⁸ The full account of this incident can be found in Zurara, Gomes Eanes de, *Crónica do Conde Dom Duarte de Meneses*, pp. 64-67. To this sudden change of heart also contributed Duarte's illegitimate condition: he was a bastard, although the only male son, while Beatriz was legitimate and the first-born child; additionally, she was the daughter of his first (and according to the chronicler, much loved) wife, Margarida de Miranda.

⁵⁰⁹ Duarte de Meneses (1414-1464) was 3rd Count of Viana do Alentejo, 2nd Count of Viana (da Foz do Lima), Lord of Caminha and the first Portuguese captain of Alcácer-Ceguer (Ksar es-Seghir or Ksar Sghir or al-Qsar al-Seghir, a small town on the Mediterranean coast of Morocco).

⁵¹⁰ Zurara, Gomes Eanes de, *Crónica do Conde Dom Duarte de Meneses*, p. 67.

⁵¹¹ Also called bicorporeal, double, common or mutable signs.

⁵¹² Ptolemy, Claudius, *Tetrabiblos*, p. 67.

⁵¹³ Ragel, Ali ben, *El Libro Conplido*, p. 6: "*Aries, Leo e Sagittarius son los igneos. Taurus, Virgo e Capricornus son los terreos. Gemini, Libra e Aquarius son los aereos. Cancer, Scorpio e Piscis son los aquaticos*" (Aries, Leo and Sagittarius are igneous; Taurus, Virgo and Capricorn are earthy; Gemini, Libra and Aquarius are aerial; Cancer, Scorpio and Piscis are aquatic).

y leo. y sagitario son del fuego” (Aries, and Leo and Sagittarius are of the fire [element])⁵¹⁴ By crossing these references, it becomes clear that only one sign – Sagittarius – assembles both qualities: two bodies and fire.

As to the correlation between the astrological attributes and character traits, it can also be found in these authors. Ptolemy claims that “*the bicorporeal signs make souls complex, changeable (...) unstable, fickle (...) prone to change their minds*”⁵¹⁵, and Ali ben Ragel echoes his words: “*los signos comunales fazen los espiritos convertibles que’s camian por que quiere e non se afirman en ninguna cousa, de diuersos asmamientos e non lo puede onme saber siesto de sos mannas (...)*”⁵¹⁶ (*the common [or bicorporeal] signs make the spirits voluble and [causes them to] vary according to their whim and they are not steady in any matter, [they are] of diverse states of mind, and no one can know for certain their ways*).

The term *was born in a sign* may refer not to a given period of the year (namely when the Sun is in Sagittarius – between the end of November and December), but to a specific hour of the day, when the sign of Sagittarius was rising (that is, when Sagittarius was the ascendant sign). If so, this means the chronicler knew the birth date and time – and therefore the astrological chart – of count Pedro de Meneses.

So, Zurara says that Sagittarius inclined count Pedro to be changeable; his inconstancy, therefore, was not entirely his fault, but an expression of his natural inclination.

2.3. The temperament of Christ (by Paulo de Portalegre)

A discussion about the melancholic complexion of Christ became the pretext to ban the Jewish students from Christian schools. In the *Novo Memorial do Estado Apostólico*⁵¹⁷, the writer, friar Paulo de Portalegre, recounts this incident.

One of the students brought a *veronica* (a cloth with the face of Christ painted on it) into the class. The other students gathered around and one of them commented: “*Óo que bem compreiondo corpo! Por serto se não fora morto per artificio nuqa naturalmente morera!*”

⁵¹⁴ Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, p. 114 and p. 113, respectively.

⁵¹⁵ Ptolemy, Claudius, *Tetrabiblos*, p. 335.

⁵¹⁶ Ragel, Ali ben, *Libro Conplido*, p. 182.

⁵¹⁷ Portalegre, Paulo de, *Novo Memorial do Estado Apostólico. Primeira Crónica dos Lóios*, pp. 130-140.

(Oh, what a good complexion! Surely, if he had not been killed by deceit, he would have never died by natural causes”⁵¹⁸. They all agreed except a young Jewish student, Abraham Guedelha (d. 1471), the son of Master Guedelha⁵¹⁹. Quite boldly, considering that he was – literally – a religious minority, he proclaimed, “*Como pode ser isso? Que ele era malenconico, que é a mais pesima copreissão que posa ser!*”⁵²⁰ (How can that be? As he was a melancholic, which is the worst complexion possible). This comment disgusted the Christian students, but they dared not to reply, “*por causa da grande e malina favoreza que ho pai do dito judeu tinha cõ el rei e senhores*”⁵²¹ (due to the high and malignant esteem the father of the said Jew received from the king and other great lords). However, some students recounted the incident to the school’s principal, father Baptista, and he angrily replied that, had he been there, the boy’s blasphemy would have severely punished. At this point a Jewish physician, who overheard the conversation replied defiantly to father Baptista: “*Pois que mal dizia se asi hé?*”⁵²² (What is the problem, if indeed it is so?) By this he meant that the melancholic complexion of Christ was a well-known fact, and therefore he saw no reason for such commotion. This remark was too much for father Baptista, who “*se ão pode ter mas acudiu-lhe em as faces cõ hua grão bofetada*” (could not refrain himself and slapped him in the face), notwithstanding the fact that the other man was a respected physician.

As a consequence of this incident, the sons of Jewish courtesans were forbidden to attend Christian schools.

The incident about Christ’s temperament was obviously a pretext to voice out the mutual aversion between the two religious groups⁵²³; the presence of privileged Jews in the

⁵¹⁸ Portalegre, Paulo de, *Novo Memorial do Estado Apostólico*, p. 130.

⁵¹⁹ Mestre Guedelha was, has stated before, the king’s astrologer and physician (see p. 37). For an explanation about the *social mimetism* of Jewish courtesans in the medieval period, and its consequences in Jewish culture, refer to Faingold, Reuven, “Judeus nas cortes reais portuguesas”, in *Sefarad, Revista de Estudios Hebraicos, Sefardies y de Oriente Próximo*. Vol. 55. Fasc.1. Madrid: 1995, p.77-104.

⁵²⁰ Portalegre, Paulo de, *Novo Memorial do Estado Apostólico*, pp. 130-140.

⁵²¹ Portalegre, Paulo de, *Novo Memorial do Estado Apostólico*, pp. 130-140.

⁵²² Portalegre, Paulo de, *Novo Memorial do Estado Apostólico*, pp. 130-140

⁵²³ The on-going abrasion between Christians and Jews, which is quite evident in this episode, exploded with tremendous violence in the massacres of April 1506. For the tensions between Christians and Jews in the late 15th century refer to Moreno, Humberto Baquero, “Tensões e conflitos na sociedade portuguesa em vésperas de 1492”, in *Revista de História - Centro de História da Universidade do Porto*. Porto, vol. XI, 1991 (pp. 23-43),

royal courts was a permanent element of tension in Portuguese society⁵²⁴. Nevertheless, the fact remains that the topic in dispute – the theory temperaments and its correlation to health and longevity – is a crucial part of the astrological system. Only those who had at least a basic knowledge of this theory could address this topic in an argument.

3. Fate and free will

Determinism was arguably the most sensitive topic within astrology. As early as the 2nd century (and probably from much earlier) and throughout the Middle Ages, there is an ongoing discussion about the limits of determinism and the power of free will.⁵²⁵ This was, in fact, the strongest objection presented by those who criticized astrology: they denied the existence of a pre-determined destiny, and proclaimed that man's free will could surpass all determinations. They mistakenly presumed that the astrologers endorsed the notion of absolute determinism, and for that reason, they rejected astrology altogether. However, many cultured astrologers would integrate both determinism and free will in their interpretations⁵²⁶. But these subtleties escaped both the less educated practitioners and the opponents of astrology, as these two groups shared more simplistic views on the matter.

In the Portuguese chronicles we find some examples of the coexistence of these different perspectives.

pp. 24; for the Jewish communities in medieval Portugal, refer to the extensive work of Maria José Ferro Tavares: Tavares, Maria José Ferro, *Os judeus em Portugal no século XIV*, Lisbon, Guimarães & Ca, 1979; *Os judeus em Portugal no século XV*. 1^a edição. Vol. I. Lisbon: Universidade Nova de Lisboa, Faculdade de Ciências Sociais e Humanas, 1982; *Os judeus na época dos Descobrimentos*. [s.l]: Edição ELO, 1995 and *A herança judaica em Portugal*, Lisbon, CTT Correios de Portugal, 2004.

⁵²⁴ Faingold, Reuven, “Judeus nas cortes reais portuguesas”, p. 104.

⁵²⁵ For a comprehensive analysis of the topic of determinism, refer to von Stukrad, Kocku, *História da Astrologia*, pp. 96-105 and pp. 213-220.

⁵²⁶ Refer to pp. 120-125.

1. The coronation of king Duarte (by Rui de Pina)⁵²⁷

The *Chronica de D. Duarte* recounts that, following the death of king João⁵²⁸ in August 1433, the heir, king Duarte, decided he would be crowned in the morning of August 15th, the day of Saint Mary⁵²⁹ (as it was already explained). The court astrologer asked the king to postpone the coronation until noon, because the selected time was very unfortunate from the astrological point of view⁵³⁰.

But in spite of the astrologer's plea, King Duarte refused to postpone the coronation. He alleged that, although he had no doubt about astrology's value, as it was "*huma das Sciencias antre as outras permitidas e aprovadas*"⁵³¹ (one of the several permitted and approved sciences), and although he knew that "*os Corpos inferiores são sogeytos aos sobrecelestes*"⁵³² (the inferior bodies were subjected to the celestial ones), he supremely believed that "*Deos sobre todo*"⁵³³ (God [was] above all).

This reply – even if distorted by the chronicler's imagination – establishes a hierarchy of powers between astrology and divine will. For king Duarte, the astrological system (being a reflection of nature and of the natural laws), was not in cause by itself. But he deemed it as totally submitted to the will of God, which was the supreme power of Creation. He therefore preferred to commend his reign to God's mercy, rather than to follow the astrological advice. "*A elle soo me encomendo, e aa Bemaventurada Virgem Maria Sua Madre Nossa Senhora, cujo dia oje he*"⁵³⁴ (To Him alone I commend my self, and to the Blessed Virgin Mary, His Mother, Our Lady, whose day is [celebrated] today).

⁵²⁷ For the full account of Duarte's coronation, refer to Duarte, Luís Miguel, *D. Duarte*, pp. 137-138

⁵²⁸ For this topic, refer to Sousa, Armindo de, *A morte de D. João I*, pp. 69-71.

⁵²⁹ Pina, Rui de, "Chronica do Senhor Rey D. Duarte", pp. 492-493.

⁵³⁰ Pina, Rui de, "Chronica do Senhor Rey D. Duarte", p. 493: "*estas oras em que fazees fundamento seer novamente obedecido mostram seer muy perigosas, e de muy triste constellaçam, caa Jupiter estaa retrogado, e o Sol em decaymento com outros sinaees que no Ceeo parecem assaz infelices*" (these hours that you make foundation to be newly [that is, for the first time] obeyed, revel to be very dangerous and of very sad constellation, for Jupiter is retrograde and the Sun in decay, along with other signs in heaven that seem [to be] very unfortunate).

⁵³¹ Pina, Rui de, "Chronica do Senhor Rey D. Duarte", p. 493.

⁵³² Pina, Rui de, "Chronica do Senhor Rey D. Duarte", p. 493.

⁵³³ Pina, Rui de, "Chronica do Senhor Rey D. Duarte", p. 493.

⁵³⁴ Pina, Rui de, "Chronica do Senhor Rey D. Duarte", p. 493.

The astrologer declared, “*Senhor, a elle praza que assi seja*”⁵³⁵ (my Lord, it pleases to God that would be so), this way dismissing the king’s fears and reassuring him that there was no conflict between astrological practice and Christian faith⁵³⁶. Having said that, he insisted in his request: “*nom era grande inconveniente sobreeserdes nisso huu pouco para se tudo fazer prosperamente, e como devya*”⁵³⁷ (it would not be a great inconvenience if you would postpone it for a while, for everything to be prosperously done, and as it should be).

For Master Guedelha, the will of God could be (or, in this case, should be) assisted by the judicious choice of the right moment to take action – that was, in fact, the benefice of elective astrology. But king Duarte again refused, claiming that complying with the astrologer’s request would be a sign of lack of faith. “*Nom farei, pois nom devo*” (I will not do it, because I should not), he declared⁵³⁸. He seems to worry more about his public image than about his moral choices, as he immediately adds: “*ao menos por não parecer que mingoa em my a speranza de firmeza que em Deos, e sua Fee devo ter*”⁵³⁹ (at least so it doesn’t look like it lacks in me the hope of steadfastness in God and in His faith, that I must have).

Duarte does not question the essence of the astrologer’s prediction – that is, its reliability. Instead, he brings into debate another dilemma: the allegiance to God versus the compliance to the astrologer’s recommendations. Although he accepts the possibility to predict through astrology, he condemns the blind submission to predictions⁵⁴⁰. In other words, he considers that free will is contrary to astrology. This dilemma, however, exists only for Duarte. Master Guedelha sees no conflict: the act of voluntarily choosing the best astrological moment is, by definition, an exercise of free will.

⁵³⁵ Pina, Rui de, “*Chronica do Senhor Rey D. Duarte*”, p. 493.

⁵³⁶ At least when it came to the practice of astrological elections.

⁵³⁷ Pina, Rui de, “*Chronica do Senhor Rey D. Duarte*”, p. 493.

⁵³⁸ Pina, Rui de, “*Chronica do Senhor Rey D. Duarte*”, p. 493.

⁵³⁹ Pina, Rui de, “*Chronica do Senhor Rey D. Duarte*”, p. 493.

⁵⁴⁰ Carvalho, Joaquim de, “*A propósito da atribuição do Secreto de los Secretos*”, p. 179: “*in the natural order of things, prediction seemed acceptable to him within the limits of common sense, however, in the moral order he condemned the subordination of the actions to astrological or magical predictions*”.

As the king refused to postpone the coronation for a few hours, Guedelha predicted that his reign would bring “*grandes fadigas, e trabalhos*”⁵⁴¹ (great toil and trouble). The chronicler adds “*segundo ao diante se dirá*” (according to what will be said next), this way subscribing the astrologer’s prediction.

King Duarte reigned only five years (1433-1438) and died short before completing 47 years of age, possibly because of the plague. Pina no doubt attributed the misfortunes of his reign to his refusal to postpone his coronation.

2. The coronation of king Afonso V (by Rui de Pina)

Duarte’s son, Afonso V, was only 5 years old when he inherited the throne.⁵⁴² The regent, prince Pedro, did not hesitate to consult master Guedelha about the young king’s coronation. The ceremony had to take place in September 10th 1438⁵⁴³, the day after Duarte’s death, so the astrologer’s choices were somewhat limited. He decided that the best moment was “*á bespora do dito dia*” (by the evening of the aforesaid day)⁵⁴⁴. The chronicler accounts that “*Mestre Guedelha, singular physico e astrologo, por mandado do Infante regulava, segundo as influências e cursos dos planetas, a melhor hora e ponto em que se poderia dar aquella obediência...*”⁵⁴⁵ (Master Guedelha, notable physician and astrologer, by the order of the Infante [Pedro] regulated, according to the influence and the course of the planets, the best hour and point [moment] in which the obedience could be done). When the moment came, the astrologer signaled the regent: “*dizendo Meestre Guedelha, que era booã ora pera*

⁵⁴¹ Pina, Rui de, “Chronica do Senhor Rey D. Duarte”, pp. 492-493: “*E logo Meestre Guedelha affirmou que regnaria poucos annos, e esses seriam de grandes fadigas, e trabalhos, como foram, segundo ao diante se dirá*” (and then master Guedelha stated that he would reign for few years, and those would be full of fatigues and trouble, as they were, according to what will be recounted next).

⁵⁴² Pina, Rui de, “Crónica do Senhor Rey D. Afonso V”, in *Crónicas de Rui de Pina*, Porto, Lello & Irmão – Editores, 1977, (pp. 577-882), pp. 588-590

⁵⁴³ Pina, Rui de, “Crónica do Senhor Rey D. Afonso V”, p. 588: “*Era quinta-feira logo seguinte, dez dias do dito mez*”.

⁵⁴⁴ Pina, Rui de, “Crónica do Senhor Rey D. Afonso V”, p. 588.

⁵⁴⁵ Pina, Rui de, “Crónica do Senhor Rey D. Afonso V”, pp. 588-589. The complete quotation: “*E em quanto m Mestre Guedelha, singular Fysico e Astrologo, por mandado do Yfante regulava, segundo as ynfluencias e cursos dos Planetas, a melhor hora e ponto em que se poderia dar aquella obediência...*”.

*fazer sua obediencia, o Yfante com os giolhos em terra tomou as maaons ao Pryncepe...*⁵⁴⁶
(Master Guedelha declared that the moment was good to make his obedience, the Infante [Pedro], in his knees, took the hands of the prince [Afonso V]).

This is a clear evidence of the practice of elective astrology at the service of the royal family. Apparently, prince Pedro saw no conflict between the exercise of free will and the choice of the best astrological moment, and so, the astrologer's advice posed for him no problem. He obviously did not follow his brothers' counsel about keeping away from the astrological practices. Contrarily to Duarte, he did not see the practice of elective astrology as a subjection to determinism or a diminishment on free will. Like master Guedelha, he saw it as an exercise of freedom of choice.

⁵⁴⁶ Pina, Rui de, "Crónica do Senhor Rey D. Afonso V", p. 589.

FINAL THOUGHTS – *VIR SAPIENS DOMINABITUR ASTRIS* – THE CENTRAL PROBLEM OF CHRISTIAN CULTURE TOWARDS ASTROLOGY

Prediction was one of the main advantages of the astrological practice – and also one of its most controversial topics. Opinions diverged about the extent of prediction, and the degree of determinism involved.

Some considered that the nature of the event to be predicted would determine the different degrees of astrological influence. For instance, Ptolemy differentiates between the events that can be predicted and those that cannot; he also distinguishes those that can be avoided and those that are inevitable. These diverse natures are determined by the events's origin: “*whatever events depend upon a first cause, which is irresistible and more powerful than anything that opposes it, must by all means take place; on the contrary, of events that are not of this character, those which are provided with resistant forces are easily averted (...)*”. In short, not all things are inevitable – only the ones determined by the *first cause*. As to the other events, they only occur if the natural causes are not unimpeded: “*If left to itself through ignorance of the opposing forces, will inevitably develop as its original nature compels*”⁵⁴⁷. But this kind of event can be avoided, or at least significantly diminished “*if it receives preventive treatment*”⁵⁴⁸. Ptolemy considers foreknowledge as a way to ameliorate, it not prevent altogether, the undesirable outcomes. And so his conclusion is a call to action and a praise to prediction: “*If future happenings to men are not known, or if they are known and the remedy is not applied, they will by all means follow the course of primary nature; but if they are recognized ahead of time and remedies are provided, again quite in accord with nature and fate, they either do not occur at all or are rendered less severe*”⁵⁴⁹.

Ptolemy also believes that prediction offers an opportunity to enhance a positive tendency. And even in the case of events that cannot be avoided (because they derive from the *first causes*), he still sees certain advantages in foreknowledge, namely the possibility to cope (in a rather stoic fashion) with the inevitable: “*we should consider that even with events that will necessarily take place, their unexpectedness is very apt to cause excessive panic and*

⁵⁴⁷ Ptolemy, Claudius, *Tetrabiblos*, p. 29.

⁵⁴⁸ Ptolemy, Claudius, *Tetrabiblos*, p. 29.

⁵⁴⁹ Ptolemy, Claudius, *Tetrabiblos*, pp. 27-29.

*delirious joy, while foreknowledge accustoms and calms the soul by experience of distant events as though they were present, and prepares it to greet with calm and steadiness whatever comes.*⁵⁵⁰

In spite of its relevance in medieval society, astrology was not taken as the sole influence in human life. Country and race (that is, culture and genetics, respectively), personal choices and – most importantly – the will of God, also contributed to shape individual destiny. All these causes combined in a complex equation (which differed from one individual to another, as each person has a different way to deal with foreknowledge) to determine the possible outcomes.

Ptolemy equates all the causes and their hierarchy of interactions. “Unless each one of these things is examined together with the causes that are derived from the ambient [the astrological influence], although this latter can be conceded to exercise the greatest influence (for the ambient is one of the causes for these things being what they are, while they in turn have no influence upon it), they can cause much difficulty for those who believe that in such cases everything can be understood, even things not wholly within its jurisdiction, from the motion of the heavenly bodies alone”.⁵⁵¹ From this long sentence two main concepts arise: on one hand, the predominance of the astrological causes above all others; on the other, the need to put astrological influence in perspective, and to take in account many other factors. And he concludes that those who consider only the planetary influence cannot produce accurate predictions.

Some astrologers went even further away from determinism, asserting that astrology was not in itself the *cause* of things; instead, it only *described* the many causes of things. The concept is already delineated in Ptolemy (he accepts that though Man is under the *influence* of the stars, their various actions are not, for it is left to their own free will to develop these

⁵⁵⁰ Ptolemy, Claudius, *Tetrabiblos*, p. 23. A similar perspective is expressed in *Segredo dos Segredos*, as mentioned in pp. 56-57. For the concepts of destiny and stoicism, refer to Stuckrad, Kocku von, *História da Astrologia*, pp. 96-100.

⁵⁵¹ Ptolemy, Claudius, *Tetrabiblos*, p. 19.

predispositions for good or evil). This is taken further by some medieval Neoplatonists represented the stars not as active forces but as symbols.⁵⁵²

But again, only the cultured practitioners shared this complex and nuanced vision of astrology – a flexible, almost fluidic, interaction between fate and free will, leaving ample room for ethical choices. Ethics was, in fact, the active factor in this equation: it allowed Man to shift from a conditioned situation (when dominated by his passions) towards a more free condition (in control of his passions). Yet, the common practitioners tended towards a much more simplified perspective of causality and determinism⁵⁵³.

King Duarte also objects to this rigid view, but he puts the blame on the astrologers: “*Que as pranas nos outorguem grande parte das condições, perguntemse os estrollegos; os quaaes nom sollamente parte destas, mas todas, querem afirmar que nos som dadas*”⁵⁵⁴ (that the planets confer us a great part of [our] conditions, [one should] ask the astrologers, who say that not only part but all is given to us [by the planets]). His protest is directed to those who see astrology as the only influence in life, capable of affecting everything – that is, the less cultured practitioners, who proclaim absolute determinism.

In any case, he does not question the value of astrological interpretation and prediction by itself, although he perceives its range as limited: “*é de teer sem duvida que as pranas nos enduzem e dam inclinação, a bem e a mal, como fazem as outras partes suzo scriptas, mas nom em tal guisa que nom possamos contradizer*”⁵⁵⁵ (it is to be taken without any doubt that the planets induce us and confer us inclination, but not in such a way that we cannot contradict [it]). He ultimately attributes all choices to Man’s free will, a force that we conceives to be somewhat independent from both stars and religion⁵⁵⁶: “*das pranas e das*

⁵⁵² Klibansk, Raymond; Panofsky, Erwin; Saxl, Fritz, *Saturn and Melancholy*, p. 182. The authors consider that this position “clearly anticipates” the view “*inclinat astra, non necessitant*”.

⁵⁵³ This simplistic view raised vigorous and systematic protest from the educated practitioners. For instance Roger Bacon (1214-1294), who had studied Ptolemy, Ali ben Ragel and Abu Ma’shar, states that no wise astrologer defends the notion of direct influence of the stars over human destiny; only the ignorant, layman astrologers and mercenaries would do so. Stuckrad, Kocku von, *História da Astrologia*, pp. 219-200.

⁵⁵⁴ Duarte, *Leal Conselheiro*, p. 151

⁵⁵⁵ Duarte, *Leal Conselheiro*, p. 151.

⁵⁵⁶ Klibansk, Raymond; Panofsky, Erwin; Saxl, Fritz, *Saturn and Melancholy*, pp. 183, 184: “*But though Thomas Aquinas himself though the could go so far as to consider that the stars might exert an indirect influence on the intellect, yet he, like his successors, eventually comes to the conclusion that man's will is not subject to the stars. 'For that reason' St Thomas remarks, 'the astrologers themselves say that the wise man*

*outras partes podemos seer enduzidos e tentados, mes nom costringidos, porque principalmente fica todo em poder de nosso livre alvydro, nom nos costringendo a predistynaçom, nem persciencia de Nosso Senhor Deos*⁵⁵⁷ (from the planets and other parts [of astrology] we can be induced and tempted but not constrained, because everything rests mainly in the power of our free will, not being constrained neither by predestination nor by prescience of God our Lord). His major argument in favor of this ultimate freedom is merit (or the lack of it): “*Se todo fosse costringidamente, nem por nossos feitos haveriamos galardom ou pena*”⁵⁵⁸ (if all was constrained [by the stars], by our achievements we would not have neither reward nor punishment). In other words, if everything was determined, there would be no merit in good actions, nor would there be guilt for bad deeds. For Duarte, the acceptance of astrological determinism (and, by extension, any kind of determinism) is, above all else, an ethical problem: “*se todo per tal ordenança fizessemos e nom per determinaçom de nosso livre alvidro, a que seria mandar e aconselhar a quem per si mais poder nom tevesse de que as pranetas nos outorgassem?*”⁵⁵⁹ (if we should do all [things] by the command of the planets and not by determination of our free will, what would be [the value of] ordering and counseling those who have no more power than that bestowed by the planets?).⁵⁶⁰ This poses a serious problem to religious faith, because if one should accept determinism, “*os mandados e conselhos da nova e velha lei, sobejos seriam*”⁵⁶¹ (the decrees and advices of the new and old law would be superfluous).

For King Duarte, all is redeemed by the love of God: “*se ho homem sabedor se assenhora das pranetas per a forza do livre alvydro, quanto mais farom aquelles que amarem o Senhor Deos, dos quaaes he scripto que todallas cousas se lhes tornarem em bem?*”⁵⁶² (if the wise man takes dominance over the planets by force of free will, how much more may achieve those who love the Lord God – of whom it is written that all things will result in good?).

commands the stars, in so far as he commands his passions’, and he exhorts every Christian to regard it as quite certain that what depends on n’lan’s will is not subject to the exigencies of the stars.”

⁵⁵⁷ Duarte, *Leal Conselheiro*, p. 150.

⁵⁵⁸ Duarte, *Leal Conselheiro*, p. 151.

⁵⁵⁹ Duarte, *Leal Conselheiro*, p. 151.

⁵⁶⁰ It must be noted that Duarte interprets determinism in absolute terms, which is surprising, considering that the main court astrologer, master Guedelha, seems to have a more open view on this matter.

⁵⁶¹ Duarte, *Leal Conselheiro*, p. 151.

⁵⁶² Duarte, *Leal Conselheiro*, p. 151.

Of all the figures studied, Duarte is the most troubled by the reconciliation of astrology and faith. His father, his brother Pedro, Master Guedelha and Zurara seem to be much more at ease with this issue. Zurara, like Ptolemy, states that while the lower bodies (the passions) are subjected to determinism, the higher faculties, like reason, can overcome the celestial influences. As to Master Guedelha (most likely the only practitioner of the group) the astrological practice poses no problem to free will; instead, it supports it, by offering a way to understand divine will – and therefore to better obey it.

They seem to be addressing the same topic under slightly different perspectives; their differences, if any, originate from their diverse understanding of the theme, not from a real disagreement. They seem to have found a comfortable ground where reconciliation is possible. Only Duarte insists on worrying – as a melancholic would typically do. Although accepting astrology, he is adamant on the issue of obedience to the Church, and this poses for him a problem, because he cannot bring together these two perspectives.⁵⁶³

The reconciliation he sought can be found in Jewish mysticism, for instance in the words of Abraham ben Ezra. In the opening statement of his treatise on astrology he declares: *“The beginning of wisdom is the fear of the Lord; that is the starting point, for when man refrains from following his eyes and his heart in their tendency to satiate his concupiscence, then knowledge come to rest within him; furthermore, the fear of the Lord protects him from the decrees of the heavenly bodies and from their sway as long as he lives.”*⁵⁶⁴

Ben Ezra sees no conflict between religion and the astrological practice: for him, astrology offered a way to comply to God’s will, through the understanding of its most obvious manifestation: the laws of Nature.

⁵⁶³ This conciliation had occupied the thoughts of many of the cultured man of his time. In the book *Saturn and Melancholy* we find another example: *“A fifteenth-century astrological poet, Matteo Palmieri, attempts to solve the problem of the relationship between free will and astral dependence by fusing together the two contrasting interpretations of the journeyings of the soul into a sort of “choice of Hercules”, presenting the soul in its descent with a choice between the ways of good and evil in each planetary sphere, so that it may acquire the fortunate or unfortunate characteristics of each of the planets.”* Klibansk, Raymond; Panofsky, Erwin; Saxl, Fritz, *Saturn and Melancholy*, p. 251

⁵⁶⁴ Ezra, Abraham ben, *The Beginning of Wisdom*, introduction. Kocku von Stuckrad notes that *“For Abraham ben Ezra, as for many of his contemporaries, there is no paradox between free-will and the knowledge of the force pattern predetermined to an individual life, for this can only be induced to develop according to the cosmic laws”*. (Stuckrad, Kocku von, *História da Astrologia*, p. 196.)

In the end, it all comes down to personal ethics: to escape determinism, Man must be disciplined, elevated – in short, wise, for only the wise can dominate the stars.⁵⁶⁵ Therefore, the knowledge of the astrological rules contributes to his wisdom⁵⁶⁶. In this perspective, the sentence *Vir sapiens dominatibus astris* – so often quoted in disregard of astrology – attains a different meaning. Instead of encouraging the rejection of astrology through the imposition of personal will, it incites to its practice. The *domination* of the stars is therefore not a call against astrology, but rather an incentive to its study. For in medieval times, as in any other period of history, knowledge is power.

⁵⁶⁵ For a study on the topic; Hendrix, Scott, “Reading the Future and Freeing the Will: Astrology of the Arabic World and Albertus Magnus”, in *Hortulus: The Online Graduate Journal of Medieval Studies*, Vol. 2, No. 1, 2006, pp. 3-34.

⁵⁶⁶ In our view this concept is correlated to the Greek proverb *know thyself*, Seneca’s sentence *The fates lead the willing, and drag the unwilling*, and of course, *Astra inclinant, non necessitant*.

CONCLUSION

At this point, we will summarize the main concepts explored in this work. Then we will focus on what we consider to be the main findings of this research, as well as its eventual limitations. Finally, we will point out the possible paths for future research.

In Part I, we conducted a survey on the existing studies on medieval astrology, from the historical perspective. This study revealed that the Portuguese historians seldom approach medieval astrology from the perspective of the History of Culture. When they do, most of them present it in a dismissive and unfavourable fashion, as an example of “medieval superstitious belief”, which was swiftly replaced by rational thought. Quite often, the references to astrology serve only to enhance the “improvements” and the “rationality” of the Renaissance thought (which is indeed quite ironic as astrology was never so wide spread as in the 16th and 17th centuries). Nevertheless, there are a few relevant studies on astrology (medieval or otherwise) from the cultural perspective.

Next we presented the foundations of medieval astrology, explained in Part II. It revealed to be a complex body of knowledge, with specific rules and methods. It’s principles were based on the natural movement of the celestial bodies: the rising and setting of the Sun, the sequence of the seasons, the phases of the Moon. These natural movements (which were apprehended by direct observation), were then correlated through the principle of analogy to events on Earth – whether these events be natural, social or personal. Astrology required good intellectual skills and a high level of education; it was practiced by court physicians and other learned man, as it is exemplified by the Negro Family. It was thus a sophisticated field of knowledge, far removed from superstition, divination and witchcraft – as the astrologers themselves never ceased to emphasise.

In the Part III we focused on the astrological books from the royal libraries and on the writings of the royal House of Avis. Through the analyses of these works, we came to the conclusion that they reveal a surprising degree of astrological knowledge within the royal

family and, by extension, in the royal court. Astrology is often referred to in their works, whether in “scientific” and philosophical discussions, or in more colloquial contexts.

The relevance of astrology in medieval thought can be attested by the significant number of books and writings on the topic, the variety of arguments and perspectives surrounding it – and the heated debates originated by these differences. Its presence in medieval thought is also attested by the frequent inclusion of astrological references into all sorts of conversations.

Finally, on Part IV we analyzed other relevant sources of astrological references, the Portuguese chronicles, namely the ones authored by Fernão Lopes, Gomes Eanes de Zurara and Rui de Pina.

These chronicles provide several examples of the practical applications of astrology, and again confirm its pervasiveness in Portuguese medieval culture. From this study three topics emerge: the validation of power, the explanation of manners and the debate about determinism and free will. Astrological arguments were used to support military decisions (as the conquest of Ceuta) and to provide guidance in crucial moments (as in the coronation of a king). In a more personal perspective, they could also explain (and sometimes excuse) the manners, habits and decisions of noblemen, kings and princes.

Let us now highlight what we consider to be the most innovative and revealing part of our investigation.

First of all, we attempted to demonstrate that astrology was a cultured and courtly practice, and that the astrological concepts and practices had wide participation in court life.

It is also worth emphasizing the “natural” incorporation of these concepts, as they were considered to be a natural part of life; astrology provided the natural integration between medicine, philosophy, culture and religion. In sum, astrology was not a separate subject, it was deeply embedded in the fabric of medieval thought; to extract the astrological

thread is to mutilate this fabric. The importance of astrological factors both in political decisions and in private life must therefore be underscored.

Astrology appears to have been pervasive among nobles and clergy, and specifically within the royal family. The multiple references to astrology – whether in books, in personal writings or in the chronicles – suggest that the readers would have some understanding of the subject, even if only in its basic principles.

But the most relevant finding of our research was the vibrant exchanges – in the cultural, scientific and religious fields – surrounding the debate of fate-versus-free will. Among cultured practitioners, this on-going discussion divided opinions and aroused heated arguments. But contrary to what could be expected, the fracture does not occur between those who passively submit to fate (that is, the determinists), and those who proclaim the supremacy of free will (the “free spirits”). The real division takes place between those capable of balancing these two instances (determinism and free will) in a practical concept of life, and those who consider them as mutually exclusive and therefore impossible to reconcile; the latter find it difficult to conciliate the practice of astrology with the Christian faith. King Duarte is a clear example of this position.

It must be noted that at this time the validity of astrology in itself is never in question. It is fully accepted by all authors (Duarte included) that astrology is functional (although not all of them agree on the causes and extent of this functionality). What *is* in debate are its limits (the extent of determinism and the extent of free will allowed to each individual) and, above all, its validity in face of the Church. The unsettling question arising from this debate is, as king Duarte puts it, “*if all is constrained [by the stars], by our achievements we would have neither reward nor punishment*”. The answer, quite ironically, had already been given two centuries before by Jewish mysticism – there is no conflict, as the “fear of the Lord” (that is, piety) is in the very core of wisdom.

The topics presented in this work are just a few of many possible lines of study. It is one of its goals to call the historians’ attention to this interesting topic in Portuguese historiography and to point out the many possibilities of research, which may be developed in future studies.

As possible lines of research, we would point out:

- Astrology as a common ground for discussion between the three main religious groups in the Iberian Peninsula: Christians, Muslims and Jews. Much still remains to be explored regarding the role of the Jewish scholars as pivotal elements in the transmission of astrological knowledge, particularly in Portugal. From this investigation may also arise a comparative study of the astrological practice in different cultural contexts.
- Astrology as a vehicle of different philosophical lines of thought (Aristotelian, Stoic, Neoplatonic, etc.). The attitude of the astrologer towards determinism and prediction is shaped by his philosophical affiliation. A thorough study on this matter should offer many interesting perspectives.
- Astrology as a reflection of society. The study of the contents of certain books on astrology – namely the extensive work of Ali ben Ragel on interrogations – offers a vast field of research into the habits, concerns and practices of medieval society. This study could bring important contributions to the History of Culture and Mentalities.
- Astrology and social group. A comprehensive study of the astrological practices among the different social strata still awaits future investigation; from the cultured courtesans, depicted in this work, to the common people, there are a number of nuances to the astrological practice, yet to explore.

In conclusion, the study of the medieval astrological practice offers a rich contribution to the history of medieval society, culture and mentalities. It contributes to a better understanding of the medieval concept of the world, and its impact on religion, philosophical thought and practical life. Astrology is also a good subject to test the transmission of knowledge from the Classical sources to the Christian world, intermediated by the Islamic and Jewish cultures.

The choice of astrological arguments was more than a mere superstition or a simple poetic embellishment of the historical narratives; it was a natural expression of medieval mentality, and it had direct repercussions in society, politics and culture. In the case of medieval chronicles, it also offers clues about the chronicler's cultural and political affiliations, and often confirms/clarifies the date of historical events.

It also gives important information to the study of Social History, as the astrological medieval texts reflect the main concerns of society: the questions posed to the astrologers, and the respective answers offer a rich field of study. In a different perspective, the study of astrological calculation and instruments can also complement the History of Science and Technology.

As to the study of specific astrological data, it can clarify some information provided by the chronicles (for instance the date of birth of a prominent figure or the date of a decisive event). It can also complement the study of a personality, as well as its political, religious and social representations. In the case of mundane horoscopes, it can help to understand political and social contexts, and perhaps clarify political decisions.

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ad anno 80, Nativitates quorundam p.), which contains a set of astrological tables for the years of 1468 to 1480 and several astrological charts of prominent figures of the French Burgundian courts.

On the top of the figure it reads “Figure [chart] of the nativity of the Christian king of the Franks, Charles VIII, which was [born] in Ambasia² in the year of Christ 1470, at the 13th hour and 10th minute post meridiem, the 29th day of June, being the preceding day [of] Venus, Mars lord of the night and of the hour”. The rest of the text refers to the chart’s rectification (a technique to ascertain the precise time of birth).

The notes on the left column list the astrological aspects (the angular relations between planets), the determination of the strongest planet (the almutem³ of the chart) and the calculation of longevity (by identifying the hyleg⁴ and the alcocodem⁵), although he does not indicate a specific number of years.

² Amboise, France.

³ Almutem: the planet that gathers more dignities in the five hylegical points in the chart (see the following footnote). “*The common Arabic astrological term al-mubtazz (Latin: almuten, almutem, almutez) means one who has gained victory or the victor*”. Dykes, Benjamin, *Book of Astronomy by Guido Bonatti*, Vol. I, introduction, p. lxxxiv, Golden Valley, Minnesota, USA, The Cazimi Press, 2007. ISBN: 978-1-934586-00-6.

⁴ Hyleg: the point in the natal horoscope which is responsible for life and vitality. It is always one of the five hylegical points: the Ascendant, the Sun, the Moon, the Part of Fortune and the Lunation preceding birth. “*Los cinco lugares principales del nascimjento que sygnifican la uida y se nonbran. ylex. son estos. el grado del ascendente. y el grado del sol. y el grado de la luna. y el grado de parte da fortuna. y el grado del a conjuncion o oposicion precedente. y si todos estos los mas estan buenos o bien acatados es buena señal para uida luenga*” (The five principal places of birth which mean life and are calle hyleg are these: the degree of the Ascendant, the degree of the Sun, the degree of the Moon, the degree of the Part of Fortune and the degree of the conjunction [New Moon] or the opposition [Full Moon] preceding [the birth]. If all these [points] are good or well aspected, it is a good indication of long life) Dois inéditos de Abraão Zacuto, p. 158.

⁵ Alcocodem: the planet which determines the life span of the native; in general terms, it is chosen as *alcocodem*, the planet which in a given chart has more power over the *hyleg*, and at the same time, aspects it. The greater the power of this planet, the longer the native’s life shall be. “*Se llama alcoquoden (...) aquel que acata [aspecta] a uno de los cinco logares de la vida, el que queda por ylex y tiene fuerça en aquel signo e le acata*” (It is called alcocodem the one [planet] which aspects one of the five places of life, the one [of the five] which is the hyleg and has power in that sign [were it is posited] and aspects it). Carvalho, Joaquim de, “Dois inéditos de Abraham Zacuto”, in *Revista de Estudos Hebraicos*, Vol. 1, Lisbon, 1928 (pp. 95-183), p. 159. Ali ben Ragel dedicates chapters 4, 5 and 6 of Book 4 to this topic. Ragel, Ali Aben, *El Libro conplido en los iudicios de las estrellas*, intro. by Gerold Hilty, Madrid, Real Academia Espanhola, 1954.

fl. 87v. - Nativity of Charles VIII, king of the Francs.

*Born in Amboise in the 29th of June of 1470 at 13h 10m PM.
Venus was lady of the preceding day, Mars was lord of the
night and of the hour.*

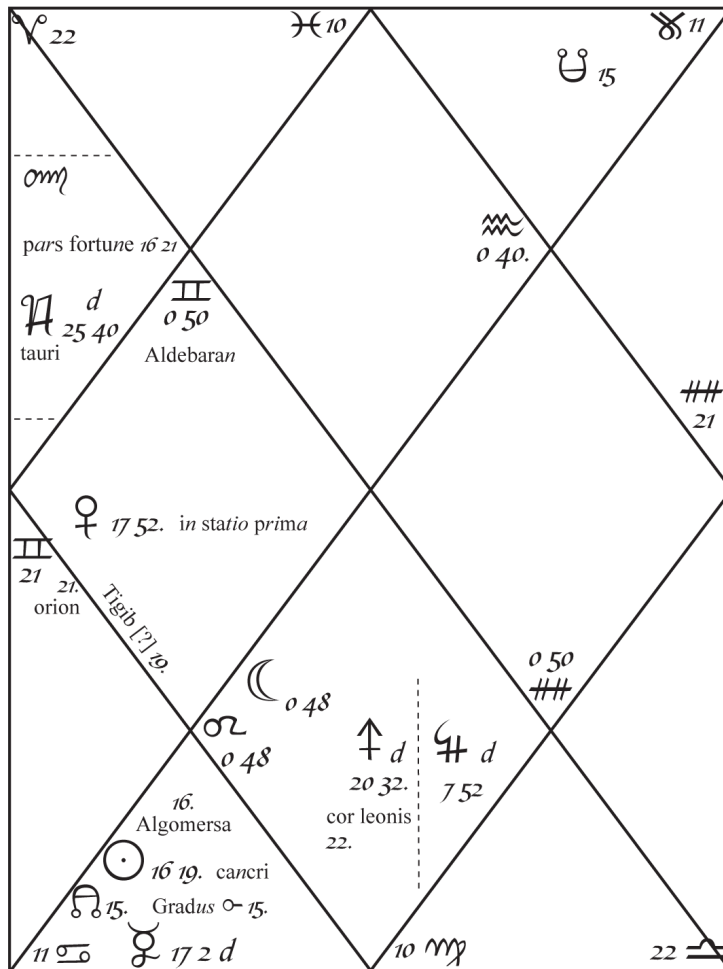


Figure 2 - Transcription of the astrological chart in fol. 87v, Lisbon, ANTT, MS 1711

The birth chart – a rectangular frame divided in to 12 segments – occupies the centre of the page. The four inner areas, with rhombus shape, represent the four angles of the chart (1st, 4th, 7th and 10th astrological houses), the others, with triangular shape, represent the remaining eight sections – or houses – of the chart⁶.

The boundaries of each house are signaled by a number and a sign, representing the zodiacal point were each house begins.

⁶ For more explanations about the houses refer to Table 3 and also to Appendix 2.

Inside some houses there is a symbol for a planet and again a number, representing the position of each planet in a given sign. For instance, on the rhombus of the right side, corresponding to the first house, we can see the symbol of Venus (a circle on top of a cross), followed by the numbers 17.52, meaning Venus was posited at 17 degrees and 52 minutes of a given sign. As the house where Venus is posited begins at 00 degrees and 15 minutes of Gemini, and the next house begins at 21 degrees of Gemini, it is easily deduced that Venus is also placed in this sign (the notation *in station prima*, written aside the numbers, relates to the direction of the movement of the planet⁷).

By consulting the table for the month of June in the year 1470, we confirm the astrologer's calculation. The first column represents the day of the month; the second, the dominical letter. The following eight columns present the luminaries (Sun, Moon), the planets (Saturn, Jupiter, Mars, Venus and Mercury) and the lunar node⁸, with their respective positions in each day of the month.

The other columns display the aspects of the Moon to the planets in each day of the month (*aspectus lunem ad planetam*). Below the table there are three small charts, corresponding respectively to the ingress of the Sun in Cancer (that is, the beginning of the Summer), the Full Moon prior to the ingress and the New Moon following it; these calculations were essential for mundane astrology, as it was mentioned in Chapter 1.

⁷ The term *first station* refers to the apparent halt (*station*) in a planet's movement, before it becomes *retrograde* (literally *backwards*); *second station* refers to the second stop, before it resumes direct motion. These observations refer to the *apparent* movement of the planet when observed from the Earth.

⁸ The Lunar Nodes are the points of intersection between the Moon's orbit and the ecliptic (the Sun's apparent path around the Earth); these are the point where eclipses occur. In astrological terms, the North Node is considered to be beneficial, and the South Node, malefic.

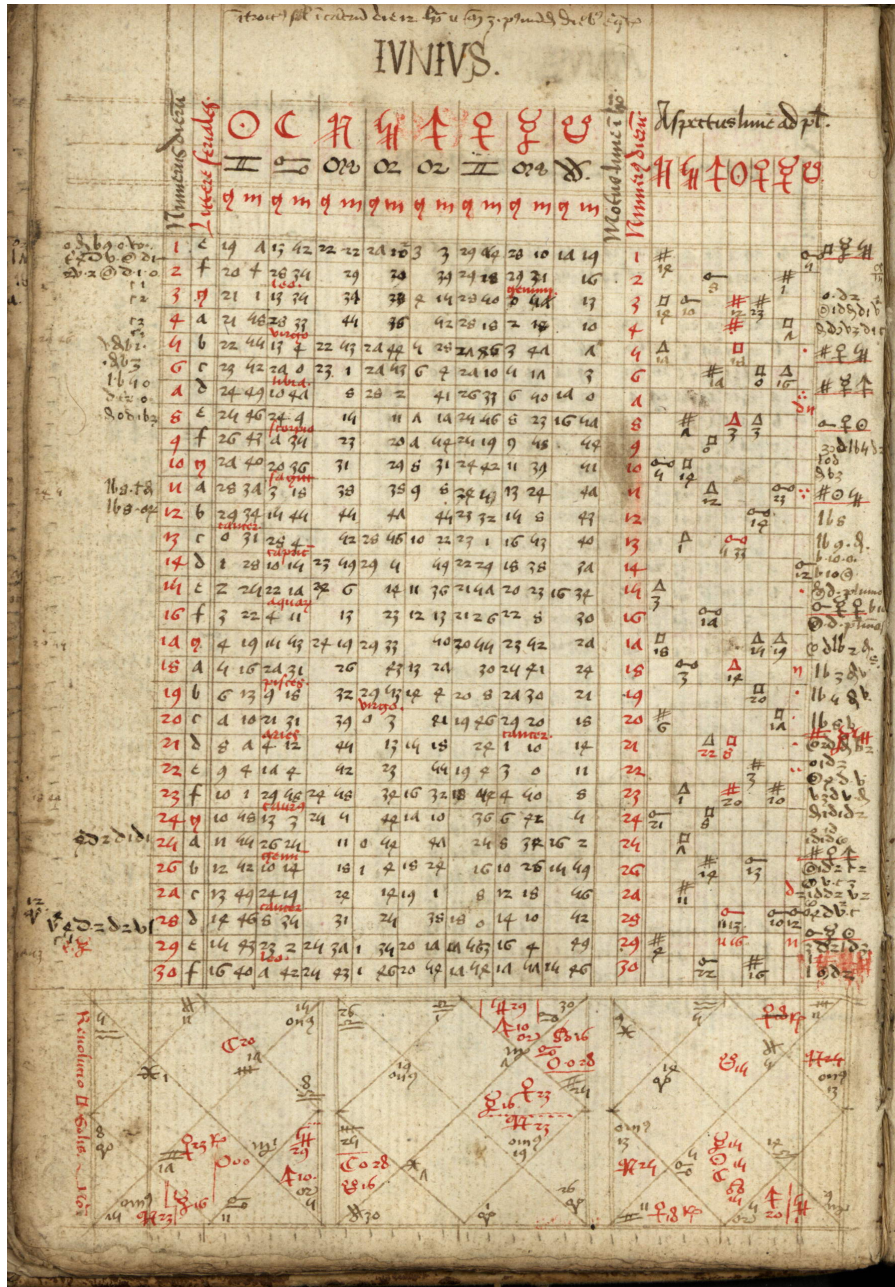


Figure 3 - Astrological tables for June 1470, Lisbon, ANTT, MS 1711, fol. 15v

The unknown astrologer notes that the king was born on the 29th, at 13 hours *post meridiem*, which means that he was born 13 hours and 10 minutes after mid-day – that corresponds to 1 hour and 10 minutes in the morning of the 30th.

On the column of Venus, on the row of the 30th day, the position of the planet is 17 degrees 54 of Gemini. As this position is calculated for noon, the astrologer had to adjust it to the hour of birth (1:10 am) with a simple calculation. As Venus was in

station prima (first station), therefore moving slowly, the difference is only two minutes of arc.

So we can conclude that in the birth chart of Charles VIII, Venus was posited in the first house, at 17 degrees and 52 minutes of Gemini.

On Chapter 1, table 3 of Zacuto's book, he attributes to the 1st house "*La complision y el gesto y la vida y la ciencia y es universal para todas las cosas y pensamientos*"⁹ (the complexion, manners, life and knowledge; it is universal for all things and thoughts [of the native]). So Venus, a planet "*risuenna, de buen parecer, afeitada, limpia, hermosa*"¹⁰ (pleasant, of good appearance, agreeable, clean, pretty) in the area of the chart directly connected to the manners and behavior of the individual. A medieval astrologer would therefore conclude that Charles VIII had pleasant and agreeable manners. Interestingly, he is known as Charles *The Afable* (Charles l'Affable).

All the other astrological factors were calculated and interpreted in a similar manner (although the full delineation of the chart followed more complex rules).

Note: these charts normally represent a nativity (that is, the birth chart of an individual, as in the present case), but they can also represent the individual's prediction for a given year (known as revolution of the year), the chart of a question (interrogation or horary), the ingress of the Sun in a given sign (seasonal chart or mundane ingress), or a specific event (a natural disaster, a victory in battle, the outbreak of a plague, a royal wedding). In any case, the depiction and the general rules of interpretation is similar, although the latter is always adapted to the specific context of the chart.

⁹ Carvalho, Joaquim de, "Dois inéditos de Abraham Zacuto", pp. 119, 120.

¹⁰ Ali Aben, *El Libro conplido en los iudicios de las estrellas*, p. 15.

origins/the father and achievements/the mother (4th, 10th), pleasures/children and hopes/allies (5th, 11th) and finally sickness and imprisonment (6th, 12th).

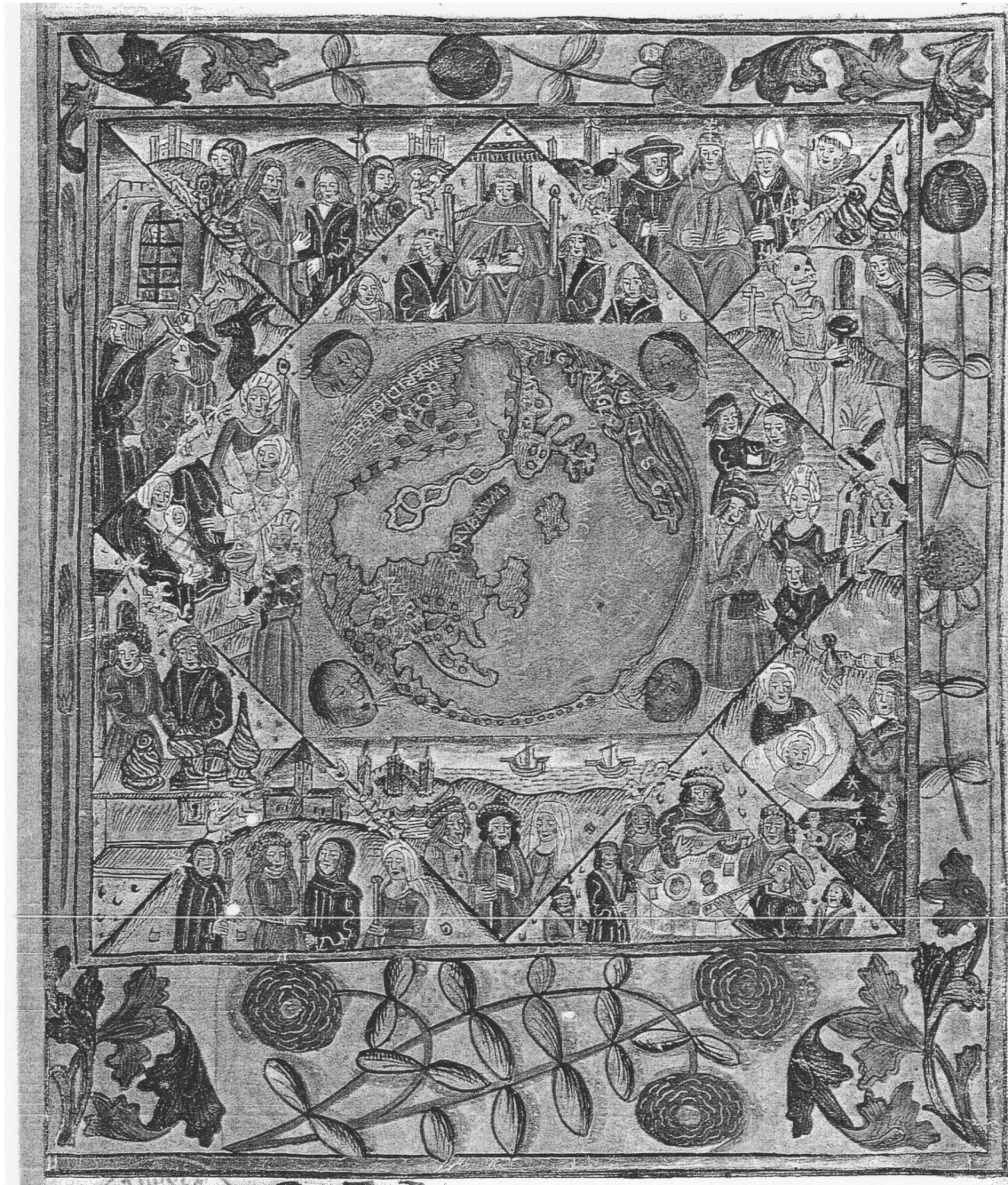


Figure 1: The astrological houses and their attributions²

² Paris, B.N., Lat. 6276, f.1, from Kathleen L. Scott, *Later Gothic Manuscripts, 1390-1490: a survey of manuscripts illuminated in the British Isles*, Vol. I, London, Harvey Miller Publishers, 1996. (In the chart presented earlier, in Appendix 1, the central square does not exist and the four central houses have a rhombus shape. These two variants are very common.)

APPENDIX 2: THE ASTROLOGICAL HOUSES AS A REFLECTION OF MEDIEVAL SOCIETY

The houses are divisions of the astrological chart, representing all aspects of life in medieval society. The meaning of each house was established in Antiquity and adapted to the medieval society; this meaning was flexible enough to adapt to any medieval society, whether it be Christian, Islamic or Jewish.

This image from the 15th century seems to be similar to the one presented in Appendix 1; but contrarily to that image, it does not display any planetary positions. It is an illustration for the meanings of the twelve astrological houses, not an individual horoscope.

In the centre of the image there is a world map, with top pointing the West. On the left there is Africa and on the right, Europe; the bottom section of the map is occupied by India and the Far East.

The houses are the triangular areas disposed around the central square¹. Their position reflects the relative importance of the issues they represent. The four main houses – the 1st, 4th, 7th and 10th – are designated *angular* houses, as they correspond to the angles of the chart. They represent the main aspects of life: personality (1st), paternal lineage (4th), partnerships (7th), honors (10th). The following houses – called *succedent*, as they succeed to the angles – are the 2nd, 5th, 8th and 11th. They signify the supporting aspects of life: possessions (2nd), children and enjoyments (5th), death and the correspondent inheritances (8th), allies and hopes (11th). The remaining four houses – the 3rd, 6th, 9th and 12th – are called *cadent*, because they fall from the angles. Two of them symbolize positive matters: brothers and short journeys (3rd) and journeys, religions and knowledge (9th); while the other two have negative meanings: sickness (6th), prisons and treason (12th).

The main meanings of the houses are also organized by axis: the native and the others (1st, 7th), gains and losses (2nd, 8th), short and long journeys (3rd, 9th),

¹ This is the table with the meanings of the houses, already presented in Chapter 1 (Ptolemy's signification for the houses is left out of this table, because they relate to an earlier period).

The astrological houses, will be examined one by one:

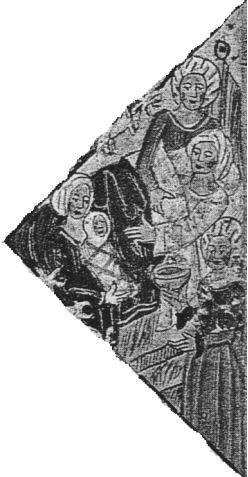


Image detail:	Description:	The meanings of the houses (Ali ben Ragel and Abraham Zacuto)
	<p>First House The image represents a mother and her baby, surrounded by three midwives. It symbolizes the native (the baby) and the beginning of life.</p>	<p>The first house is the most important area in the chart, representing the native, his manners and general disposition.³</p> <p>Ragel: The native, his thinness or fatness Zacuto: The complexion, manners, life and knowledge; it is universal for all things and thoughts [of the native]</p>
	<p>Second House A man and a woman stand in front of a trunk, with several items on top, symbolising possessions.</p>	<p>Ragel: Highly valued and priced things, possessions Zacuto: Money and sustenance</p>
	<p>Third House A party of four stands in front of a church; they all hold walking sticks, suggesting a journey or a peregrination.</p>	<p>Ragel: Brothers, short journeys, law and its knowledge Zacuto: Brothers, short journeys, law and knowledge</p>

Table 1 – 1st, 2nd and 3rd houses

³ In this brief study, we will mention only the significance of the houses in a nativity; in the case of horary, mundane or ingress charts, the significations are similar, but adapted to the respective context.




Image detail:	Description:	The meanings of the houses (Ali ben Ragel and Abraham Zacuto)
	<p>Fourth House The native is depicted with two elder figures – father and mother – with their properties and wealth.</p>	<p>Ragel: Parents, the ends of things, hidden things Zacuto: The father, possessions and the end of all things</p>
	<p>Fifth House A recreational scene: a banquet, with food, music and children.</p>	<p>Ragel: Children, gifts and pleasures, invitations and drinks [pubs and parties] Zacuto: Children, pleasures, garments and vices</p>
	<p>Sixth House A sick person (perhaps the native) is assisted by a woman and surrounded by physicians. In the second plan there is an enclosure with small animals, probably sheep.</p>	<p>Ragel: Infirmities, captives, servants, animals Zacuto: Infirmities, servants and slaves, small cattle and minor sciences [crafts]</p>

Table 2 – 4th, 5th and 6th houses




Image detail:	Description:	The meanings of the houses (Ali ben Ragel and Abraham Zacuto)
	<p>Seventh House A man and a woman receive a gift from a third party; they seem to be coming out of a house, possibly a church. In the second plan, two men fight and one of them stabs the other – it is an open conflict.</p>	<p>Ragel: Women, marriages, opponents Zacuto: Women, battles, declared enemies and companions</p>
	<p>Eight House A skeleton offers a cup to the native, who tries to move away (this is one of the two only images where the native is almost out of the frame, suggesting that the topic is unpleasant and he wants to avoid it). In the second plan there is a cross, representing a grave, and a building, on top of which can be seen the same items depicted in the second house – connecting possessions with death (though heritages).</p>	<p>Ragel: Death and killing, poverty and fears, heritage from the death Zacuto: Lost things, death, heritages</p>
	<p>Ninth House Four clerical figures are solemnly presented with all their paraphernalia: a Pope, a cardinal, a bishop and a monk. In the background there is a church.</p>	<p>Ragel: Roads and movement from one place to another, things of God, houses of prayer, prophets and prophecy, astrology and philosophy Zacuto: Sciences and distant journeys, journeys by water, houses of prayer and the laws</p>

Table 3 – 7th, 8^h and 9th houses


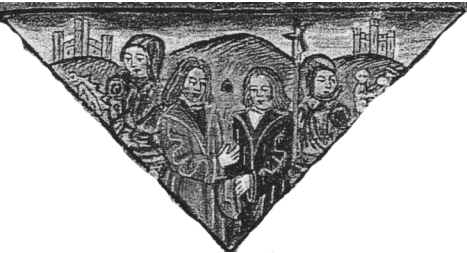

Image detail:	Description:	The meanings of the houses (Ali ben Ragel and Abraham Zacuto)
	<p>Tenth House A king seated in his throne, in all his majesty, surrounded by four courtesans. Two of them – the ones closer to the king – are also wearing crowns – princes (?)</p>	<p>Ragel: Highness, king and kingdom, lordship and nobility, good fame, mastery, the women of the father [mother or stepmother] Zacuto: Kingdom and lordship, honour, the office of the mother</p>
	<p>Eleventh House Four men in the outdoors. In the second plan, two castles can be seen. The image suggests an alliance between two noble houses or two kingdoms (represented by the noble men and the castles), and their respective armies (represented by the knights).</p>	<p>Ragel: Hopes, adventures, recognition, good fames, prizes, friendship from great men Zacuto: Friends, the king's treasures, good fame and hope</p>
	<p>Twelfth House A man is stabbed in the back with a dagger (like in the eight house, he is almost out of the frame of the image, suggesting that these two topics should be avoided). Note that, differently from the image of the 7th house, this time he is being stabbed on the back, suggesting treason (as opposed to open confrontation). Behind him, there are a donkey and a horse. In the second plan, there is a prison and trough the barred window, a prisoner stares at the street.</p>	<p>Ragel: Enemies, misfortunes, confinement, prisons, deception and the evil crafts Zacuto: Secret enemies, confinement, horses and knowledge [of hidden things]</p>

Table 4 – 10th, 11th and 12th houses

When placed within its proper astrological context, this image becomes a valuable document for the study of medieval astrological symbolism. The thorough study of the astrological houses offers interesting clues to the understanding of medieval mentalities and society.

The translation and references for the table of the Houses (Ptolemy does not require further translation):

The Astrological Houses		
	Livro Conplido Ali ben Ragel; 11 th century	Tratado Breve Abraham Zacuto; 16 th century (pp. 119, 120)
1st House	pg. 29: el nacido (...) su magrez e su grossura	La complision y el gesto y la vida y la ciencia y es universal para todas las cosas y pensamientos
2nd House	pg. 33: Las cosas alçadas, preciadas e el aue	Dinero y mantenimiento
3rd House	pg. 35: Los hermanos, carreras cortas, la ley e el saber de la le	Hermanos, caminos breves y ley e sciencia
4th House	pg. 36: Los padres, las fines de las cosas, cosas cubiertas escondidas	El padre, las possessions el fin de todas las cosas
5th House	pg. 42: Fijos, presentes e los gozos; conuidamientos, los beveres	Hijos y plazeres y los vestidos y los vicios
6th House	pg. 60: Las enfermedades, los catiuos, los sieruos, biestas	Las enfermedades y servidores y esclavos y ganado meudo e sciencias pequenas
7th House	pg. 73: Las mugieres, casamientos, aduersarios	Las mugeres y las batallas y los enemigos publicos e los companeros
8th House	pg. 118: Muerte e matanza, pobreza e medos, herencias de los muertos	Cosas perdidas y la muerte y herencias
9th House	pg. 119: Carreras e andamientos de una tierra a otra; cosas de Dios, casas de oración, profecias e profetas, astrologia, e filosofia	Sciencias y caminos lexos y caminos de agua, casas de oratio y las leyes
10th House	pg. 138: Alteza e rey e regno e sennorio e la nobreza, buena fama, mestrias, las mugeres de los padres	El rreyno y senorio y la honrra y el oficio y la madre
11th House	pg. 154: Las fuizas, aventuras, gradecimientos, buenas famas, gualardones, amistat de los altos homnes	Los amigos, los thesoros del rey y de la buena fama y la esperança
12th House	pg. 156: Inimigos, lazerias, carceles, prisiones, enganos, malas mannas	Enemigos secretos y las carceres y las bestias cavallares y la sciencia