

READING GOD'S WILL IN THE STARS PETRUS ALFONSI AND RAYMOND DE MARSEILLE DEFEND THE NEW ARABIC ASTROLOGY¹

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RESUMEN

Pedro Alfonso y Raimundo de Marsella intentaron justificar la teoría y la práctica de la astrología en medio de un clima de escepticismo y de oposición. Ambos defendieron con firmeza el arte de la adivinación celeste, afirmando que forma parte del plan racional trazado por Dios para el Universo. Atacaron a sus oponentes (los practicantes de la astrología inferior y el clero opuesto a la astrología), llamándolos ciegos, pervertidos y bestias irracionales. Sus discusiones contribuyeron a entender la importancia de la recepción de la ciencia árabe en la Europa latina durante el siglo XII y a que se apelase cada más a la razón.

Palabras clave: Pedro Alfonso, Raimundo de Marsella, Astrología, Siglo XII, Ciencia árabe.

ABSTRACT

Petrus Alfonsi and Raymond of Marseille both attempt to justify the theory and practice of astrology in the face of considerable skepticism and opposition. They aggressively defend the art of celestial divination, affirming that it is part of God's rational plan for the universe. They attack their opponents (both practitioners of inferior astrology and clerical opponents of astrology) as (*inter alia*) blind, perverse, irrational beasts. Their polemics shed light on the reception of Arabic science in Latin Europe in the first half of the twelfth century and on the invocation of "reason" (*ratio*) as an increasingly popular rhetorical weapon.

Key words: Peter Alfonsus, Raymond of Marseilles, Astrology, the twelfth Century, Arabic science.

To what extent do the movements of the heavenly bodies affect things on earth? Can these movements be used to predict natural events in the future? To predict the character or actions of individual human beings? With what reliability? Does the belief in or practice of astrology compromise a belief in the omnipotence of God?

These problems plagued Christian (as well as Muslim and Jewish) thinkers at various times during the Middle Ages. They provoked especially intense debate in the twelfth century, as new

¹ An earlier version of this article was presented to the annual meeting of the History of Science Society in Madison, Wisconsin, November, 1991. Thanks to Laura Smoller and Jonathan Black for suggesting corrections and revisions.

translations made Greco-Arabic science—including astrology—widely available to scholars of Latin Europe. As Charles Homer Haskins noted, the Twelfth-century Renaissance was at first a Roman Renaissance.² In the field of dialectic, for example, the resurgence of philosophical activity in the early twelfth century is a culmination of the «old logic» based on Latin texts such as Boethius;³ for Heloise, the «greatest of the Philosophers» is neither Aristotle nor Plato, but Seneca.⁴ The later twelfth century saw the massive translation and introduction of Aristotle, who becomes «The Philosopher» *par excellence*. The same pattern occurs in twelfth-century astronomy and cosmology: early twelfth-century authors cite Ovid, Lucan, and Macrobius; later in the century, Aristotle, Ptolemy, and Abu Ma'shar.

There were those who resisted this transition from Latin to Greco-Arabic models, and there were those who championed it.⁵ Two vocal proponents of astronomy who fought to endow their chosen science with legitimacy, to prove its rational basis, and to reassure academic clerics that it did not threaten religious orthodoxy. Petrus Alfonsi, a convert from Judaism and an emigrant from Muslim Spain, by 1116 had already translated astronomical tables from Arabic into Latin. Some time in the 1120's, he composed a polemical defense of astrology, his *Letter to the Peripatetics of France*.⁶ In 1141 Raymond of Marseille composed his *Liber cursuum planetarum*,⁷ the introduction to which is an impassioned defense of astrology in the face of clerical criticism.

Alfonsi and Raymond each direct their polemics against two distinct groups of adversaries: clerics who oppose astrological doctrine on principle and practitioners of inferior astrology. Petrus Alfonsi is primarily concerned with the latter group. He tries to convince the scholars of northern

2 Charles Homer Haskins, *The Renaissance of the Twelfth Century* (Harvard, 1927 & 1982), 9.

3 Norman Kretzmann, «The Culmination of the Old Logic in Peter Abelard.» *Renaissance and Renewal in the Twelfth Century*, Robert L. Benson & Giles Constable, eds. (Harvard, 1982), 488-511, esp. 489-91.

4 »Philosophi Quorum unus et maximus Seneca.» Peter Abelard, *Historia calamitatum*, Jacques Monfrin, ed. (Paris, 1967), 77.

5 Charles Burnett, «Advertising the New Science of the Stars, circa 1120-1150,» in F. Gasparri, ed., *Le XII^e siècle: Mutations et renouveau en France dans la première moitié du XII^e siècle* (Paris, 1994).

6 I provide an edition and translation of Petrus Alfonsi's *Epistola ad Peripateticos* in Appendix I of my *Petrus Alfonsi and his Medieval Readers* (Gainesville, Florida, 1993). The following analysis of the *Epistola* is based on my article, «La Carta a los estudiosos Franceses,» in María Jesús Lacarra, ed., *Estudios sobre Pedro Alfonso* (Zaragoza: Instituto de Estudios Altoaragoneses, 1996), 381-402. On Petrus Alfonsi, see also Charles Burnett, «The Works of Petrus Alfonsi: Questions of Authenticity,» *Medium Aevum* 66 (1997), 42-79.

7 This unedited text exists in three manuscripts: Oxford, Corpus Christi College 243, ff. 53r-62v; and Paris, Bibliothèque Nationale lat. 14704, ff. 110r-135v, and Cambridge, Fitzwilliam Museum, McClean 165, ff. 44r-47r & 51r-66v (this last manuscript does not have the complete text).

On Raymond of Marseille, see Emmanuel Pouille, «Raymond of Marseille,» *Dictionary of Scientific Biography* 11 (New York, 1975): 321-23; Pouille, «Le traité d'astrolabe de Raymond de Marseille,» *Studi medievali* 5 (1964): 866-909; Joshua Lipton, *The Rational Evaluation of Astrology in the Period of Arabo-Latin Translation, ca. 1126-1187 A.D.* (Dissertation, University of California—Los Angeles, 1978); Richard Lemay, *Abu Ma'shar and Latin Aristotelianism in the Twelfth Century: The recovery of Aristotle's Natural Philosophy through Arabic Astrology* (Beirut, 1962): 141-57; Charles Homer Haskins, *Studies in the History of Medieval Science* (New York, 1924): 96-98; Marie-Thérèse d'Alverny, «Astrologues et théologiens au XII^e siècle,» *Mélanges offerts à M.D. Chenu* (Paris, 1967): 31-50; *eadem*, «Translations and Translators,» Robert L. Benson & Giles Constable, eds., *Renaissance and Renewal in the Twelfth Century* (Harvard, 1982), 421-62 (esp. 447n); *eadem*, «Abélard et l'astrologie,» *Pierre le Venerable et Pierre Abélard* (Paris, 1975); Pierre Duhem, *Le Système du monde: Histoire de doctrines cosmologiques de Platon à Copernic* 3 (Paris, 1913-59): 201-16; Lynn Thorndike, *History of Magic and Experimental Science* (New York, 1929), 91-93.

France to study Arab astronomy; he has to combat his readers' preferences for the trivium (in particular, for rhetoric) over astronomy, and for Macrobius over the new Arab authorities. Alfonsi, a frustrated teacher, is searching for students and respect; he has very little to say about theological objections to the study of astrology. Indeed, he is at pains to avoid these issues, concentrating on the role of astrology in medicine and weather prediction, avoiding the theologically explosive question of whether astrology can predict human nature and actions.

Raymond, on the other hand, directs his polemic primarily against theological scruples, against «the superstitious controversy of certain cloaked men who believe that they may please God only by the smokiness of their vestments and the high tonsures on their heads.»⁸ He wishes to explain to his readers how astrology works, and to address directly the objections of skeptics—in particular, he wants to defend astrology from centuries of attack by theologians.

Despite the differences between these two texts, the prevailing tone is quite similar. Alfonsi and Raymond are the self-assured practitioners of a new science. They have access to Arabic texts of which their opponents are completely ignorant. They deploy various arguments in defense of their science, but fundamentally their case is based on a ringing invocation of reason (*ratio*). They have reason on their side, and therefore their opponents, those who do not believe that the stars influence things on earth, are irrational. Disdain is all they have for these opponents, and they proffer this disdain with a rich and varied lexicon of insults.

Defenders of astrology had an impressive list of authorities to invoke. Aristotle had granted (albeit in general and somewhat vague terms) that the movements of the celestial bodies affect events on earth. Ptolemy's *Almagest* set forth a detailed theory describing the nature of each of the planets and explaining how (and when) they influence earthly phenomena. This theory, in summary form, was known to the Medieval Latin world in the widely available vulgarization of Macrobius' *Commentary on the Dream of Scipio* and in the more detailed (but less widely available) *Mathesis* by Firmicus Maternus.⁹

Meanwhile, Christian writers since the early church fathers had attacked astrology for two reasons: it does not work, and it limits both God's power and man's free will. Augustine, for example, frequently ridiculed «mathematici.»¹⁰ He presents astrology (along with sex and Manichaeism) as one of the discarded sins of his youth. He mocks the *mathematici* for their pretensions to foretell the future, providing various examples of their failures. What makes astrology heretical (rather than

8 »Cesset ergo de cetero palliatorum quorundam superstitiosa controversia, qui sola uestium fumositatem aut alta capitis tonsuratione se deo* posse placere putantes.» Paris, Bibliothèque Nationale MS 14704 (hereafter «P»), f. 112v; Oxford, Corpus Christi College 243 (hereafter «O»), f. 58r. P omits *deo*. For Raymond's text, I have followed primarily P, noting variants from O only where I deemed them significant (but ignoring minor variations in spelling, word order, the occasional added *enim*, etc.)

9 See S.J. Tester, *A History of Western Astrology* (Wolfeboro, New Hampshire, 1987); Maria Teresa Donati, «Metafisica, fisica e astrologia nel XII secolo: Bernardo Silvestre e l'introduzione 'Qui celum' dell'*Experimentarius*, *Studi medievali* 31 (1990), 649-703.

10 Especially *Confessions* 4:3 and 7:6; and *City of God* 5:1-8. For a fuller list of passages in which Augustine and Gregory discuss astrology, see D'Alverny, «Abélard et l'astrologie,» 623n; *eadem*, «Astrologues et théologiens»; Valerie I. J. Flint, *The Rise of Magic in Early Medieval Europe* (Princeton, 1991), esp. 92-101 & 132; *eadem*, «The Transmission of Astrology in the Early Middle Ages,» *Viator* 21 (1990):1-27. For the *Confessions*, I have consulted the Latin text of M. Skutella (Stuttgart, 1969); quotations are from the English translation by R.S. Pine-Coffin (New York: Penguin, 1961).

merely ridiculous), for Augustine, is that *mathematici* «tell us that the cause of sin is determined in the heavens and we cannot escape it»¹¹; in other words, they deny both free will and man's responsibility for his sins. Gregory the Great associated *mathematici* with Priscillianist heretics; for him, too, their art is both futile and heretical.¹²

From the time of Firmicus Maternus to the early twelfth century, the only known Latin composition on judicial astrology was the *Liber Alchandreï*, probably written in the tenth century, surviving only in four manuscripts.¹³ A smattering of other texts existed: *computi*, often for use in calculating the date of Easter; crude astrological texts such as *Lunaria*, lists of auspicious and inauspicious days for various enterprises.¹⁴ Clerics continued to intone condemnations of astrology, often echoing the terms of Augustine and Gregory. This led Franz Gumont and M.L.W. Laistner to conclude that the Church fathers had been successful in quashing astrology, and that astrology is not in practice in Europe until the ninth century, and even then only sporadically so.¹⁵ The occasional fulminations against astrology (by Isidore, for example) would thus be merely rhetorical imitations of the Church fathers, not evidence of contemporary astrological practice. The real rebirth of astrology in Latin Europe would occur in the twelfth century, as a result of the translation of Arabic astrological texts into Latin.

Valerie Flint, concentrating on the early middle ages, argues that the Church fathers were not as successful as it might seem in suppressing astrology: they had merely driven it underground, into the realm of non-Christian magic.¹⁶ To Flint, the anti-astrological fulminations of Isidore and others are not merely academic: they are directed at real practitioners, rivals in the realm of the supernatural. The increase of texts in the ninth to eleventh centuries would represent a change in strategy: the clerical authors of these texts are offering a legitimized, learned, Christianized astrology to replace the popular non-Christian astrology. This strategy was unacceptable to many Churchmen, as the continued tradition of anti-astrological texts shows.

Let us grant that Flint may be right that astrologers practiced in the early middle ages despite the dearth of texts, that «Much can be transmitted verbally or by means of charts and tables, easily used to impress and easily lost, and it is all the more likely to be so transmitted when there is condemnation in the air.»¹⁷ If this is true, how sophisticated is such astrology? What kind of horoscopes can be cast? What kinds of predictions made? What sorts of philosophical and scientific justifications for astrological doctrine are produced?

When Petrus Alfonsi, an Andalusian Jew who had converted to Christianity, came to England (some time between 1108 and 1116), the level of basic understanding of planetary movements was

11 *Confessions* 4:3.

12 Gregory the Great, *Homiliae in Evangelia* II:10 (Pl 76:1111-12)

13 See Charles Burnett, «Abelard, Ergaphalau, and the Science of the Stars,» in idem, ed. *Adelard of Bath: An English Scientist and Arabist of the Early Twelfth Century* (London, 1987), 133-45 (esp. 140-42); A. Vand de Vyver, «Les plus anciennes traductions latines médiévales (Xe-XIe siècles) de traités d'astronomie et d'astrologie,» *Osiris* 1 (1936):658-91.

14 Flint, *Rise of Magic*, 131ff.

15 Franz Cumont, «La polémique de l'Ambrosiaster contre les Païens,» *Revue d'histoire et de littérature religieuse* 8(1903):417-440; cited by José Maria da Cruz Pontes, «Astrologie et apologétique au Moyen Âge,» in C. Wenin, ed., *L'Homme et son univers au Moyen Âge* 2 (Louvain, 1986):631-37 (quotation at 632). M.L.W. Laistner, «The Western Church and Astrology During the Early Middle Ages,» *Harvard Theological Review* 34(1941):251-75.

16 Flint, *The Rise of Magic*, esp. 93ff.; eadem, «The Transmission of Astrology.»

17 Flint, *Rise of Magic*, 93.

rudimentary at best; this is seen in *De Dracone*, by Alfonsi's student Walcher of Malvern, who presents even the system of 12 zodiacal signs of 30 degrees each as something new.¹⁸ Clearly, any astrologers who may have been practicing in England when Alfonsi arrived were not able to provide sophisticated horoscopes.

Alfonsi and other twelfth century scholars produced a flood of new translations from Arabic into Latin, in both astronomy and astrology.¹⁹ Alfonsi provided a rather poor Latin version of Muḥammed ibn Musa al-Khwārizmī's *Zīj al-Sindhind* in 1116; about 10 years later, Adelard of Bath, probably in collaboration with Alfonsi, produced an improved version of the text.²⁰ Adelard also translated, about the same time, Abu Ma'shar's *Ysagoge Minor*, a short summary of astrological doctrine. Adelard put this new knowledge to work, as well. He seems to have composed a set of ten horoscopes for the English royal family (particularly for King Henry II), for which he calculates the positions of the stars by using his translation of the *Zīj al-Sindhind*.²¹

In 1133, John of Seville produced a Latin translation of Abu Ma'shar's *Introductorium maius*, a far more detailed presentation of astrological doctrine than the *Ysagoge minor*. Hermann of Carinthia translated the same text in 1140,²² and about ten years later may have translated Ptolemy's *Almagest* from the Greek.²³ Hugh of Santalla, Daniel of Morley, Gerard of Cremona, Raymond of Marseille, Robert of Ketton—all of these twelfth-century authors produced astronomical and astrological texts either translated from Arabic or inspired by Arabic models. This produced a wealth of astrological theory (and probably practice) previously unknown to Latin Europe.

18 On Walcher of Malvern and his *De dracone*, see Tolan, *Petrus Alfonsi*, 61-66; Charles Burnett, *The Introduction of Arabic Learning into England* (London, 1998), 38-40.

19 There is an extensive bibliography on the twelfth-century translations of scientific works from Arabic to Latin. Of particular interest are Marie-Therèse d'Alverny, «Translations and Translators» (she provides a bibliography on 459-62), *eadem*, *La Transmission des textes philosophiques et scientifiques au moyen âge*. Aldershot: Variorum, 1994; Charles Burnett, «Abelard, Ergaphalau, and the Science of the Stars»; *idem*, «Literal Translation and Intelligent Adaptation amongst the Arabic-Latin Translators of the First Half of the Twelfth Century.» *La Diffusione delle scienze islamiche nel medio evo europeo* (Rome, 1987), 9-28, *idem*, «The Translating Activity in Medieval Spain,» dans J. Jayussi, éd., *The Legacy of Muslim Spain* (Leiden: Brill, 1992), 1036-58; *idem*, *The Introduction of Arabic Learning into England*. London, 1998; Richard Lemay, «De la Scolastique à l'Histoire par la truchement de la Philologie: Itinéraire d'un Médiéviste entre Europe et Islam,» *ibid.*, 399-535; Danielle Jacquart, «L'école des traducteurs,» dans L. Cardaillac, éd. *Tolède, XIIe-XIIIe siècles: musulmans, chrétiens et juifs. Le savoir et la tolérance* (Paris: Autrement, 1991), 177-191; Danielle Jacquart and Gérard Troupeau, «Traduction de l'arabe et vocabulaire médical latin: quelques exemples.» *La lexicographie du latin médiéval et ses rapports avec les recherches actuelles sur la civilisation du Moyen-Age, Paris, 18-21 octobre 1978* (Colloques internationaux du C.N.R.S., 589). (Paris: C.N.R.S., 1981), 367-376; Francis J. Carmody, *Arabic Astronomical and Astrological Sciences in Latin Translation* (Berkeley, 1956); Lynn Thorndike, «John of Seville,» *Speculum* 43 (1959), 20-38; Paul Kunitzsch, «Gerhard von Cremona und seine Übersetzung des *Almagest*,» *Die Begegnung des Westens mit dem Osten: Kongreßakten des 4. Symposions des Mediävistenverbandes in Köln 1991 aus Anlaß des 1000. Todesjahres der Kaiserin Theophanu*, Odilo Engels and Peter Schreiner, eds. (Sigmarigen, 1993), 333-40.

20 See Tolan, *Petrus Alfonsi*, 55-61; Burnett, «Adelard of Bath and the Arabs,» *Rencontres de cultures dans la philosophie médiévale: traductions et traducteurs de l'antiquité tardive au XIV^e siècle* (Leuven, 1990), 89-107.

21 According to J. D. North, «Some Norman Horoscopes,» in C. Burnett, ed., *Adelard of Bath*, 147-61; see also Burnett, *The Introduction of Arabic Learning into England*, 31-46.

22 Lemay, *Abu Ma'shar, passim*. Lemay describes the influence of Abu Ma'shar's work on both defenders and detractors of astrology during the twelfth century. While the three translations of Abu Ma'shar's work were indeed influential, Lemay's far-reaching assertions need to be taken with a grain of salt. See Tester, *A History of Western Astrology*, 159n.

23 Lemay, «De la Scolastique à l'Histoire,» 428-84.

It also produced, predictably, fresh condemnations of astrology. Daniel of Morley relates that Gerard of Cremona publicly defended astrology against charges echoing those of Gregory.²⁴ The 1210 condemnations of Aristotelian doctrine, according to Richard Lemay, particularly single out the doctrine of astrological determinism. The same controversy existed in the Muslim world as well: `Abd Allah, Emir of Granada, defended his use of astrology while the Sufi Rumi claimed that Muḥammad had demonstrated the futility of astrology by splitting the moon.²⁵ Renewed controversy will accompany the translations of Arabic astrological texts into Latin in the twelfth century. The new astrology did not go unchallenged.

Petrus Alfonsi and Raymond of Marseille (along with the other twelfth-century proponents of astrology), had to overcome two kinds of resistance: the passive complacency of those satisfied by the meagre astrological fare of the medieval Latin tradition and the active hostility of those who saw in astrological doctrine an affront to Christianity.

As we have seen, Petrus Alfonsi, after converting from Judaism and emigrating from his native Andalus to England, in the 1110's taught astronomy in England, working with Walcher of Malvern and Adelard of Bath. By the 1120's, it seems, he was in northern France, a frustrated teacher with few students. It is here that he wrote his *Letter to the Peripatetics of France*.

The *Letter* falls into three parts. In the first part, Alfonsi explains the place of astronomy (*astronomia*) within the seven liberal arts. He finds that French scholars devote much of their attention to grammar and dialectic, ignoring the higher and more useful arts of medicine and astronomy. Astronomical knowledge, he sets out to show, is essential for the practice of medicine; proper knowledge of the seasons aids in preventing and diagnosing diseases.

Through astronomy, also, are obtained the proper times for cauterizing, making incisions, puncturing abscesses, bloodletting or applying suction cups where that is necessary, giving or taking potions, the days and also the hours in which fevers are to end.²⁶

Since, Alfonsi concludes, «it is obvious that astronomy itself is more useful, more pleasant and more worthy than the remaining arts,»²⁷ and since he found the Latins to be devoid of astronomical knowledge, he has devoted himself to the teaching of *astronomia*. In these descriptions he makes no distinction between the study of the motions of celestial bodies (what we call astronomy) and the study of the influence of these motions on the sub-lunar world (what we call astrology): he uses *astronomia* to refer to both of these.

The second part of his *Letter* is a sustained polemic against French scholars who will not become his students. Some of these scholars, he complains, travel to distant lands to study astronomy; why do they stray so far, when they have an accomplished teacher in their midst?

24 Daniel of Morley, *Philosophia*, G. Maurach, ed, in *Mittelateinisches Jahrbuch* 14 (1979):204-55 (passage cited on pp. 244-45).

25 `Abd Allāh b. Buluggīn, *The Tībyan: memoirs of `Abd Allāh b. Buluggīn, Last Zirid Amir of Granada*, Amin Tibi, trans. (Leiden, 1986), 181; on Rumi, see Annemarie Schimmel, *And Muhammad is his Messenger: The Veneration of the Prophet in Islamic Piety* (Chapel Hill, 1985), 71.

26 Petrus Alfonsi, *Epistola ad peripateticos* 5, J. Tolan ed. and trans., in *Petrus Alfonsi and his Medieval Readers*, Appendix 1, pp. 166 (Latin text) and 174 (English translation).

27 Alfonsi, *Epistola ad peripateticos* 6, pp. 166 (Latin text) and 174 (English translation).

I am not aware that it is the custom of learned men to pass judgement concerning that of which you are ignorant and to accuse that which you have not tested. This art may only be understood firstly through practice (*experimentum*), and similarly no one can master the art without practice (*experimentum*).²⁸

«Others,» Alfonsi continues, «after they have read Macrobius and others who seem to have labored in this art, suppose that they may be satisfied with themselves and that they have obtained a full knowledge of this art.»²⁹ This latter group, in particular, provokes Alfonsi's ire. Clearly, these scholars are hesitant to embrace Alfonsi's new Arabic texts, preferring to rely on the old Latin standbys. Macrobius' *De somno Scipionis* survives in approximately 230 medieval manuscripts, many of them from the twelfth century, which was the high point of the text's popularity.³⁰ By contrast, of the more detailed astrological tract by Firmicus Maternus (the *Mathesis*) there is only one known twelfth-century manuscript (as well as three from the eleventh century).³¹ The modest numbers of manuscripts of the new Arab-based astrological texts show how slowly these texts made inroads into the Latin tradition. Even Hermann of Carinthia, translator of Greek and Arabic astrological texts, prominently cites Macrobius as an authority.³²

Alfonsi blames this reluctance to accept the authority of the new texts (and to accept Alfonsi's own credentials as a teacher) on laziness and obstinacy. But theological reasons may also have counseled such conservatism: Macrobius had been studied by Latin Christians for centuries; churchmen may have naturally shied away from these new, «pagan» authorities, presented to them by a foreigner. But clearly the defenders of Macrobius already accepted the theory of celestial influence, in spite of the condemnations of those such as Augustine and Gregory. Here Alfonsi is directing his argument at a second set of enemies: inferior astrologers, who are content with half-baked Macrobian theory.

Alfonsi is, among other things, a fabulist (he is author of the popular *Disciplina clericalis*),³³ and here he illustrates the obstinacy of his opponents in two short fables. These men, he says, are like the goat who broke into a vineyard, gorged himself on vine leaves (ignoring the ripe grapes), and then proclaimed that there was no finer fruit than these leaves. Just so do these vain men prefer Macrobius to Alfonsi. These men are like an onion seller who, when a pearl merchant came to the market, thought his pearls were onions, and was astonished that he asked such high prices for such small onions.

He accuses these men of laziness: astronomy is difficult, and they are discouraged by this. Moreover, they proudly call themselves professors (*magistri*), and hence are ashamed to admit their

28 Alfonsi, *Epistola ad peripateticos* 7, pp. 167 (text) and 175 (translation).

29 Alfonsi, *Epistola ad peripateticos* 7, pp. 167 (text) and 175 (translation).

30 Albrecht Hüttig, *Macrobius im Mittelalter: Ein Beitrag zur Rezeptionsgeschichte der Comentariorum in Somnium Scipionis* (Frankfurt am Main, 1990), 27-28; B. C. Barker-Benfield, «The Manuscripts of Macrobius' Commentary on the Somnium Scipionis» Dissertation, Oxford University, 1975.

31 According to W. Kroll and F. Skutsch, in their edition of Firmicus Maternus, *Mathesis* (Stuttgart, 1968) 2:v-xviii; see also Laistner, «Western Church and Astrology,» 274-75.

32 Burnett, «Literal Translation,» 14. Daniel of Morley, on the other hand, describes how Gerard of Cremona invokes Firmicus' *Mathesis* as an *auctoritas* to prove celestial influence to his students (Daniel of Morley, *Philosophia*, 244-45).

33 Petrus Alfonsi, *Disciplina Clericalis* (Alfons Hilka and Werner Söderhjelm, eds.) *Acta Societatis Scientiarum Fennicae* 38, no. 4. (Helsinki, 1911); on this text, see my *Petrus Alfonsi and his Medieval Readers*, chapter 4, pp. 73-91.

ignorance and assume the humble role of student. Every day, Alfonsi complains, he receives letters from those who promise they will come to listen to his lessons; when class time comes, the students are not there.

Alfonsi then appends the third part of the letter, which is in fact an expanded version of an earlier text, the introduction to his translation of the *Zij al-Sindhind* of al-Khwārizmi.³⁴ As in the first part of the *Letter*, his point is to prove the utility of *astronomia* to his skeptics. Here, however, he attempts to prove stellar influence on terrestrial things.

When God created the earth, Alfonsi says, he granted to the «celestial creatures» power over things on earth. As an example of this, he gives a long description of how the movements of the sun cause the changes in the seasons, and in turn how these changes affect climate, affect plant and animal life, affect the four humors within man (and hence cause or alleviate certain diseases). He shows how the movement of the moon influences conditions on earth. The tides are caused by the moon's motion, as are variations in weather. In animals, the moon causes increase and decrease in various humours. Alfonsi observes that these changes, caused by the sun and moon, can vary greatly in intensity: hence one summer will be hotter than another, one rainier, etc. Similarly, the tides, and the other changes caused by the moon, do not always occur in the same manner. This leads Alfonsi to conclude that the regular movements of sun and moon are not enough to explain these variations; such explanation (he concludes with a logical leap) must be sought in the movement of the other planets.

Stellar influence, for Alfonsi, is part of the divine plan: it was established by God at creation, and it is knowable to man through diligent study. Those who oppose such study are lazy and inept. Raymond of Marseille, writing some twenty years later, produces a quite similar invective.

Raymond's introduction to his *Liber cursuum planetarum* is, in fact, only loosely related to the rather technical text that follows in manuscript P (and which is not extant in MS O).³⁵ It is rambling and discursive, meant, it seems, to explain and defend to his readers some of the principles of astrology—including those of casting horoscopes and predicting future events. The text has little apparent structure, as Raymond will often pick up and rehash issues that he has discussed earlier in the text. Raymond did not, it seems, expect his readers to have much practical knowledge of astronomy: he gives simple (and by and large clear) explanations of, e.g., retrograde planetary motion, how

34 O. Neugebauer, ed, *The Astronomical Tables of al-Khwārizmi, Translated with the Commentaries of the Latin Version ed. by H. Suter* (Copenhagen, 1962). See Tolan, *Petrus Alfonsi*, 55-61.

35 The text ends rather abruptly, with a reference to a diagram that is not extant in either MS: «Vel eis qui qualiter illic signorum oppositorum ascensiones equales aut iugiter equinoctia fiant sicere desiderant. Et ecce hic habes tam tabule inferioris, quam retis figuram.» (P, 115r; O, 62r).

In P, f. 115v is blank (except for a note in a later cursive hand); f. 116r begins with «His ordine peractis formetur aliud rete . . .» This looks, at first glance, like the incipit of a new text, although the repetition of *rete* may suggest that the second text is a continuation of the first; the second *incipit* is not listed in Thorndike & Kibre, *Incipits of Medieval Scientific Writings in Latin* (Cambridge, Mass., 1963). What follows (116r-118v) are *canones*, then a blank page (119r), then a series of astronomical tables (119v-135v). This is followed by John of Seville's translation of Abu Ma'shar's *Introductorium maius in astrologiam*, which begins at f. 136r (Thorndike & Kibre, 813). Lemay describes this manuscript (*Abu Ma'shar*, 394-59).

In O, the same explicit is followed, after a brief space, by Aristotle's *De fato* (inc.: «De fato autem dignum considerare . . .»; Thorndike & Kibre, 373).

eclipses occur, how to make an almanac, two rival schemes of the earth's climates, problems of defining an astronomical day, etc.

What I will focus on, however, is his defense of astrology. This is indeed the text's major preoccupation: to show that astrology is true and that it does not contradict orthodoxy. Raymond presents himself as a model Christian sage, surrounded by vicious, back-biting slanderers. He follows the model of the Magi, great sages of old, who (according to Raymond) were expert in astrology and used this expertise to find Christ, following the star of Bethlehem. It is unclear who are his tansured adversaries with smoky vestments; Marie-Thérèse d'Alverny has suggested Cistercian monks; she has also suggested that it may be addressed to anti-astrological arguments in Abelard's *Hexameron* commentaries.³⁶

Throughout his introduction, Raymond feels a greater need to answer his critics' theological objections than does Alfonsi. Alfonsi summarily dismisses such objections:

And then there are others who claim that this art is against the rule of the Christian faith. But natural arguments plainly show how inept and frivolous is their claim. For if it is an art, it is true. If it is true, it is not contrary to the truth. Hence it is concluded that it does not go against the faith.³⁷

Alfonsi underestimated the force and weight of such scruples; clerics were genuinely afraid that to dabble in astronomy might to slide into heresy, particularly since Gregory had associated astrology with Priscillianism. Raymond goes to much greater lengths to reassure his readers on this score; when we foresee the future in the stars, we are foreseeing what God has decided to reveal to us. «For the planets signify nothing more than what God has foreseen.»³⁸ He who studies the stars «does not praise them, but praises their Creator through them.»³⁹

Raymond bases this argument on a wide range of authorities. First and foremost, he extensively cites biblical passages which support astrology. He also cites the authority of pagan writers such as Ovid,⁴⁰ Lucan,⁴¹ Galen,⁴² and Hippocrates,⁴³ Church fathers Augustine,⁴⁴ Boethius,⁴⁵ and Gregory the Great,⁴⁶ and Muslim astronomers Abu Ma'shar (whom Raymond calls Abumassar)⁴⁷ and al-Zarqâli (Azarchiel).⁴⁸

36 The first suggestion is made in her «Astrologues et théologiens au XIIe siècle.» 37; the second in her «Abelard et l'astrologie.» She acknowledges that this is highly speculative, and I must agree with Lipton, who says of the second theory that «she is led to conclude this . . . from the very paucity of candidates» (Lipton, 27); he goes on to demonstrate that Abelard's *Expositio in Hexameron* is not as hostile to astrology as d'Alverny claims.

37 Alfonsi, *Epistola ad peripateticos* 9, pp. 168 (text) and 176 (translation).

38 »Nichil enim aliud planete nisi quod deus prouideret aut predestinauerit significant.» P, 112v; O, 58r.

39 »Non ea sed in eis contidorem laudet.» P, 112v; O, 58r.

40 P, ff. 110r, 114v & 115r.

41 P, ff. 110v, 113r, 114r & 114v.

42 P, 113v.

43 P, 113v.

44 P, f. 112v.

45 P, ff. 110r, 110v, 113r & 115r.

46 P, ff. 112v & 113r.

47 P, f. 110v. On his use of Abu Ma'shar, see Lemay, *Abu Ma'shar*, 141-57. On his use of Arabic sources in general, see Lipton, 166-67.

48 P, f. 110v.

The destiny (*fatus*) of any man, Raymond makes clear, is beyond the astrologers' ken.⁴⁹ Here he cites both Gregory and Boethius, in another attempt to disarm potential critics. Fatalism (or determinism) is indeed one of the issues that most bothered astrology's critics; for them (as, apparently, for a few of ancient astrology's advocates) astrology's claims to predict the future denied man's free will. Some critics also felt that this determinism put limits to God's own power.⁵⁰ Raymond distances himself from the Priscillianists, whose determinism Gregory had so vigorously attacked:

We think that it is worthy to avoid completely the error of the Priscillianists and to pierce it with the sword of reason. For they used to say that if anyone had been born at the same time as the Lord, he would have been just like him. This is stupid not only to defend, but even to hear! For if it were as these people used to say, we could believe that instead of the stars being created for men, men were created for the stars; this is false.⁵¹

Raymond was familiar with condemnations of diviners and *mathematici* in the works of such church fathers as Augustine and Gregory the Great, and he is at pains to explain away these condemnations. He also tries to distance astrology from the pagan forms of worship associated with it in the days of the Church fathers and from the kind of crude determinism which would deny man his free will—a determinism, moreover, quite present in the works of Arab astrologers such as Abu Ma'shar.⁵² He asserts that divining the future in the stars—far from compromising God's power—is one of the main avenues God has chosen to communicate with man.

Raymond then goes one step further and turns the tables on his clerical opponents. Since the stars are messengers created and ordained by God, those who deny astrology blaspheme God and come dangerously close to heresy. The astrologers are truly pious, reading the messages which God has placed in the heavens for them; Raymond's opponents are blasphemous, opposing those with whom God chooses to communicate and denying his power to communicate through the motions of the planets.

Raymond knows that his readers will be familiar with hostile references to divination and astrology in Augustine and Gregory the Great; he knows that he can ignore these only at his peril. He first addresses Gregory:

Nor should it change anything that in his commentary on the Gospel . . . the blessed Gregory says that there were diviners (*mathematici*) who said that whenever a man was born, a new star would rise, or if someone was born under the sign of Aquarius he would become a fisherman and someone born under Libra a money-changer.⁵³

49 P, 113r.

50 See Lipton's chapter V, «Determinism» (pp.133-46).

51 »Priscillianistarum [O: principia istorum] errorem funditus euertere et gladio rationis confodere dignum credimus. Hii [O: Si] enim dicere solebant quod si hora quando dominus natus est nasceretur alius qualis et ipse fuit esseret. Quod non solum deffendere uerum etiam audire stultissimum est. Nam si ut ipsi aiebant foret, non propter homines stellas sed propter stellas homines factos quod falsum est credere possemus.» (P, 112r; O, 57v)

52 See Lemay, *Abu Ma'shar*, 113-27 (on Abu Ma'shar's determinism) and 156 (on Raymond's softening of that determinism).

53 »Nec quempiam mouere debet quod in illius euangelii expositione cuius uerba promissimus beatus gregorius dicit fuisse mathematicos qui dicerent quotienscumque homo nasceretur nouam orri [O: ori] stellam aut siquis sub aquario natus

This is not anything that an astrologer would say, replies Raymond. Gregory creates a caricature of astrology in order to discourage his contemporaries from studying it; this he does, Raymond says, because in his day astrology was still associated with paganism. Raymond explains:

The philosophers of old were themselves led into error on this account. Calling Saturn and Jupiter and the sun and the moon and the other planets gods and goddesses, nonetheless they did not worshipped them with sacrifices and other rites, although they taught humbler people that they ought to do so. Because of these things, many Christians still believe that this science cannot be free of ignominy.⁵⁴

Raymond answers these qualms by asserting (here as elsewhere in his treatise) that God created the stars, along with the angels, man, and other creatures: to disdain the stars is to disdain his creation. It is better to praise God's works than to be silent about them. Raymond's sensitivity to the pagan associations of astronomy also pervades his discussion of chronology. He explains that he has chosen to use the *Anno Domini*—and not the years of the Greeks, Persians, or Arabs, so that nothing heretical or foreign to the faith might be found in his work.⁵⁵

If Gregory's attack on astrology can be dismissed as the overzealous qualms of a pious Christian who abhors paganism and heresy, Augustine's unequivocal rejection of it is harder to tackle. Instead of directly countering the arguments of Latin Christendom's greatest Church Father, Raymond twists his words to make him seem to *support* Raymond's point of view.

But perhaps someone should add, «if this is so, as you say, why do learned astrologers sometimes make mistakes when they make predictions?» To such a questioner, we can respond thus. Because it [true prediction] is in none other than Jesus Christ in whom (according to the Apostle) the plenitude of all divinity bodily resides. Thus Augustine says that none of the additions (*augmenta*) of good diviners are sufficient in themselves, without there being something else which the mind would need to rationally understand and to act. If a skilled astrologer should make mistakes in giving predictions (something which rarely if ever happens), no one should be astonished. Because of this, we generally qualify our predictions in the following way. When it is said at what moment God started all the planets together from the first degree of Aries, or [when it is said] that at a certain time [the planets] will arrive at the same place and the earth will either end or recommence we immediately add, «if God should will it.» For indeed all things are in God's power, so that the Lord himself, invalidating the opinions of the philosophers and condemning and annulling the wisdom of the wise, can turn both earthly and heavenly things from their accustomed courses.⁵⁶

foret piscatorem et sub libra trapezitam futurum.» P, 112v; O, 58r. He is referring to Gregory's *Liber Homiliarum in Evangelia* I:10 (PL 76:1112).

54 »Ipsi philosophi in hoc etiam antiquitus seducti sunt. Unde saturnum et iouem et solem et lunam aliosque planetas deos* atque deas appellantes, sacrificiis aliisque solempnitatibus non tamen uenerati sunt. Verum etiam simpliciores quosque idem debere agere docuerunt. Ea propter nonnulli adhuc christiani hanc scientiam ignominia posse* carere arbitrantur minime.» P, 113r; O, 58v. O: deos atque deas; P: diuinus atque diuinus. O: ignominia posse; P: ignominiam pro se.

55 »Quem non annis mundi, seu grecorum, aut iezdazird, siue Arabum aut quibuslibet aliis intitulamus, sed annis incarnationis domini nostri iesu ut nichil hereticum nichil a uerba fide alienum sed quicquid hic dicitur catholicum et spiritu sancto ministrante dictatum inueniatur.» P, 110v; O, 55r.

56 »Sed forte subinferat aliquis: 'si ita est, ut refers, cur aliquando periti astrologi in iudiciis dandis falluntur?' Cui nos sic respondere possumus. Quia cum sit in nullo nisi in Christo* Ihesu in quo secundum apostolum habitat omnis ple-

Raymond transforms Augustine's *rejection* of astrology into a *qualification* of it; Augustine, Raymond implies, condemned only those astronomers who denied that the stars followed God's will. A key element to Raymond's defense, moreover, is that the astrologer qualifies his prediction with the qualifying «if God should will it («si deus uoluerit»»). This is in fact John of Seville's rendering of Abu Ma'shar's formulaic «Insh'Allah,» here elevated to a theological defense of astrological practice.⁵⁷

Alfonsi, as we have seen, maintains that God, at creation, endowed «celestial creatures» with power over terrestrial ones; this power, he makes clear, is used for carrying out God's will. Raymond also uses the creation to justify the study of the stars. He opens his treatise by saying that God made man so that he should sing (*decantare*) God's glory by praising his creation. God's creatures—including the stars—are miracles (*miracula*) and those who wish to hide these miracles are bound for hell.⁵⁸ Clearly, Raymond will pull no punches with the ecclesiastical opponents of *astronomia*.

Moreover, Raymond continues, God made the animals with their faces pointing down toward the earth and man with his pointing up towards the sky; this must be so that man can survey the heavens and so that he may read, in the stars, the announcement of God's *mirabilia*. He cites Ovid and Boethius to support his case.⁵⁹

All the more amazing, therefore, is the perversity of certain utterly lost people, who are ignorant of how much beauty God granted to human nature. [These people] not only hold the knowledge of celestial things in contempt, but if they happen to meet someone who knows

nitudo diuinitatis corporaliter testante* augustino qui dicit nulla diuinorum bonorum augmenta ita sufficient, [O: sufficient], quin semper supersit quod mens rationalis et intelligendum desideret et gerendum. Si peritus astrologus quandoque in dando iudicia (quod aut uix aut nullatenus euenire potest), fallatur nemo miretur. Qua propter iudicia nostra sic temperare consueuimus, ut cum dominus quando planete omnes ad arietis primum initium unum cursum suum a quibusdam cepisse dicuntur, uno eodemque tempore peruenerint mundum uel finiri uel reincoari [O: inchoari], mox adiungimus, 'si deus uoluerit.' Quam quidem in dei potestate sic uniuersa sunt posita ut ipse dominus philosophorum opiniones irritas faciens et sapientum sapientiam reprobans et euacuans, tam celestia quam terrestria a curso suo deflectere possit.» P. 112v; O, 58r. P: in Christo . . . testante [text missing]. I have been unable to identify the passage in Augustine to which he is referring. The use of *reincoari* [in MS P] suggests that Raymond, following his Greek sources, posits a circular notion of time in which the world will be re-created; that he should suggest this in a work meant to convince his readers of the orthodoxy of astrology seems strange. Perhaps O's reading, *inchoari*, should be preferred: it is more orthodox (though less logical, in the structure of the sentence).

⁵⁷ Lemay, *Abu Ma'shar*, 148-49.

⁵⁸ P. 110r. A similar defense of astrology was made by the twelfth-century translator (from Greek to Latin) of Ptolemy's *Almagest* (who, according to Lemay, is Hermann of Carinthia), in the introduction to his translation: «Stultum quippe creatoris opera contemplari, eorumque speculatione ineffabilem ipsius potentiam ac sapientiam delectabilis admirari? Nefarium quoque penitusque liquet illicitum ad conditoris cognitionem conditorumque cognitione animum subleuare, creatorem insensibilem comparare? O mentes cecae! uiamque philosophandi penitus ignorantes!» This text is edited by Charles Homer Haskins, *Studies in the History of Mediaeval Science* (Harvard, 1927):191-93 (the passage cited is at p. 192) and reproduced (with a French translation) by Lemay, «De la Scolastique à l'Histoire,» 433-39; Lemay's argument for Hermann's authorship is at pp. 428-32.

⁵⁹ »Os homini, ut Ouidius refert, sublime dedit, celumque uidere iussit, et erectos ad sidera tollere uultus, prona cum spectant cetera animalia terram.» P, 110r. O, 54r.

«Pronaque cum spectent animalia caetera terram,

Os homini sublime dedit, coelumque uidere

Jussit, et erectos ad sidera tollere uultus.» Ovid, *Metamorphoses* I, 84.

these things, they are shocked, they flee, and they judge him abominable. If such men are ever saved, God will save them not as men but as asses. For any man who is ignorant of celestial wonders should not be called a man but should be numbered among the irrational beasts.⁶⁰

If such men happen to turn their gaze towards the heavens, Raymond continues, «it is as if they did not see.» «They are blind, ignorant of whatever they might see.»⁶¹ Their ignorance, though shrouded in apparent piety, is a kind of contempt for God and his works.

Again Raymond is trying to beat his adversaries at their own game. He wants to show that it is the astrologer who is truly pious; his craft, far from being heretical, involves praising God's works and trying to discern His will. The astrologer's opponents are the ones who impugn God's works and try to limit his power. Raymond comes back to this theme again and again:

Whom do these men insult if they cry out against those of us who ponder the wondrous works of God and who praise him in these works? Certainly not us, but rather, when they reprehend those [of us] who exalt God in his works, they blaspheme not us but Him whom they wish to prevent us from praising. They rouse Him to anger with their insults. . . . In this way they clothe themselves in the darkness of ignorance and the blindness of error.⁶²

Some people, Raymond says at another point, claim that astrologers attribute to the planets what in fact should be attributed to God's will; Raymond again explains that the planets, created by God, are simply a means he has chosen to express his will.⁶³

Raymond's critics have a more pedestrian objection to astrology as well: it does not work, they claim. Astrologers cannot accurately predict the future based on the stars; two people born at the same time (twins, for example) can have very different fates; God is able to circumvent the rules of the astronomers, by making the sun stand still for Joshua at Gibeon (Joshua 10:13); this shows that the astronomers' rules are folly. Raymond refutes each of these objections carefully. He takes great pains to distinguish God's will as it is manifested in accordance with the rules of nature (*naturaliter*) and as it is manifested when he acts outside of the rules of nature, through miracles (*mirabiliter*).⁶⁴

60 »Unde magis quorundam p̄ditissimorum prauitas admiranda est, qui quanta beatitudine deus hominis naturam dotauerit ignorantes, non solum quicquam de celestibus scire contempnunt sed etiam si quos scire cognouerunt abhorrent et fugiunt et abhominabiles diiudicant. Hos tales si fortuito saluari contigerit non ut homines deus sed ut iumenta saluabit. Omnis enim homo qui mirabilium celestium inscius est non homo potius dicendus est et inter irrationabilia deputandus est.» P, 110r; O, 54v.

61 »Quasi non uidentes sunt. . . Ceci sunt, nescientes quid uideant.» P, 110r; O, 54v.

62 »Cui [O: cum] enim si nobis dei opera mirifica considerantibus et eum in ipsis laudantibus contradicant detrahunt? Numquid nobis non, imo cum deum in suis operibus extollentes reprehendunt, non nos sed deum [P: illum] a cuius laude retrahere nos uolunt blasphemant et contumeliis ad iracundiam concitant. . . . huius modi ignorantie tenebris et cecitate erroris inuoluuntur.» P, 112v; O, 58r.

63 P, 114r. At 112r-v, he similarly explains how astrology is part of the divine plan.

64 This desire to limit the scope of God's direct (i.e., miraculous) action by explaining more in terms of his indirect (i.e., natural) action is common to many 12th- and 13th-century authors. It ran up against the cult of the saints, whose advocates wished to multiply and publicize the miracles of their favorite saints. On this, see the first chapter of Benedicta Ward's *Miracles and the Medieval Mind* (Philadelphia, 1987).

Whatever God does, he does it either through his power miraculously (*potentialiter et mirabiliter*) or through his power naturally (*potentialiter et naturaliter*). God acted *potentialiter et mirabiliter* in the birth from the Virgin Mary, who conceived against the nature of a virgin, gave birth a virgin, and remained a virgin in body and mind after the birth. In birth from the bodies of all other women, God operates *potentialiter et naturaliter*. It should be considered, then, that the things that God does *potentialiter [et mirabiliter]* we see are extremely rare, but those things which he does *potentialiter et naturaliter* we see and hear frequently. No wise man doubts that [God] acts in the same way concerning the seven planets, which shine against the firmament.⁶⁵

At another point in Raymond's treatise, he gives concrete examples of natural and miraculous eclipses.

God can deflect both terrestrial and celestial things from their courses. He did this, we know, with the sun in the time of Joshua. And at the time of the passion of our Lord, when [the sun] grew dark at a time when this could occur in no other way except through the power of divine virtue. Not in such a way that the heretics could babble that this happened from the obstruction of the moon and its vicinity to the ascending or descending lunar node, which can in no way happen when the moon is 14 [degrees] away, as can be ascertained [in the works of] the above-mentioned philosopher. Since, then, he saw the earth immediately hidden in darkness, he knew that this did not happen in accordance with the nature of the luminaries. He knew for certain that this occurred through some great and miraculous thing, which alone could overcome the force of the sun itself.⁶⁶

In the same way, Raymond says elsewhere, God acted when he made the sun stand still. This was a singular act of act of God's power, unique in all time. It was hence something known only to God, something which no astrologer could have predicted.⁶⁷

God can circumvent the laws of astrology, which are after all his own laws; the doctrine of astrology does not put limits on God's power. On the contrary, stresses Raymond, the stars are one

65 »Et enim dominus deus quecumque facit aut facit potentialiter et mirabiliter tamen aut potentialiter et naturaliter. Potentialiter ac mirabiliter tamen operatus est deus in partu beate uirginis marie que contra naturam uirgo concepit, uirgo peperit, uirgo etiam post partum mente et corpore perseuerauit. In partu uero corpori enim omnium aliarum mulierum operatur deus potentialiter et naturaliter. . . . Considerandum est itaque quod ea que a deo tamen potentialiter <et mirabiliter> facta sunt rarius uidemus, sed que potentialiter facit et naturaliter iugiter cernimus et audimus; veluti fit de .vii. planetis quos contra firmamentum niti, sapientum nemo ambigit.» P, 114v; O, 61r-v.

66 »[Deus] tam celestia quam terrestria a cursu suo deflectere possit. Sicut de sole iosue temporibus factum fuisse nouimus. Et in tempore dominice passionis, quando obscuratus est quando aliunde nisi ex diuine uirtutis potentia euenire potuit. Non quemadmodum heretici garrere solebant ex obiectu lune et uicinitate capitis vel caude drachonis id accidisse, quod fieri nequaquam potuit luna tunc existente .xiiii. ex idem ex cuiusdam dicti philosophi percipi potest. Cum enim uideret mundum tenebris subito obfuscatum. Sciretque non idem ex luminarium natura accidisse. Nouit pro certo quod ex quadam magna et admirabili re que etiam ipsi soli uim inferret contingebat.» P, 112v (the text of O is corrupt here). On the eclipse believed to have accompanied the crucifixion and the conversion of Dyonisius the Areopagite, see Petrus Comestor, *Historia scholastica*, PL 198:1702-03; Laura Smoller, *History, Prophecy, and the Stars: The Christian Astrology of Pierre D'Ailly, 1350-1420* (Princeton, 1994), 160n13.

67 »Atque de sole qui ad gabaon stetisse [P: stetisse] legitur accidit quoniam nullatenus astrologorum iudicio hoc prosciri poterunt [sic] sic sciendum que* hoc in omni tempora singulariter in sua deus disposuit potestate. Illa namque solius dei scire est.» P, 110r; O, 54v. *P:que hoc in omni; O: quia huiusmodi.

of the ways that God announces His will to man. Raymond compares astrologers to the prophets: just as God granted to the prophets the gift of foreknowledge, so he announces the future to astrologers through the stars.⁶⁸ Raymond has biblical examples to prove his argument.

No one doubts that an astrologer can predict the future. For if this were false, the Truth itself would not have instructed us about the signs by which we will know that the day of judgment is close, saying, «There shall be signs in the sun and in the moon and in the stars.» [Luke 21:25]⁶⁹

The Bible shows not only that God will announce the last judgment through the stars, it also describes how he announced the incarnation through the star of Bethlehem. Indeed the Magi, for Raymond, are archetypal Christian astrologers. If astrologers could not predict the future, says Raymond,

The Magi would not have learned that the Lord was born on earth through the star which appeared. We know that learned this by being illuminated by the Holy Spirit, through this science.⁷⁰

Whoever denies that astrologers can read the future in the stars, Raymond concludes, contradicts scripture, for in Matthew (2:2) the Magi say: «We have seen his star in the east and have come to worship him.»⁷¹ Earlier defenders of astrology (e.g., Prudentius, Rabanus Maurus) had invoked the Magi as legitimate, Christian astrologers. Church Fathers had been careful to explain the Gospel reference in other ways: for some (including Augustine and Gregory), the star of Bethlehem was a special sign; interpreting it involved no knowledge of astrology. For others (Isidore, in particular), the coming of Christ marked the end of the usefulness of astrology; once they visit Jesus, the Magi give up their now useless astrological practice.⁷²

Raymond still has to tackle the objections of skeptics. In particular, two people born at the same time often lead very different lives, even though they have the same horoscope. Raymond takes on three variations of this argument.

The first of these, as we have already seen, was a question which had been raised by Priscillianists: What if someone had been born at the exact same moment as Christ?⁷³ The star of Bethlehem was a special sign, Raymond explains, sent by God to announce Christ's birth to the nations. It would have no significance to the birth of a mere mortal. Moreover, he continues, this argument tries to put the Creator and his creatures on the same level.

68 P, 112r.

69 »Astrologum futura posse predicere nemo desperet. Nam si id falsum foret ueritas ipsa quibus signis diem iudicii propinquum esse [P omits *esse*] presciremus non nos instrueret dicens: 'Erunt signa in sole et luna et stellis,' et cetera [Luke 21, 25].» P, 112r; O, 57r-v.

70 »Nec magi dominum in terris natum in stella que ipsis [P omits *ipsis*] apparuit cognouissent quod eos spiritu sancto illustratos hac scientia mediante percepisse scimus.» P, 112r; O, 57v.

71 »Vidimus enim stellam eius in oriente et uenimus adorare eum.» (Matthew 2:2)

72 Flint, *Rise of Magic*, 364-75; eadem, «Transmission of Astrology,» 20-23.

73 See above, page 22.

Less easy to dismiss, however, is the second variation on this theme: how does one explain the very differing fortunes of the biblical twins Jacob and Esau? (Raymond does not acknowledge that Augustine and Gregory both use this very argument to refute astrology.)⁷⁴ The twins were not, Raymond answers, born at the same time; Esau was born a few minutes earlier. This short interval is enough to change the celestial configurations; Raymond illustrates this by giving different horoscopes for the twins.⁷⁵

He has a slightly different answer to the problem of a king and a slave born at the same moment:

Concerning kings and servants who are born at the same time, we believe that this has happened either rarely or never. In order to satisfy the useless objections of certain simpletons, we will respond as follows. Ascending 10^o in Aries while the sun also is in Aries and Mars is in Virgo, the slave is born. In this situation, the Sun indicates that [the one] will be king for life. Mars shows that the slave will stay in perpetual servitude.⁷⁶

Having mocked and lambasted his critics, Raymond turns to the practical benefits of astrology. Medicine testifies to the importance of astrology, for Raymond as for Alfonsi. Citing Galen, Raymond says that

all corporeal substance is joined together and connected to the planets and the zodiacal signs through the links of the four elements. This [Galen] proves through the example of Alexander, who took his characteristics not from his father or his mother, but from the planets themselves.⁷⁷

Raymond then explains, very much as Alfonsi had done, that astrological prediction aids the physician in proper diagnosis and helps him correctly time treatment.

Raymond, like Alfonsi, is at pains to prove that he is competent in the practice of astrology. Indeed this runs through his text as a secondary purpose; in instructing his readers in astronomy and astrology, he is showing his own expertise; this is implicit, too, in his criticisms of bad astrologers: the ones whom Augustine and Gregory criticize, or the ones who make faulty predictions. This becomes explicit when Raymond discusses a debate he had with other astronomers.

⁷⁴ Augustine, *Confessions*, VII:6; *De civitate Dei* V:4; Gregory the Great, *Homiliae in Evangelia* II:10 (Pl 76:1111-12).

⁷⁵ »Ponamus autem dum esau nasceretur in ortu ascendisse .x. cancri gradum innesetque ibi mars et saturnus similiter in x^o arietis. De interuallo unius uel duorum graduum facto non enim conglobari, nati sunt sed post alterum alter dum eiusdem signi xii gradus ascendet ibique foret mercurius et luna in xii gradus uirginis natus est iacob. Ecce cum malos esau habeat significatores non est mirandum [O: mirum] si malam ducat uitam et econtrario de iacob sentiendum [O: sciendum est]. Non tamen ideo dicendum est quod ipsi planete homini ut malus uel bonus sit inferant.» P, 113r; O, 58v.

⁷⁶ »De regum et seruorum natiuitate eodem tempore facta. Quod aut uix aut numquam euenire posse credimus. Vt quorundam simplicium inutilibus oppositionibus satis faciamus, sic respondemus. Ascendente .x. gradus arietis dum esset sol in ipso ariete et mars in uirgine natus est [O: rex et] seruus. Regem ergo perpetuo futurum sol indicat. Seruum mars in perpetua seruitute mansurum ostendit. Aliter eadem res accidere posset.» P, 113r; O, 58v. Raymond goes on to give a second possible horoscope with the same kind of dual meaning.

⁷⁷ »omnis substantia corporea animata iuncta sit et ligata in planetis et signis .iiii. elementorum nexibus quod ibidem probat per alexandrum qui non a patre uel a matre similitudinem traxit sed ab ipsis planetis.» P, f. 113v; O, 60r. On Raymond's use of Galen, see Lemay, *Abu Ma'shar*, 147-48.

Some time ago a controversy arose between us and two followers of a certain false book on the movements of the planets, who swore that if somehow their book were disproved by reason, they were ready have their heads beaten.⁷⁸

Raymond says that he argued with these men over the position of Mars. They had planetary tables based on movement measured from a planet's last solar conjunction (*combustio*); Raymond explains in detail how he, through superior calculation, showed these tables to be false. In fact, Raymond's calculations (as preserved in the manuscripts) are equally faulty, as Joshua Lipton has shown.⁷⁹ Still, this long presentation of his intellectual victory over rival astronomers is meant to show his readers that he is a redoubtable expert.

The presence of these rival astronomers, again, parallels Alfonsi's fulminations against astronomers content with Macrobian theories: in each case, the author asserts that he is more knowledgeable and competent astronomer than his adversaries. Both cases suggest that there is indeed astrological practice before the availability Arabic astronomical texts. In this case, Laistner and Cumont are wrong in supposing that it is the translations that reawaken interest in astrology.⁸⁰ Rather, it seems that the new interest in astronomy and astrology—like that of the «twelfth-century Renaissance» in general⁸¹—falls into two phases: first, a study based on old, Latin texts; then the adaptation of Arabic astronomical theory and astrological practice. Raymond of Marseille and Petrus Alfonsi are transitional figures: bearers of the new Arab astronomy, they are battling not only the theological scruples of astrology's detractors, but the complacency of those who are satisfied with the likes of Macrobius.

Both Alfonsi and Raymond (like their contemporary Abelard) prize their grasp of reason (*ratio*) and denigrate their opponents' lack of it. All claim to be able to out-argue their opponents and mock them for trying to fend off reason with the crutch of authority. (Though, of course, all three invoke authority as well). Alfonsi charges that those who depend on Macrobius, «when their reasoning (*ratio*) is examined, . . . they fail in arguing and they fling to their authorities the full force of proof.»⁸² Alfonsi, on the other hand, bases his ideas on reason and experience (*experimentum*).⁸³ If Alfonsi follows reason, and proves stellar influence through «experimental argument» (*argumento experimentalis*)⁸⁴, then, his opponents are «feeble» and «infirm»; they are unwilling to study astronomy because of their «laziness.» Their theological objections are «frivolous» and «inept.»⁸⁵

Raymond takes much the same attitude: with the «sword of reason»⁸⁶ he will take on his enemies. Those who oppose that sword, Raymond's opponents, are «ignorant,» «stupid,» «blind,»

78 »Quodam tempore tanta inter nos et duos mendosi cuiusdam libri cursuum sectatores controuersia emersit, ut firmarent si quolibet modo liber eorum ratione falsificari posset se capite plecti uelle.» P. 111r; O, 56r.

79 Lipton, 169-76. Lipton shows that Duhem's discussion of the text (pp. 206-09) is too generous to Raymond, overlooking his errors and attempting to correct some of his figures.

80 See above, p. 16.

81 See above, p. 14.

82 Alfonsi, *Epistola ad peripateticos* 7, pp. 167 (text) and 175 (translation).

83 See quotation above. On Alfonsi's use of *experimentum*, see Tolán, *Petrus Alfonsi*, 59-60, 68-71.

84 Alfonsi, *Epistola ad peripateticos* 18, pp. 171 (text) and 179 (translation).

85 *imbecilles, inualidi, desidia, friuolum, ineptum*; all of these insults are in Alfonsi, *Epistola ad peripateticos* 9, pp. 168 (text) and 176 (translation).

86 »gladio rationis,» P. 112r.

«irrational creatures»; they suffer from «perversity,» are lost in the «darkness of ignorance.» Moreover, they «err,» they stir up «superstitious controversy»; they have only «the appearance of piety.» In fact, by opposing astrology they «vilify,» «slander,» and «blaspheme.»⁸⁷

Their opponents' ignorance invalidates their arguments and makes them worthy of contempt. Raymond judges that, by their failure to use reason, his opponents no longer deserve to be considered human, but are irrational beasts, asses.⁸⁸ The translator of Ptolemy's *Almagest* (c. 1150, who, according to Richard Lemay, is Hermann of Carinthia) argues:

You have certainly noticed the many audacious judges of causes they do not understand who, in order not to appear ignorant, declare whatever they do not know to be useless and profane. About this the Arabs say: The arts have no greater enemy than him who is ignorant of them.⁸⁹

The new Arab astronomy follows reason; its opponents are hence irrational, bestial. This too is the view of another twelfth century writer and translator, Adelard of Bath, who says:

I learnt from my masters, the Arabs, to follow the light of reason, while you are led by the bridle of authority; for what other word than «bridle» can I use to describe authority?⁹⁰

Adelard is in fact arguing—as are Alfonsi and Raymond—for replacing an old (Latin) set of authorities with a new (Arab) set of authorities; reason is invoked primarily as a stick with which to beat one's opponents. This is a common practice in the twelfth century: Peter of Cluny says that Jews refuse to listen to reason, and hence prove themselves irrational beasts.⁹¹ Similar arguments are leveled against those who practice trial by ordeal.⁹²

This shrill invocation of reason shows the nature of the opposition to this new Arabic science. Writers like Alfonsi, Raymond, and Adelard did not risk ecclesiastical censure, nor were they in danger of having their books burned. What they faced was a cold, apathetic reception. They were battling not intolerance as much as complacency. They are the solitary shock-troops of Arab learning, beating against the citadel of Latin tradition. That citadel will be stormed later in the century, when the wave of translations from Spain invades and transforms Latin learning.

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87 »Ignorantes» (P. 110r), «ignorare» (110r), «nescire» (twice at 110r); «stultissimus» (112r); «ceci» (110r), «cecitate» (112v); «irrationabilia» (110r); «prauitas» (110r); «ignorantie tenebris» (112v); «errare» (110r); «supersticiosa controuersia» (112v); «religionis simulatio» (112v); «uulificare» (112v); «calumnantes» (112v); «blasphemare» (112v).

88 See passage cited above, page 24.

89 »Sensisti uero et tu nonullos hiis in temporibus cause quam ignorant iudices audacissimos qui, ne minus scientes uideantur, quecumque nesciunt inutilia predicant aut profana. Iuxta quod Arabes dicunt: Nullus maior artis inimicus quam qui eius expers est.» Text edited by Haskins, *Studies*, 191-93; reproduced by Lemay, «De la scolastique à l'histoire,» 435-36.

90 Trans. by Richard Southern, *Robert Grosseteste: The Growth of an English Mind in Medieval Europe* (Oxford, 1986), 86; from *Questiones naturales, Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 31, pt.2, 11.

91 Cf. in particular, Peter the Venerable, *Aduersus Iudeorum inveteratam duritiem* (Yvonne Friedman, ed., *Corpus Christianorum continuatio mediaevalia*, vol. 58 (Turnholt, 1985)): V, 125; on Peter's anti-Jewish polemic, see Dominique Iogna-Prat, *Ordonner et exclure: Cluny et la société chrétienne face à l'hérésie, au judaïsme et à l'islam, 1000-1500* (Paris: Aubier, Collection historique, 1998), 272-323.

92 Robert Bartlett, *Trial by Fire and Water: The Medieval Judicial Ordeal* (Oxford, 1986), 86. On this kind of invocation of reason, see also R.I. Moore, «Power and Reason,» chapter 4 of his *The Formation of a Persecuting Society* (Oxford, 1987), 124-53.