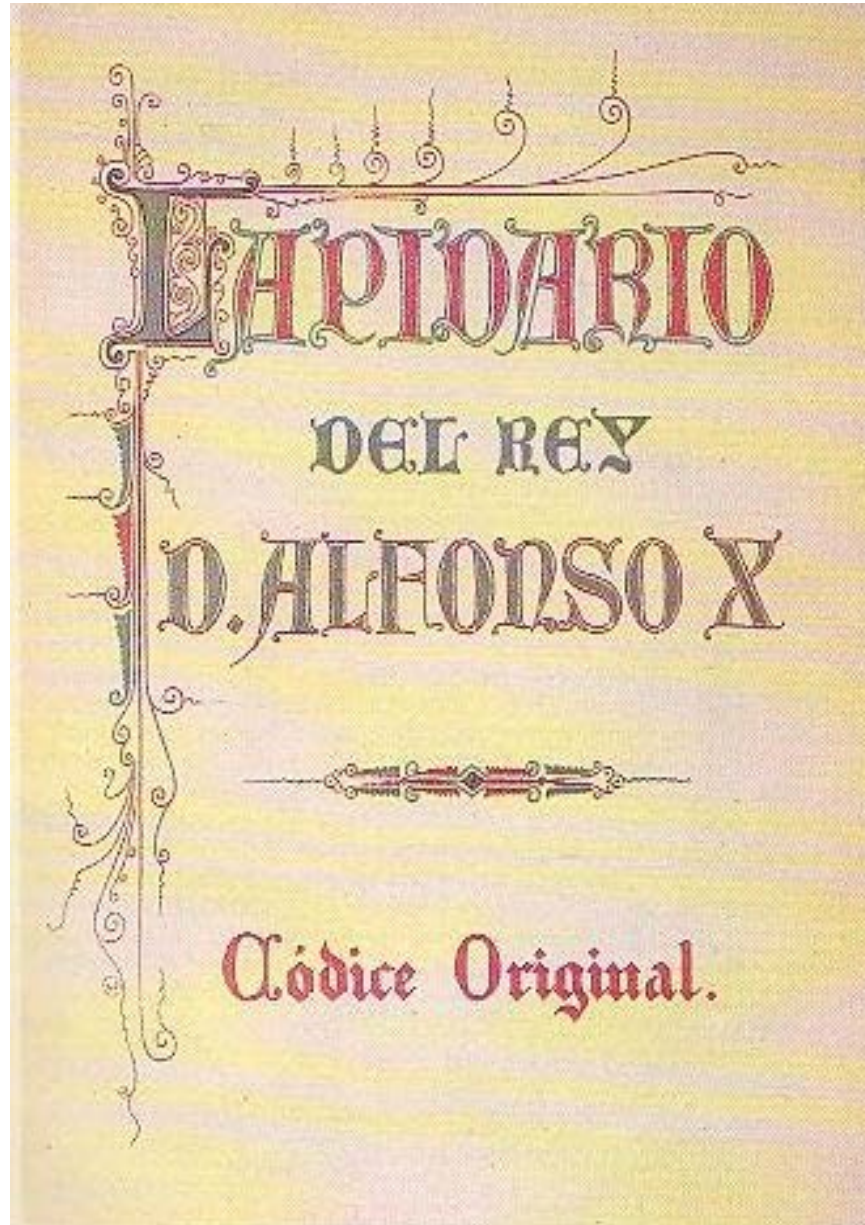


# Lapidario del rey D. Alfonso X

Alfonso X, King of Castile and Leon, 1221-1284



**Lapidario del rey D. Alfonso X; codice original. Madrid, Impr. de la Iberia, á cargo de J. Blasco, 1881**

**PN682.L3 A38 Special Collections oversized**

The Lapidary is the first book to come out of Alfonso's workshop, in 1253 and was written by Alfonso X the Wise. It is the first book written in Castilian prose, early Spanish, and the first relevant scientific book written in the Iberian Peninsula and in Europe.

The facsimile edition of the Lapidary contained in the first 94 sheets of the ms. H.I.15 of the Library of El Escorial (Madrid), at original size (29,1 x 40,2 cm), on parchment paper printed in 8+8 colours, which are the most faithful reproduction of its 638 full-coloured miniatures and initial letters.

Lapidario del Rey D. Alfonso X, Codice Original, Madrid, 1881, 4to, *facsimile edition with coloured plates, contemporary cloth-backed boards* - Fincham (Henry W.): Artists and Engravers of British and American Book Plates, New York, 1897, 4to, limited to 1050 copies, *plates, original cloth-backed boards; and a quantity of books, pamphlets and catalogues of bibliographical interest.*



• 165 ALFONSO X. LAPIDARIO DEL REY D. ALFONSO X.

Codice Original. Madrid: Imprenta De La Iberia, A cargo de J. Blasco. . . 1881 4to: (1) + (6) ff + 132 ff = 76 pp. 1/3 brown polished calf cloth, gilt. 9 x 12 in.

*This work reproduces in full and brilliant color the illuminated manuscript prepared for King Alfonso X of Spain and preserved in the San Lorenzo Library in Escorial, Madrid.*

*In the preface, Jose Fernandez Montana comments on the manuscript and the original writings from which it was prepared. Facsimile letters are shown authenticating the accuracy of reproduction of the present work. The main portion of the book, 132 leaves reproduce the original manuscript in all its intricate detail including the large, hand-colored initial letters, drawing and archaic script. All are of great beauty and show the great care taken in their preparation by unknown Medieval scribes. According to Joan Evans (In *Magical Jewels*, 1922), wherein this lapidary is discussed at length, the original manuscript was finished in 1278. She discusses the authors responsible for the different sections of the lapidary, each of whom wrote about the magical properties of the stones and metals in connection with the Zodiac and the various celestial bodies reflecting the belief held at that time of the influence of celestial bodies on all things on Earth including gems, metals and other substances from the ground, Alfonso X, the Wise, (1221-1284) was king of Castille and Leon. His reign was dominated by a costly and unpopular attempt to become Holy Roman Emperor. His attempts were ultimately unsuccessful due to the opposition of the Pope. Alfonso is known primarily as a farsighted lawmaker and as a patron of learning and literature. He captured the cities of Cartagena and Cadiz in the wars against the Moors. A superb volume and rare*

*References: Connoisseur Magazine, January 1906, p 31-36 by J.E. Keller  
 Gems and Gemology, Vol. 9, 1957, p. 105-121.*

*"Magical Jewels," by Joan Evans, London, 1922.*





# TWO ASTROMAGICAL MANUSCRIPTS OF ALFONSO X\*

Alejandro García Avilés

*A mis maestros, Cristina Gutiérrez-Cortines y Joaquín Yarza Luaces*

Um die Mitte des dreizehnten Jahrhunderts erfuhr in Toledo, unter dem Einfluss des Königs Alfonso el Sabio, die antike Wissenschaft vom gestirnten Himmel eine eigentümlich zwiespältige Wiederbelebung: Der Sternhimmel des Arat musste zugleich der Naturwissenschaft und dem Aberglauben dienen: griechische Sterntafeln wurden exakt mathematisch korrigiert und daneben Handbücher rekonstruiert, die den Missbrauch der Sternnamen zu magischen und divinatorischen Zwecken lehrten. Das war freilich nicht altgriechisch, wohl aber quellenrecht hellenistisch.

(Aby Warburg, 'Die Wanderungen der antiken Götterwelt vor ihrem Eintritt in die italienische Hochrenaissance', unpublished lecture, Göttingen, 29 November 1913)

In 1911 Aby Warburg had his first sight of Biblioteca Apostolica Vaticana manuscript Reg. lat. 1283, folios 1–36, a richly illustrated astrological codex to which his attention had been drawn by Franz Ehrle and Bartolomeo Nogara.<sup>1</sup> This proved to be what remains of a book produced under the supervision of Alfonso X, King of Castile (1252–84). Warburg intended to edit the work in collaboration with his friend Franz Boll, the philologist and historian of astrology, but the project was never completed.<sup>2</sup> In the meantime the manuscript was rediscovered independently

\* This paper is part of the research for my doctoral thesis, 'La miniatura astrológica en los reinos medievales hispánicos (siglos XI–XIII): iconografía y contexto cultural', Universidad de Murcia 1994, under the direction of Dr Joaquín Yarza Luaces (Universidad Autónoma de Barcelona), to whom I am indebted for his generous help and encouragement. The first part of this thesis, on astrological illustration in the Carolingian tradition and its cultural context, is forthcoming as *El tiempo y los astros: Arte, ciencia y religión en la Alta Edad Media*. I should like to thank the Vatican Library for granting me permission to consult the astrological manuscripts in their collections in the summer of 1990. Most of this article was written in 1992 with the aid of a Frances A. Yates Research Fellowship from the Warburg Institute, and some of the results of my research were presented at the Director's Work in Progress Seminar. I am indebted especially to Dr Charles Burnett, Dr Kristen Lippincott, Professor Nicholas Mann, Miss Anne Marie Meyer and Miss Anita Pollard for their assistance. Lastly, I am grateful to the late Professor Hugo Buchthal, who kindly allowed me to share his room at the Warburg Institute during my stay there, and to Sir Ernst Gombrich, for a long and fascinating conversation on Warburg and Saxl in December 1990.

Frequently cited works:

D'Agostino = Alfonso X el Sabio, *Astromagia* (MS Reg. lat. 1283<sup>a</sup>), ed. A. D'Agostino, Naples 1992;

Darby = G. O. S. Darby, 'An Astrological Manuscript of Alfonso X', Ph.D. thesis, Harvard University, Cambridge, Mass. 1932;

Diman and Winget = Alfonso el Sabio, *Lapidario and Libro de las formas & ymagenes*, ed. R. C. Diman and L. W. Winget, Madison, Wisc. 1980;

Rico y Sinobas = *Libros del saber de astronomía del rey D. Alfonso X de Castilla*, ed. M. Rico y Sinobas, 5 vols, Madrid 1863–7.

<sup>1</sup> A. Warburg, 'Heidnisch-antike Weissagung in Wort und Bild zu Luthers Zeiten', *Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Philosophisch-historische Klasse*, xxvi, 1920; repr. in his *Gesammelte Schriften*, ii, Leipzig and Berlin 1932, pp. 487–558, esp. 515–16 n. 3, and 528 n. 2. The discovery was probably made during his visit to Rome early in 1911 to discuss with Adolfo Venturi the arrangements for the forthcoming International Congress of History of Art, at which Aby Warburg was to read his famous lecture on the iconographic programme of the Schifanoia Palace (see E. H. Gombrich, *Aby Warburg: An Intellectual Biography*, London 1970, pp. 192, 194). In the discussion of his discovery Warburg referred to the compilation as 'Libro de los [sic] ymagenes', probably a confusion with the title of the other manuscript I deal with in this paper. It is clear from his own words that Warburg saw MS Reg. lat. 1283 for the first time in 1911; however, his interest in it undoubtedly began earlier, since in the Warburg Archive there is a letter to him dated 10 June 1910, from Bartolomeo Nogara, which gives a brief description of the manuscript. I am indebted to Miss Meyer for drawing my attention to the existence of this letter.

<sup>2</sup> See E. Saxl and H. Meier, *Catalogue of Astrological and Mythological Illuminated Manuscripts of the Latin Middle Ages. III. Manuscripts in English Libraries*, ed. H. Bober, i, London 1953, p. LX n. 3. The project was interrupted by Warburg's illness, by Boll's death (see the obituary by K. Meister, 'Franz Boll und die Erforschung der antiken Astrologie', *Neue Jahrbücher*, iii, 1925, pp. 321–30) and by Warburg's own death in 1929.

by a Spanish scholar, Alfonso García Solalinde,<sup>3</sup> and in 1932 one of his doctoral students at Harvard, George Darby, wrote a dissertation on it.<sup>4</sup>

The manuscript belongs to the final phase of activity of the royal scriptorium of Alfonso X, from 1276 to 1284. This was the period in which the learned monarch devoted his attention to the subjects which most interested him personally,<sup>5</sup> resulting in the production of three encyclopedic collections of works on astronomy and astral magic.<sup>6</sup> The first, generally known as the *Libros del saber de astronomía*,<sup>7</sup> comprises fifteen treatises on the construction and use of astronomical instruments.<sup>8</sup> The other two compilations are the *Libro de las formas et de las ymágenes* and the

<sup>3</sup> See A. García Solalinde, 'Alfonso X, astrólogo. Noticia del manuscrito vaticano, Reg. lat. núm. 1283', *Revista de filología española*, xiii, 1926, pp. 350–6, where its relationship to the *Picatrix* is discussed. Solalinde claims to have come across the manuscript in 1916 and seems unaware of Warburg's article of 1920 (as in n. 1).

<sup>4</sup> Darby (as in n. \*).

<sup>5</sup> E. S. Procter, 'The Scientific Works of the Court of Alfonso X of Castile: The King and his Collaborators', *Modern Language Review*, xl, 1945, pp. 12–29; idem, *Alfonso X of Castile: Patron of Literature and Learning*, Oxford 1951 (repr. Westport, Conn. 1980); G. Menéndez Pidal, 'Alfonso X el sabio', *Historia general de las literaturas hispánicas*, Barcelona 1949, pp. 427–46; idem, 'Cómo trabajaron las escuelas alfonsíes', *Nueva revista de filología hispánica*, v, 1951, pp. 363–80; D. Romano, 'Le opere scientifiche di Alfonso X e l'intervento degli ebrei', *Oriente e occidente nel medioevo: filosofia e scienza*, Rome 1971, pp. 677–711 (repr. in his *De historia julia hispánica*, Barcelona 1991, pp. 147–81, and incorporated in his *La ciencia hispanojudia*, Madrid 1992, pp. 139–49).

<sup>6</sup> The Alfonsine texts in vernacular prose are published in L. Kasten, J. Nitti et al., *Concordances and Texts of the Royal Scriptorium Manuscripts of Alfonso X el Sabio*, Madison, Wisc. 1978 (microfiches).

<sup>7</sup> The original Alfonsine manuscript is acephalous and the title was devised by its first editor, Rico y Sinobas; his choice of *astronomía* rather than *astrología* (terms which were used interchangeably in the Middle Ages) should be seen in the context of late 19th-century discussions on Spanish nationalism. Previously, the manuscript was entitled *Libro del saber de astrología*, which appears in a 16th-century copy (Madrid, Biblioteca Nacional MS 1197, fol. 2<sup>o</sup>) and in the Italian (more precisely Florentine) translation made in Seville in 1311: Biblioteca Apostolica Vaticana MS Vat. lat. 8174, incipit 'Questo libro è di sapere di astrologia...', in P. Knecht, *I libri astronomici di Alfonso X in una versione fiorentina del Trecento*, Saragossa 1965. See now, however, a recent transcription in which the title chosen by Rico y Sinobas is recovered: Alfonso X, el Sabio, *Text and Concordance of the Biblioteca Apostolica Vaticana, MS. 8174, Libro di sapere di astronomia*, ed. J. A. Levi, Madison, Wisc. 1993; cf. also A. J. Cárdenas, 'A New Title for the Alfonsine Omnibus on Astronomical Instruments', *La Corónica*, vii.2, 1980, pp. 172–8. The Rico y Sinobas edition is found wanting when judged by today's philological standards, and Cárdenas's long-awaited critical edition, based on a collation of the manuscripts, is to the best of my knowledge still unpublished. In the meantime one must consult his edition of the original Alfonsine manuscript (A Study and Edition of the Royal Scriptorium Manuscript of El Libro del Saber de Astrología by Alfonso X, el Sabio', Ph.D. diss., 4 vols. University of Wisconsin 1974), in conjunction with the Italian translation; this is necessary due to the fragmentary state of the original (see A. J. Cárdenas, 'Hacia una edición crítica del Libro del saber de astrología de Alfonso

X el Sabio: estudio codicológico actual de la obra regia (mutilaciones, fechas y motivos)', *Homenaje a Pedro Sáinz Rodríguez*, ii, Madrid 1986, pp. 111–20). On the first treatise of the compendium, the *Libro de la ochava esfera* ('Book of the Eighth Sphere'), see M. Comes, 'Al-Sufi como fuente del libro de la Ochava esfera de Alfonso X', 'Ochava esfera' y *Astrufísica*', *Textos y estudios sobre las fuentes árabes de la astronomía de Alfonso X el Sabio*, ed. M. Comes, H. Mielgo and J. Samsó, Barcelona 1990, pp. 11–113; the critical edition by C. Rambos, 'Alfonso X: Libro de la ochava esfera. Edition critique', doctoral thesis, 2 vols. University of Paris XIII 1983, takes insufficient account of modern scholarship.

<sup>8</sup> This compendium was thought to have been translated in order to help with preparation of the Alfonsine Tables (Procter, *Alfonso X*, as in n. 5, p. 10). Julio Samsó, however, has pointed out that: 'la mayoría de los instrumentos descritos en los *Libros del saber* no son, estrictamente, instrumentos de observación sino instrumentos de cálculo, computadores analógicos destinados a resolver gráficamente problemas de astronomía esférica' ('La astronomía de Alfonso X', *Investigación y ciencia*, lxxxix, 1984, pp. 91–103 [95]). Also, there has been much discussion among specialists regarding the question of the Alfonsine origin of the tables, the Latin version of which became the standard text for measuring the movements of the heavenly bodies in the late Middle Ages. Emmanuel Pouille, the editor of the *editio princeps* of Venice 1483 (*Les tables alfonsines avec les Canons de Jean de Saxe*, Paris 1984), has argued in several papers for a French origin of the tables: 'Les tables alfonsines: sont-elles d'Alphonse X?', *De astronomia Alphonsi regis*, Barcelona 1987, pp. 51–69; 'Les tables alfonsines et Alphonse X de Castille', *Comptes-rendus de l'Académie des Inscriptions et Belles-Lettres*, Jan.–Mar. 1987, pp. 82–102; 'The Alfonsine Tables and Alfonso X of Castile', *Journal for the History of Astronomy*, xix, 1988, pp. 97–113. But several historians dispute this view, favouring an Alfonsine origin: see J. Samsó and E. Castelló, 'An Hypothesis on the Epoch of Ptolemy's Star Catalogue according to the Authors of the Alfonsine Tables', *Journal for the History of Astronomy*, xix, 1988, pp. 115–20; J. D. North, 'Just Whose were the Alfonsine Tables?', unpublished communication submitted to the Simposio Internacional de Historia de la Ciencia Árabe (Granada 1992); J. Samsó, 'Las ciencias exactas y físico-naturales', *La época del Gótico en la cultura española (c. 1220–c. 1480)*, ed. J. A. García de Cortázar (Historia de España Menéndez Pidal, xvi), Madrid 1994, pp. 553–93, esp. 561–6; idem, 'Las ciencias exactas en Castilla durante la Edad Media', *Historia de una cultura. II. La singularidad de Castilla*, ed. A. García Simón, Valladolid 1995, pp. 661–89, esp. 674–6. See also the recent assessment of Alfonso's patronage of astronomical works by O. Gingerich, 'Alfonso X the Learned King, ed. F. Márquez Villanueva and C. Vega, Cambridge, Mass. 1990, pp. 30–44.

compendium of astral magic brought to light by Warburg and García Solalinde.<sup>9</sup> This latter work, which I shall refer to as the *Libro de astromagia*,<sup>10</sup> is known principally for preserving the only remaining fragment of the Spanish version of the *Picatrix*.<sup>11</sup> Alfonso d'Agostino, who recently edited the manuscript, pays very little attention to its *fortuna*; he suggests that it may have been housed in the Royal Chapel of Granada in the late fifteenth century,<sup>12</sup> but I shall show this to be unlikely. As for Roderic Diman and Lynn Winget, the editors of the *Libro de las formas et de las ymágenes*, they do not go much beyond repeating the conventional wisdom concerning the *fortuna* of the compilation.<sup>13</sup> The history of these two closely related astromagical manuscripts thus remains to be written.

#### THE LIBRO DE LAS FORMAS ET DE LAS YMÁGENES

The 'Book of the Forms and Images which are in the Heavens' is the most controversial of the three Alfonsine compendia—indeed, one celebrated nineteenth-century Spanish scholar came to regard it as spurious.<sup>14</sup> The surviving manuscript of the work, El Escorial, Real Biblioteca MS h-I-16, consists of little more than a synopsis, or *tabla*, which summarises in some detail the contents of eleven treatises dealing with the influence of heavenly images on human beings and with the magical powers conferred by the stars on certain stones. The magical properties of the stones are described in the *tabla*, but the discussions of the stones themselves, and of the heavenly images, are lacking. Some chapters can be recovered from other Alfonsine works in which certain of the treatises are also found, particularly the *Libro de astromagia*, the *Liber Razielis* and the *Lapidario*.<sup>15</sup> The content of other chapters can only be guessed at; for example, in the fourth treatise we read that 'the fourteenth chapter concerns how to avoid harm from bears and wild beasts, and how to gain power over foolish and evil men' (folio 11<sup>v</sup>).

The generic relationship between the *Libro de las formas et de las ymágenes* and the Alfonsine *Lapidario* (in reality a collection of lapidaries), together with the presence of some of the same texts in both compilations and, in particular, the mention of an unidentified person referred to as 'Abolays' in the first treatise of both collections,<sup>16</sup> has for a long time led scholars to believe that the *Lapidario* was originally

<sup>9</sup> For complete transcriptions see D'Agostino; Darby; and Kasten, Nitti et al. (as in n. 6), under the microfiche entry 'Picatrix'.

<sup>10</sup> D'Agostino has preferred to refer to the compendium simply as 'Astromagia', but, in my opinion, 'Libro de astromagia' seems more appropriate, as can be seen by comparison with other known titles of Alfonso's scientific works (such as the *Libros del saber de astronomia* and the *Libro de las formas et de las ymágenes*), cited above. Professor D'Agostino kindly informed me in a recent personal letter that he agrees with me that 'Libro de astromagia' is a very appropriate title, adding that even in an apparently exceptional case such as the Alfonsine compilation known as *Lapidario*, the original title was in reality *Libro de las piedras* ('Book of the Stones').

<sup>11</sup> See D. Pingree, 'Between the Ghāva and Picatrix. I: The Spanish version', this *Journal*, xlv, 1981, pp. 27–56.

<sup>12</sup> See D'Agostino, p. 81, who advances this hypothesis very cautiously, since it is based on the tentative reading of the word 'Granada' in a virtually illegible Arabic inscription on fol. 8<sup>v</sup>.

<sup>13</sup> Diman and Winget, p. i.

<sup>14</sup> M. Menéndez y Pelayo, *La ciencia española*, 3rd edn, iii, Madrid 1887–8, p. 351.

<sup>15</sup> On the relationship between the *Liber Razielis* and the *Libro de las formas* see my 'Alfonso X y el "Liber Razielis":

imágenes de la magia astral judía en el scriptorium alfonsí', forthcoming, *Bulletin of Hispanic Studies*, lxxiv, 1, 1997.

<sup>16</sup> The identity of Abolays remains a puzzle. On this problem see J.-H. Nünemacher, 'Index of the Stones in the Lapidary of Alfonso with Identifications in other Lapidaries', Ph.D. diss., University of Wisconsin 1928, p. 5; idem, 'Note on Abolays', *Hispanic Review*, ii, 1931, pp. 242–6; G. O. S. Darby, 'The Mysterious Abolays', *Osiris*, i, 1936, pp. 251–9; idem, 'Ibn Wahshīya in Medieval Spanish Literature', *Isis*, xxxiii, 1941–2, pp. 433–8. None of the identifications proposed by these authors is entirely convincing. In my opinion, Abolays is to be identified with Abū 'Alī al-Khayyāt (on whom see E. Sezgin, *Geschichte des arabischen Schrifttums*, vii, Frankfurt 1979, pp. 120–1), whose name was changed into 'Abolay' in a 14th-century book list (Copenhagen, Royal Library, Gl.Kgl.S. 277, fol. 146<sup>v</sup>); see A. A. Björnho, 'Ein Lehrgang der Mathematik und Astrologie im Mittelalter', *Bibliotheca mathematica*, ser. 3, iv, 1903, pp. 288–90; R. Lemay, 'The Teaching of Astronomy in Medieval Universities, Principally at Paris in the Fourteenth Century', *Manuscripta*, xx, 1976, pp. 197–217 (210–11); C. S. E. Burnett, 'The Impact of Arabic Science on Western Civilisation in the Middle Ages', *Bulletin of the British Association of Orientalists*, ii, 1979–80, pp. 40–51 (50). In some

part of the *Libro de las formas*; consequently, they were published together in 1881.<sup>17</sup> Alfonsine scholars have persisted in this opinion, despite the fact that it was questioned by Moritz Steinschneider in 1893.<sup>18</sup> Some have gone even further, claiming not only that the *Lapidario* is the sole remaining portion of the *Libro de las formas*, but also that the constituent treatises of the *Lapidario* are the only items among those listed in the *tabla* that were actually produced for the compendium. This attitude is summed up by J. H. Nunemaker, who states:

Any approach to a study of the sources of the Alfonsine Lapidaries must include a consideration of their *tabla*, which purports to be their index. In reality, this *tabla* is an index for a proposed work of eleven lapidaries, which so far as is known was never written.<sup>19</sup>

In reality, the only points in common between the *tabla* and the *Lapidario* are those noted by Joan Evans as early as 1922: the correspondence between the second and third treatises of the *Lapidario*, on the one hand, and the fourth and fifth treatises of the *Libro de las formas et de las ymágenes*, on the other.<sup>20</sup> By contrast, there are compelling factors which point to a separate origin for the two works: above all, the fact that the *Lapidario* is an early piece, compiled in its entirety when Alfonso was still the Infante of Castile, whereas the prologue to the *Libro de las formas* indicates that it was begun in 1277 and finished in 1279, five years before his death.

That it *was* finished has been doubted by the recent editors of the work. According to Diman and Winget: 'whether or not these eleven treatises were finished is not known'.<sup>21</sup> There are, however, firm indications that the compilation was indeed completed. Some of these have been discussed by Anthony Cárdenas in a recent study.<sup>22</sup> First, certain later additions in the margins of the *tabla* give numerical references from the second treatise onwards; these are most likely indications of the pages on which the corresponding texts begin. Second, indices for Alfonsine works were generally written after the books had been completed, as was common in the Middle Ages. Cárdenas has pointed to the example of the *Libros del saber de astronomía*, in which the third treatise (the second in the Rico y Sinobas edition) was added once the rest of the compilation had been copied.<sup>23</sup> The additional chapter, however, is fully integrated into the index, which shows no sign of having been modified, suggesting that it was written after the treatise had been inserted.<sup>24</sup>

other manuscripts we find the transcriptions 'Abuali', 'Albuali', 'Aubueli' or 'Albohaly' for Abū 'Alī al-Khaiyāt (see F. J. Carmody, *Arabic Astronomical and Astrological Sciences in Latin Translation. A Critical Bibliography*, Berkeley and Los Angeles 1956, pp. 49–51).

<sup>17</sup> J. Fernández Montaña, *Lapidario del Rey D. Alfonso X. Códice original*, facs. edn. Madrid 1881. The new facs. edn (*Primer Lapidario del Rey Alfonso X el Sabio*, Madrid 1982) does not include the *Libro de las formas*. See also S. Rodríguez Montalvo, *Lapidario, según el manuscrito escurialense H.I.15*, Madrid 1981. The first person to connect the codices, which are numbered consecutively in the Real Biblioteca de El Escorial, seems to have been J. Rodríguez de Castro, *Biblioteca española*, i, Madrid 1781, p. 159. Accordingly, the title which appears on the cover of the *Libro de las formas* (MS h-I-16) is 'Tabla del libro llamado Lapidario' ('Index of the Book called the Lapidary').

<sup>18</sup> M. Steinschneider, *Die hebräischen Uebersetzungen des Mittelalters und die Juden als Dolmetscher*, ii, Berlin 1893, p. 980; idem, 'Arabische Lapidarien', *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, xlix, 1895, pp. 244–78 (266–8).

<sup>19</sup> J. H. Nunemaker, 'In Pursuit of the Sources of the Alfonsine Lapidaries', *Speculum*, xiv, 1939, at p. 483. See also A. García Solalinde, *Antología de Alfonso X el Sabio*, Madrid 1965, p. 195: 'Varios eran los libros dedicados a

las piedras, pero sólo se llegaron a copiar cuatro de los once que anuncia el índice del manuscrito alfonsino.'

<sup>20</sup> J. Evans, *Magical Jewels of the Middle Ages and the Renaissance, Particularly in England*, Oxford 1922, repr. New York 1976, pp. 38–50. Anthony J. Cárdenas has pointed out the existence of 14 chapters in the first treatises of the *tabla* and the *Lapidario* in which the subject matter coincides very closely (Alfonso X's *Libro de las formas & de las ymágenes: Facts and Probabilities*, *Romance Quarterly*, xxxiii, 1986, pp. 269–74, esp. 271–2); but bearing in mind that there are 360 chapters in each of the treatises, the relationship is only sporadic.

<sup>21</sup> Diman and Winget, p. i; however, at p. xxvii n. 2, they conclude: 'we think that the evidence points to its having been completed and later separated from the table of contents'.

<sup>22</sup> Cárdenas, 'Alfonso X's *Libro de las formas*' (as in n. 20). See also the edition of the *Lapidario* ed. M. B. Mariño, Madrid 1968, p. XXIV; Diman and Winget, p. xxvii n. 2; D'Agostino, pp. 36–8.

<sup>23</sup> Rico y Sinobas. See Cárdenas's edition (as in n. 7), i, p. cxxv, and ii, p. 264; and idem, 'A Medieval Spanish Collectanea of Astronomical Instruments: An Integrated Compilation', *Journal of the Rocky Mountain Medieval and Renaissance Association*, i, 1980, pp. 21–8.

<sup>24</sup> Cárdenas (as in n. 23), p. 23; idem (as in n. 20), p. 270.



A third factor is the evidence that the *Libro de las formas et de las ymágenes* was already finished by the time that the *Libro de astromagia* was compiled.<sup>25</sup> We read in the *Picatrix*, referring to a certain image of Mars: ‘and, God granting, I will speak about it in the future’ (‘et de ea Deo dante erimus in posterum locuti’).<sup>26</sup> This phrase is not found in the *Ghāyat al-Hakīm* (the Arabic text on which the *Picatrix* is based),<sup>27</sup> but was added in 1256 when the translation was made in the Alfonsine scriptorium. In the *Libro de astromagia*, however, which was compiled around 1280, it is stated that: ‘we spoke about this image in our *Libro de las imágenes*’ (‘fablamos desta ymagen en el nuestro Libro de las imágenes’).<sup>28</sup> The reference appears to be to the treatise on talismanic images and the powers conferred on them by the seven planets, by ‘Uṭarid (Mercury-Hermes?),<sup>29</sup> which is the seventh part of the *Libro de las formas et de las ymágenes* (MS h-I-16, folios 12<sup>v</sup>–13<sup>r</sup>). This would suggest that at least this section had been completed, although the exact correspondence of subject-matter cannot be checked since, as was noted above, the descriptions of the images are not included in the *tabla*.

The final confirmation that the *Libro de las formas et de las ymágenes* was actually finished is a reference to the existence of a French version of the text, apparently of the complete work. In the 1373 catalogue of the library of Charles V of France, compiled by Gilles Mallet, the following item appears: ‘Thirty-nine paper quires of the book of the forms, figures and images which are in the heavens, translated from Spanish into French by Pierre Levant... by order of my lord, the Duke of Berry.’<sup>30</sup> The catalogue of the French royal library, commissioned in 1423 by the Duke of Bedford, adds to this entry: ‘in which the first quire begins “In the name of the

<sup>25</sup> See now D’Agostino, pp. 36–8.

<sup>26</sup> *Picatrix. The Latin Version of the Ghayat al-Hakīm*, ed. D. Pingree, London 1986, p. 66.

<sup>27</sup> *Ghāyat al-Hakīm*, ed. H. Ritter, Leipzig and Berlin 1933, p. 111; German tr. H. Ritter and M. Plessner, *Picatrix. Das Ziel des Weisen von Pseudo-Magriti*, London 1962, pp. 118–19; Spanish tr. M. Villegas, *Picatrix. El fin del sabio y el mejor de los dos medios para avanzar*, Madrid 1982, pp. 140–1.

<sup>28</sup> Vatican City, Biblioteca Apostolica Vaticana MS Vat. Reg. lat. 1283, fol. 26<sup>v</sup>. It is not absolutely clear whether the verb ‘fablamos’ is in the present or past tense; but given the date of the work, I am inclined to think that the author is referring to the past. The words ‘e te’ which precede ‘fablamos’ (‘e te fablamos’, ‘and we speak to you’) unfortunately do not help to clarify this point. Pingree (as in n. 11, p. 55), has transcribed ‘<&> te fablamos’; while D’Agostino (pp. 37, 242) has ‘e nós esto fablamos’ (‘and we speak about this’); and Darby (p. 19) thinks that it could be a mistake of the copyist, who intended to write ‘ante fablamos’ (‘we spoke previously’).

<sup>29</sup> The text is attributed to Mercurius (Hermes) in *Picatrix*, iii.3.3 (ed. D. Pingree, London 1986, p. 97), where it is referred to as the ‘Book of the Seven Planets’. ‘Uṭarid is the Arabic name for Mercury, and so, as has been pointed out by J. Ruska, *Griechische Planetendarstellungen in arabischen Steinbüchern*, Heidelberg 1919, p. 24, the name ‘Uṭarid ibn Muhammad al-Kātib, which appears in some other manuscripts would be a mere ‘arabisation’ of Mercury-Hermes: al-Kātib (‘the scribe’) being the usual characterisation for the Arab Mercury. See also M. Ullmann, *Die Natur- und Geheimpwissenschaften im Islam*, Leiden 1972, pp. 422–3.

<sup>30</sup> ‘Inventaire des livres du roy nostre sire Charles V, estans en son chastel du Louvre, à Paris, en 1373’, in J. Barrois, *Bibliothèque protypographique, ou Librairies des fils du roi Jean, Charles V, Jean de Berry, Philippe de Bourgogne et*

*les siens*, Paris 1830, p. 85: ‘486. xxxix cayers en papier, du Livre des formes, figures et ymages qui sont ès cieux, translatez d’espagnol en françois, par Pierre Levant, jadis maistre des ports et passages en la seneschauce de Beaucaire, du commandement de monseignr. le duc de Berry.’ This inventory was compiled by the royal librarian, Gilles Mallet (see his *Inventaire ou catalogue des livres de l’ancienne Bibliothèque du Louvre fait en l’année 1373*, Paris 1836, p. 177). See also L. Delisle, *Recherches sur la Librairie de Charles V. II. Inventaire des livres ayant appartenu aux rois Charles V et Charles VI et a Jean, Duc de Berry*, Paris 1907, p. 304 n. 173. Delisle suggests, without any solid evidence, that this book may be close to another one from the Duke of Berry’s library: ‘Un petit livre des images du ciel et du monde, escript, en françois, de lettre de forme’ (p. 251). The latter work is, in fact, Nicole Oresme’s *Livre du ciel et du monde* (ed. A. D. Menut and A. J. Denomy, Madison 1968). I have found no reference to the *Libro de las formas* in J.-J. Guiffrey, *Inventaires de Jean, duc de Berry (1401–1416)*, Paris 1894–6, nor in A. Hiver de Beauvoit, *La Librairie de Jean duc de Berry au Chateau de Mehun-sur-Yèvre*, Paris 1860, although among the books on astrology and magic which appear in this catalogue is an interesting reference to ‘Deux gros livres de magique escripts en espagnol...’ (p. 43, no. 81). Regarding the translator, ‘Pierre Levant’ is the reading of Barrois: Doucet-d’Arcq and Delisle prefer ‘Pierre Leraut’ (see next note), but the real name of this royal officer was Pierre Lesant, or Lesanti (other variants are Le Santii, Lesenti, or, less probably, Lasanti or Lescuti). He was ‘maître des ports de la sénéchaussée de Beaucaire’ from 1370–1, apparently until his death in 1393; see G. Dupont-Fertier, *Gallia regia, ou état des officiers royaux des bailliages et des sénéchaussées de 1328 à 1515*, i, Paris 1942, pp. 302–3, 330, 366. I am indebted to Professor François Avril for this reference.

Father and of the Son", and these quires are tied together with a parchment cover.<sup>31</sup> The considerable size of the French translation—thirty-nine quires (*cahiers*)—leads one to suppose that the original work must indeed have been complete. Furthermore, it seems reasonable to assume that the separation of the main body of the *Libro de las formas et de las ymágenes* from the *tabla* had something to do with the movements of the manuscript at the time of its translation into French, through the patronage of the Duke of Berry. The incipit quoted in the Duke of Bedford's catalogue does not come from the *tabla*, but rather corresponds to the phraseology employed by Alfonso to begin the prologues of several of his treatises.<sup>32</sup> The texts of the treatises which made up the *Libro de las formas et de las ymágenes* might therefore have been sent to France, while the *tabla* remained in Spain and ended up in the Escorial library. How the book fell into the hands of the Duke of Berry is a question I shall deal with below.

#### THE *LIBRO DE ASTROMAGIA*

The 'Book of Astromagic' must have been planned and begun around 1280, during the last years of the Alfonsine scriptorium, since there are several references in it to 'el nuestro Libro de las ymágenes', a work which, as we have seen, was completed in 1279. The *Libro de astromagia*, moreover, shares some material with the earlier compilation: its first chapter (folios 1<sup>r</sup>–8<sup>v</sup>) is parallel to the third one in the *Libro de las formas et de las ymágenes*, as can be established from the *tabla*. It is bound in the Vatican Library with a collection of Latin texts, whose titles—*Incerti de templi Ierosolymitani et aliorum Galliae templorum dedicatione*, *Privilegia universitatis Parisiensis*, *Processus verbalis visitationis in Domo Dei Parisiis factae* etc.<sup>33</sup>—clearly point to a French origin. This is confirmed by repeated mentions of the 'Ecclesia Fossatensis', the Abbey of Saint-Maur-des-Fossés, near Paris.<sup>34</sup>

The exact route taken by the *Libro de astromagia* following the death of Alfonso X is unknown. The manuscript can, however, be shown to have been in France by the

<sup>31</sup> *Inventaire de la Bibliothèque du roi Charles VI fait au Louvre en 1423 par ordre du régent Duc de Bedford* (with preface by L. Douët-d'Arcq), Paris 1867, p. 208: '805. Item. xxxix cayers en papier du livre des formes, figures & images qui sont es Cieux, translatez d'espaingnol en françois par Pierre Leraut, jadiz maistre des ports et passaiges en la sénéchaussée de Beaucaire, du commandement de monseigneur le duc de Berry. Dont le premier cayer commence "ou nom du Père & du Filz." & sont touz iceulz cayers liez en une couverture de parchemin. Non prisé... Nihil.' See also Barrois (as in n. 30), p. 85; Delisle (as in n. 30), p. 103; and idem, *Le Cabinet des manuscrits de la Bibliothèque Nationale*, iii, Paris 1881, p. 143. The entry in the 1423 inventory corresponds to nos 873 and 897 respectively in those of 1411 and 1413.

<sup>32</sup> See M. Y. Corona de Ley, 'The Prologue in Castilian Literature between 1200 and 1400', Ph.D. diss., University of Illinois 1976; A. J. Cárdenas, 'Alfonso's Scriptorium and Chancery: The Role of the Prologue in Bonding the *Translatio studii* to the *Translatio potestatis*', *Emperor of Culture. Alfonso X the Learned of Castile and his Thirteenth-Century Renaissance*, ed. R. I. Burns, Philadelphia 1990, pp. 90–108.

<sup>33</sup> See the Reg. lat. 1283 index in Bernard de Montfaucon, *Bibliotheca bibliothecarum manuscriptorum nova*, 2 vols, Paris 1739, i, cols 61–96 (repr. with an indication of the corresponding present-day catalogue numbers in *Les Manuscrits de la Reine de Suède au Vatican*, Studi e testi, cccxxxviii, Vatican City 1964). See also now E. Pellegrin, *Les Manuscrits classiques latins de la Bibliothèque Vaticane*,

ii.1: *Fonds Patetta et fonds de la Reine*, Paris 1978, pp. 159–60. The manuscript was catalogued as no. 481 by the Benedictine monks of St Maur, whose inventory was published by Montfaucon. The modern catalogue number originates from Domenico Teoli's 'Inventario dei manoscritti reginensi', compiled in the mid-18th century (unpublished; copy in the Vatican Library).

<sup>34</sup> See E. Pellegrin, 'Possesseurs de manuscrits latins du fonds de la Reine', *Revue d'histoire des textes*, iii, 1973, pp. 271–97 (283), repr. in eadem, *Bibliothèques retrouvées. Manuscrits, bibliothèques et bibliophiles du Moyen Âge et de la Renaissance*, Paris 1988, pp. 457–97 (469); L. Auvray, 'Documents parisiens tirés de la Bibliothèque du Vatican (VII<sup>e</sup>–XIII<sup>e</sup> siècles)', *Mémoires de la Société de l'Histoire de Paris*, xix, 1892, pp. 2–17. Folios 95–6 of the Vatican manuscript come from the Abbey of St Remi in Rheims (Pellegrin, *Bibliothèques retrouvées*, p. 465). Folios 66, 70–2 and 145 are attributed to the Abbey of Fleury by F. M. Carey, 'De scriptura Floriacensi', Ph.D. diss., Harvard University 1923 (see M. Mostert, *The Library of Fleury. A Provisional List of Manuscripts*, Hilversum 1989, pp. 280–1). Folios 92–4, which currently constitute MS Reg. lat. 1283b (since they were separated by Franz Ehrle in 1897, as stated on the cover leaves of MS Reg. lat. 1283), are also probably from Fleury: see E. Pellegrin, 'La tradition des textes classiques latins à l'abbaye de Fleury-sur-Loire', *Revue d'histoire des textes*, xiv–xv, 1984–5, pp. 155–67 (63) (now in her *Bibliothèques retrouvées*, pp. 285–97 [293]).

late fourteenth century. For in the same 1373 catalogue of the library of Charles V which mentioned the French translation of the *Libro de las formas et de las ymágenes*, the following entry is also found: 'A book of astronomy, which seems to be of the *Ars notoria*, written in Spanish, perfectly decorated with figures and with fine colours of Bolognese illumination.'<sup>35</sup> In the 1411 and 1413 inventories of the library of books on astronomy which Charles V housed in the Louvre, information was added to this entry which confirms that the manuscript referred to is indeed our Alfonsine codex. It is said to be made up of 'five quires, of which the first begins with a rubric on the second folio: "estas son las figuras"; and the last with "ocio aniello de mercurio"'.<sup>36</sup> This description corresponds to the *Libro de astromagia* in its present form, in which the incipit 'estas son las figuras' occurs on the second folio<sup>37</sup> and 'otro anillo de Mercurio' ('another ring of Mercury'—the French scribe misread 'otro' as 'ocio') on the last (folio 36<sup>r</sup>). The original ordering of the compendium, which can be deduced from a paragraph on folio 25<sup>r</sup>,<sup>38</sup> must have been changed before the manuscript reached the library of Charles V. In that ordering the last section dealt with the moon. The fact that the surviving pages of the *Libro de astromagia* include a 'Libro de la Luna' (folios 11<sup>r</sup>–24<sup>v</sup>) would indicate that the text part of the compilation was completed, even though some of the illustrations remained unfinished.

#### FORTUNA OF THE MANUSCRIPTS

We have no knowledge of any other document that bears witness to the *fortuna* of the manuscript of the *Libro de astromagia*, or, for that matter, of the *Libro de las formas et de las ymágenes*, between Alfonso's death in 1284 and Gilles Mallet's catalogue in 1373. It is reasonable to assume that the Duke of Berry's interest in Alfonsine works, borne out by his commissioning of the translation of the *Libro de las formas*, might have extended to the *Libro de astromagia*; but we have no solid information on how the two manuscripts could have come into the possession of the French royal family. Nevertheless, it is worth noting the close ties between Jean de Berry and Joan I of Aragon, who became brothers-in-law following Joan I's marriage to Violante de Bar.<sup>39</sup> Correspondence between the French nobleman and the Aragonese monarch reveals a common taste for astrological literature (as well as certain other kinds of literature) and a passion for collecting books, some of which they sent to each other.<sup>40</sup> An example of their shared interest in astrology is a letter

<sup>35</sup> See Barrois (as in n. 30), p. 176: 'Livre d'astronomie, qui semble estre de Arte notoria, en espagnol, très parfaitement bien figuré et de bonnes couleurs d'enluminure de Boulogne'. For the *Ars notoria* or 'notory art', which seeks to gain knowledge from or in communion with God by invocation of angels, mystic figures and magical prayers, see L. Thorndike, *A History of Magic and Experimental Science*, 8 vols. New York 1923–58, ii, chap. XLIX, and iii, pp. 10, 21.

<sup>36</sup> 'Un livre d'astronomie, qui semble estre de Arte notoria, escript en espagnol, de leure en forme, a deux coulombes, très parfaitement bien figuré, et de bonnes couleurs d'enluminure de Boulougne, et contient en tout cinq cayers, dont le premier commence, au II<sup>e</sup> foillet en rouge lettre: "estas son las figuras...", et ou derrenier "ocio aniello de mercurio...". Couvert d'une pele de parchemin': Paris, Bibliothèque Nationale, respectively MS Fr. 2700, no. 863 (1411) and MS Fr. 9430, no. 887 (1413); quoted by Delisle (as in n. 30), ii, p. 117, no. 714; idem (as in n. 31), p. 147; Darby, p. 5. See also *La Librairie de Charles V*, ed. F. Avril and J. Lafaurie, exhib. cat. (Bibliothèque Nationale), Paris 1968; and recently D. Bloch, 'La formation de la Bibliothèque du Roi', *Histoire des bibliothèques*

*françaises. I: Les bibliothèques médiévales, du VI<sup>e</sup> siècle à 1530*, Paris 1989, pp. 311–31; and S. Balayé, *La Bibliothèque Nationale des origines à 1800*, Geneva 1988, pp. 5–10.

<sup>37</sup> The incipit 'estas son las figuras' appears not only on the second folio but at the beginning of every page of the first treatise (in the present order): this work deals with the figures of the 'grados que suben en los signos', that is, the *paranattellonta*, or constellations that rise at the same time as the signs of the zodiac.

<sup>38</sup> See D'Agostino, pp. 226–8 (text) and pp. 45–8 (commentary).

<sup>39</sup> R. Olivar Bertrand, *Bodas reales entre Francia y la Corona de Aragón*, Barcelona 1947, p. 179.

<sup>40</sup> F. de Bofarull y Sans, 'Antiguos y nuevos datos referentes al bibliófilo francés Juan de Francia, Duque de Berry', *Revista de ciencias históricas*, v, 1887, pp. 22–60; see also A. Rubió i Lluch, 'Joan I humanista i el primer període de l'humanisme català', *Estudis Universitaris Catalans*, x, 1917–18 (published 1919), pp. 1–117 (8–9). In tracing the route taken by the *Libro de astromagia* from Spain to France, it should be borne in mind that the Duke of Berry was not the only member of the French

from Joan I to Jean de Berry in 1388, asking the duke to grant permission for the master astrologer, Guillem Lunell, to travel from Paris to the court of Aragon.<sup>41</sup> Charles V is said to have held astrologers in high regard and to have governed his personal life in accordance with their recommendations.<sup>42</sup> Likewise, in the court of Joan I, the astrologer was no mere ornamental figure, as is demonstrated by the fact that the Aragonese king refused to fix the date of his marriage to Violante de Bar until he had consulted the astrologer Dalmau Ses Planes: in 1379 the monarch asked him which days and months between February and April would be most propitious for the duchess to enter the principality of Catalonia and to celebrate her wedding.<sup>43</sup>

We do not know whether the close relationship between Joan I and the French monarchy was adversely affected by the famous prophecy attributed to Francesc Eiximenis, that in 1400 there would be only one king ruling the world and that this would be the king of France.<sup>44</sup> Joan I was so disturbed by this that he sent a messenger to Eiximenis telling him to refrain from making such pronouncements. He implied, however, that the matter would be viewed in a more favourable light if it should prove that the prophecy was founded on sound astronomical observations:

If by chance [Eiximenis] refuses to obey, on the ground that what he has said is what he has discovered through the art of astronomy, we would like you to tell him to come into our presence in complete security and freedom, so that he can demonstrate to us the conclusions of the judgement made according to this art, since Divine Providence is superior to everything, and every Catholic prince must subordinate himself to it.<sup>45</sup>

royal family with whom the Aragonese monarch corresponded about his love of books. There are also the letters between Joan I and King Charles VI of France; and we should, for instance, give some thought to the controversy over whether it was Abraham Cresques's *Catalan Atlas* which was given to Charles VI by Joan I, as some scholars have maintained (for a discussion of this question see F. Avril et al., *Manuscrits enluminés de la Péninsule ibérique*, Paris 1982, p. 98).

<sup>41</sup> A. Rubió i Lluch, *Documents per l'història de la cultura catalana mig.eval*, i, Barcelona 1908, p. 8; idem (as in n. 40), p. 14. Other relevant information is also available. For example, in both the French and Aragonese courts at this time, astronomy was included in medical training; see R. Lemay (as in n. 16), pp. 200–4; A. Cardoner y Planas, *Historia de la medicina a la Corona de Aragó 1162–1479*, Barcelona 1973, p. 209; idem, 'La medicina astrològica durante el siglo XIV en la Corona de Aragó', *Actes du IX<sup>e</sup> Congrès International d'Histoire des Sciences*, Barcelona and Paris 1960, pp. 341–6; L. Comenge i Ferrer, *La medicina en el Reino de Aragó. Siglo XIV*, Valladolid 1974, pp. 76–81. See also J. Chabàs (with the collaboration of A. Roca and X. Rodríguez), *L'Astronomia de Jacob ben David Bonjorn* (Arxiu de les Seccions de Ciències, civ), Barcelona 1992, pp. 23–8. On Charles V's interest in astrology see C. Jourdain, 'Nicolas Oresme et les astrologues de la cour de Charles V', *Revue des questions historiques*, xviii, 1875, pp. 136–59 (also in idem, *Excursions historiques et philosophiques à travers le moyen âge*, Paris 1888, repr. Frankfurt am Main 1966); Thorndike (as in n. 35), iii, pp. 585–9; and F. Laird, 'Astrology in the Court of Charles V of France, as Reflected in Oxford, St. John's College, ms. 164', *Manuscripta*, xxxiv, 1990, pp. 167–76.

<sup>42</sup> S. de Phares, *Recueil des plus célèbres astrologues et quelques hommes doctes*, ed. E. Wickersheimer, Paris 1929, p. 228: 'Il eut en merveilleuse recommandacion les astrologiens et se gouverna par eulx'.

<sup>43</sup> '...quals dies e quant dels mesos de febrer, març, e abril serien bons a entrar la duquesa en el principat de Catalunya, e axí mateix a fer bodes': Barcelona. Archivo de la Corona de Aragón, Reg. Y, 766, fol. 50, quoted by Rubió i Lluch (as in n. 41); see also S. Sanpere y Miquel, *Las costumbres catalanas en tiempo de Juan I*, Gerona 1878, part 3; and J. M. Roca, *Johan I d'Aragó* (Memorias de la Real Academia de Buenas Letras, xi), Barcelona 1929, pp. 363–415 ('Johan I i les supersticions'). A large number of works on astrology and magic had been accumulated in the Aragonese royal collection, as can be seen from the inventory of books of King Martí I of Aragon (d. 1410): see J. Massó y Torrents, 'Inventari dels béns mobles del rey Martí d'Aragó', *Revue hispanique*, xii, 1905, pp. 413–590; and also Chabàs (as in n. 41), pp. 28–37.

<sup>44</sup> F. Eiximenis, *Dotze del chrestí*, chap. 466, entitled 'Que han dit alguns dels regnes presents e de lur durada e de novell imperi' ('What some people have said about the present kingdoms and their duration, and on the new empire'): '...Dien encara que, açò fet, tota potestat reial cessarà en lo món, sinó solament la casa de França, qui durarà llongament...' (Rubió i Lluch, as in n. 40, p. 18 n. 2). See also J. Guadalajara Medina, *Las profecias del Anticristo en la Edad Media*, Madrid 1996, pp. 206–16 (212). Pere Bohigas, however, points out that people who denounced Eiximenis's prophecy cannot be referring to this chapter, since, as stated in its title, Eiximenis only reproduces prophecies current in his own time (this is further demonstrated by the fact that he devotes the following chapters, 467–72, to denying them): see P. Bohigas i Balaguer, 'Profecies catalanes dels segles XIV i XV. Assaig bibliogràfic', *Butlletí de la Biblioteca de Catalunya*, vi, 1925, pp. 24–49 (35–7); and also J. M. Pou i Martí, *Visionarios, beguinos y fraticelos catalanes (siglos XIII–XV)*, 2nd edn, Madrid 1991, pp. 291–2.

<sup>45</sup> 'Si por ventura [Eiximenis] se resistiera a obedecer la orden basándose en que lo dicho lo ha encontrado por arte de astronomía, nos place que le digáis venga a



Joan I inherited a noteworthy collection of works on astronomy and astrology from his father, Pere el Cerimoniós, whose interest in those subjects is well known.<sup>46</sup> Since Sancho IV of Castile, the son of Alfonso X, did not display a particular interest in the astrological work of his father,<sup>47</sup> it seems possible that the manuscripts produced in the Alfonsine scriptorium may have been dispersed and that some may have reached the neighbouring Aragonese court of Pere el Cerimoniós. This is precisely what happened in the case of Alī Abenragel's *Libro conplido en los iudizios de las estrellas*.<sup>48</sup> After Joan I came into possession of Pere's library, he could have given certain manuscripts to Jean de Berry, with whom he was connected by both shared interests and personal ties, and other volumes could have been lent to him for the purpose of translation.<sup>49</sup> Most of the Duke of Berry's books were later transferred to the royal library of the Louvre, where they were inventoried and described. As was mentioned above, only a detailed plan of the *Libro de las formas et de las ymágenes* has survived. Since the publication of the *tabla* by Fernández Montaña in 1881, no scholar, to my knowledge, has thrown any light on the whereabouts of the actual work or of the French version commissioned by the Duke of Berry.

Fortunately, however, the subsequent route taken by the *Libro de astromagia* can be traced with only one significant interruption. There is no entry corresponding to the work in the inventory of books in the Louvre belonging to Charles VI, compiled by Garnier de Saint-Yon in 1423, which seems to indicate that the manuscript was no longer part of the royal collection at the Louvre by this time.<sup>50</sup> In 1425, the astronomy library of the Louvre passed to the Duke of Bedford, who transferred it

nuestra presencia en completa seguridad y en toda libertad para que nos demuestre las conclusiones del juicio que según dicha arte ha hecho, pues sobre todas las cosas está la Divina providencia a la que todo príncipe católico ha de someterse.' Letter from Joan I dated 17 Nov. 1391: Barcelona. Archivo de la Corona de Aragón, Reg. 1962, fol. 3, tr. Sanpere (as in n. 43), p. 167 n. 1. See also P. Bohigas, 'Prediccions i profecies en les obres de Fra Francesc Eiximenis', *Franciscalia*, Barcelona 1928, pp. 23–38 (now in his *Aportació a l'estudi de la literatura catalana*, Montserrat 1982, pp. 94ff, esp. 107–8). On the excuses offered by Eiximenis and the exchange of letters in this respect, see R. Tasis, *Joan I, el rei caçador i músic*, Barcelona 1959, p. 212.

<sup>46</sup> See J. M. Millás Vallicrosa, *Las tablas astronómicas del rey D. Pedro el Ceremonioso*. Madrid and Barcelona 1962, pp. 123–4; J. Samsó, 'Alfonso X y los orígenes de la astrología hispánica', in *Estudios sobre historia de la ciencia árabe*, ed. J. Vernet, Barcelona 1980, pp. 81–114; Chabàs (as in n. 41), pp. 16–23.

<sup>47</sup> The traditional view of Sancho's very limited literary patronage must, however, be reconsidered in light of R. P. Kinkade, 'Sancho IV: Puente literario entre Alfonso X y Don Juan Manuel', *PMLA*, lxxxvii, 1972, pp. 1039–51 (I thank Professor Alan Devermond for this reference).

<sup>48</sup> A copy of the *Libro conplido en los iudizios de las estrellas* was in Pere IV's library in 1359 and was translated into Catalan in 1386: see J. Vernet, 'Tradicición e innovación en la ciencia medieval', *Oriente e occidente nel medioevo: filosofia e scienze*, Rome 1971, p. 751, now in his *Estudios sobre historia de la ciencia medieval*, Barcelona 1979, p. 183. It has further been shown that the treatise on astrology by Bartolomeu de Tresbens, commissioned by Pere el Cerimoniós, is a summary of books IV and V of the *Libro conplido*: see Bartolomeu de Tresbens, *Tractat de astrologia*, ed. J. Vernet and D. Romano, Barcelona 1957–8. Abenragel's manual seems to have been translated into French at the court of Charles V: see De Phares (as in n. 42), p. 228. Gerold Hilty's edition of the Spanish version

comprises only the first five chapters in the Arabic version; see Aly Abenragel, *El libro conplido en los iudizios de las estrellas*, ed. G. Hilty, Madrid 1954. Later, Guy Beaujouan found the eighth chapter of the Spanish version in the library of the Cathedral of Segovia, MS B 388, *olim* 115 (15th century); see his 'Manuscrits scientifiques médiévaux de la Cathédrale de Ségovie', *Actes du XI<sup>e</sup> Congrès International d'Histoire des Sciences*, iii, Warsaw 1968, pp. 15–18 (now in his *Science médiévale d'Espagne e d'alentour*, Aldershot 1992). This chapter has been edited recently by L. M. Vicente García ('La astrología en el cristianismo y en la literatura medieval castellana. Edición de la octava parte inédita del *Libro conplido en los iudizios de las estrellas*', Ph.D. diss., UCLA 1989), but his study is unreliable: even a later 17th-century copy of it seems to have escaped his notice (Vatican City, Biblioteca Apostolica Vaticana MS Barb. lat. 4363, for which see H. G. Jones, *Hispanic Manuscripts and Printed Books in the Barberini Collection*, i, Vatican City 1978, p. 189). Finally, the sixth chapter of the Spanish version is partially preserved in Valladolid, Colegio de Santa Cruz MS 253, *olim* 78 (14th century); see the description by M. N. Alonso Cortés, *Catalogo de manuscritos de la Biblioteca de Santa Cruz*, Valladolid 1976, pp. 196–8, and also C. Faulhaber and J. K. Nitti in *La Corónica*, xi.2, 1983, p. 290; but they all seem unaware that the discovery was made by Beaujouan (*Annuaire 1967–68 de l'École Pratique des Hautes Études. IV<sup>e</sup> section: sciences historiques et philologiques*, p. 352).

<sup>49</sup> On the documented gift of a 'book of Marco Polo' from Joan I to Jean de Berry see De Bofarull y Sans (as in n. 40), p. 44 n. 2 and p. 53.

<sup>50</sup> The catalogue is reproduced with a preface by L. Douet-d'Arcq in the *Inventaire de la Bibliothèque du roi Charles VI fait au Louvre en 1423 par ordre du régent duc de Bedford*, Paris 1867.

to England in 1429.<sup>51</sup> The collection began to be dispersed when the duke died in 1435.

We find the *Libro de astromagia* again in the second half of the sixteenth century,<sup>52</sup> on the shelves of the bibliophile Paul Petau.<sup>53</sup> Some folios have annotations by the French humanist Pierre Daniel d'Orléans,<sup>54</sup> from whose collection came several of the manuscripts which now make up the codex containing the *Libro de astromagia* in the Vatican Library.<sup>55</sup> Certain sections of this codex were acquired for Petau by Claude Fauchet (whose name appears on folio 112<sup>v</sup>).<sup>56</sup> In common with other humanists of his time,<sup>57</sup> Petau did not respect the integrity of medieval manuscripts and was in the habit of cutting up those in his collection in order to construct new ones according to his own whim. This would explain the present state of the codex: a collection of manuscripts from various sources, which Petau, for reasons that are no longer apparent, put together as one.

After the death of Paul Petau, his collection passed to his son Alexandre,<sup>58</sup> who, in 1650, sold some 15,000 books—among them the *Libro de astromagia*—to Queen Christina of Sweden, through the good services of Isaac Vossius.<sup>59</sup> The possessions of the queen travelled with her to Rome, where she settled in exile after her abdication and public conversion to Roman Catholicism in 1655.<sup>60</sup> Her collection of manuscripts was incorporated in the Vatican Library after the accession of Pope Alexander VIII (1689–91).<sup>61</sup> And it is there that the manuscript of the *Libro de astromagia* lay unnoticed until its recovery for scholarship by Aby Warburg in 1911.

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<sup>51</sup> Delisle (as in n. 30), pp. 138; Bloch (as in n. 36), p. 312.

<sup>52</sup> See Pellegrin (as in n. 33); and also A. D'Agostino, 'El 'Libro de la mágica de los signos', in his *Il 'Libro sulla magia dei segni' ed altri studi di filologia spagnola*, Brescia 1979, pp. 21–64.

<sup>53</sup> Manuscripts belonging to Paul Petau can be identified by a catalogue number in the top right-hand corner of the first page, comprising a letter and two numbers. The manuscript of the *Libro de astromagia* has the press mark 'A44' in this position (Pellegrin, as in n. 33, p. 24).

<sup>54</sup> Pellegrin (as in n. 33), p. 160.

<sup>55</sup> The library of Pierre d'Orléans is known to have been divided among Paul Petau and Jacques Bongars: L. Jarry, 'Une correspondance littéraire au XVI siècle. Pierre Daniel et les érudits de son temps', *Mémoires de la société archéologique et historique de l'Orléanais*, xv, 1875, pp. 343–431; H. Hagen, *Étude sur P. Daniel*, Orleans 1876 (1st edn Bern 1873, in German).

<sup>56</sup> Pellegrin (as in n. 33), pp. 24, 160.

<sup>57</sup> See E. Pellegrin, 'Membra disiecta Floriacensia', *Bibliothèque de l'École des chartes*, cvii, 1959, pp. 5–56 (5)

(now in her *Bibliothèques retrouvées*, as in n. 34, pp. 159–210 [159]).

<sup>58</sup> On Paul and Alexandre Petau's library see K. A. de Meyier, *Paul en Alexandre Petau en de geschiedenis van hun handschriften*, Leiden (E. J. Brill) 1947 (*Dissertationes inaugurales Batavae ad res antiquas pertinentes*, v).

<sup>59</sup> I am indebted to the Prefect of the Vatican Library, P. Leonard F. Boyle O.P., for clarification of this matter. On the figure of Isaac Vossius as a bibliophile see F. F. Blok, *Contributions to the History of Isaac Vossius's Library*, Amsterdam and London 1974.

<sup>60</sup> C. Callmer, *Königin Christina, ihre Bibliothekare und ihre Handschriften. Beiträge zur europäischen Bibliotheksgeschichte* (*Acta Bibliothecae Regiae Stockholmensis*, xxx), Stockholm 1977, pp. 217–34.

<sup>61</sup> J. Bignami Odier, 'Le fonds de la Reine à la Bibliothèque Vaticane', *Collectanea Vaticana in honorem Anselmi Albareda*, i (Studi e testi, ccxix), Vatican City 1962, pp. 159–89.