

MORE ON IBN AL-HĀTIM*

IN THE 1987 VOLUME of this *Journal*, David Pingree and I published an article concerning the fifteenth-century, illustrated, bilingual Arabic and Latin manuscript of the *De imaginibus caelestibus* attributed to a certain Ibn al-Hātim (Vatican, Biblioteca Apostolica, MS Urb. lat. 1384).¹ The author of the Latin translation of the text, Guglielmo Raimondo de Moncada, was identified as the Renaissance polymath Flavius Mithridates, the scribe of the manuscript named as Pietro Ursuleo de Capua, and the manuscript itself dated to 1480 or 1481.²

* This Note was written while I was a National Endowment for the Humanities Fellow at the Harvard University Center for Italian Renaissance Studies at the Villa I Tatti. I thank both the NEH and the Rush H. Kress Trust for their generous support of my research and Charles S. F. Burnett for his help in deciphering the *marginalia*.

¹ Kristen Lippincott and David Pingree, 'Ibn al-Hātim on the Talismans of the Lunar Mansions', this *Journal*, t, 1987, pp. 57–81.

² Regarding the Arabic script in Urb. lat. 1384, Professor Paul Kunitzsch has suggested to me that the shaping of the individual letters and the elements of modern cursive script in the text indicate that it was written by an Oriental hand, rather than a European one. The idiosyncrasies evident in the text stem either from the fact that the original had been read to the scribe, who composed the words according to their acoustic impression on him, or, more probably, from the fact that the source manuscript from which the Arabic text in Urb. lat. 1384 was copied contained the defective orthographies. One explanation is that the original manuscript may have been written in a colloquial Spanish-Arabic dialect. This, as Kunitzsch pointed out, coincides with relationships previously noted between Urb. lat. 1384 and the Spanish 'Plinio' and Alfonsine *Lapidari* (see Lippincott and Pingree (as in n. 1), pp. 58 and 73–75). But, whereas the script reveals the linguistic traces of Spanish colloquialisms, in form it clearly has an Eastern Arabic *Nasḥī-ductus* and not a Western Arabic *Maghrabī-ductus*. Kunitzsch proposed that the scribe was an Oriental Christian, in some way affiliated with the Papal Court, perhaps either Guglielmo's Arabic tutor or a scribal assistant. Levi della Vida had noted the 'siro-egiziano' quality of the Arabic script in Urb. lat. 1384 and in the similarly-formed Arabic passages in Guglielmo's *Sermo de passione Domini* (Vat. Barb. lat. 1775, fol. 117), and believed that it indicated an Egyptian origin for the 'Moncada' family (ibid., p. 57 n. 3). If, however, the Arabic script of Urb. lat. 1384 was written by an Oriental scribe, might he not also be responsible for the passages in Vat. Barb. lat. 1775? The names of the individual virtues written on the illustrations of the talismans in Urb. lat. 1384 are by a non-Oriental hand, perhaps either that of Guglielmo

or of the artist, who would merely have copied an Arabic model.

³ The same title, but with *Imagines*, is listed in the table of contents on fol. 148^r of the manuscript. The Vatican catalogue (v, pp. 102–04) subsumes the work under the heading of *Imagines mansionum secundum Zoelen* [sic], et alia secundum Hāli, and provides the incipit 'In prima facie arietis...' for the whole section. This incipit does not relate to the lunar mansions, but represents the opening line of Zāhel's (Abū 'Uthman Sahl ibn Bisḥr) descriptions of the decan-gods, first published in the *Liber Quadrupartiti Ptolomei, Centiloquium eiusdem. Centiloquium hermetis*... Venice, O. Scotus, 1493, pp. 122^v–138^r (N.B.: both this and the 1519 Scotus edition omit the decan-gods for Cancer). The *Imagines mansionum* is immediately preceded in the manuscript by a table of the *Loca planetarum verificata usque ad annum domini 1460 completas* (fols 80^v–81^r), listing both the Ptolemaic and latinized Arabic names for the stars, a *Tabula mansionum lunae verificata ad annum domini 1460* (fol. 81^v), with the names of the lunar mansions 'secundum Hāli', the Arabic and Latin names of the mansions, the initial point of the mansions and their qualities, a list of the *Dispositiones mansionum lunae* (fol. 82^r), with tables of the lunar mansions verified to A.D. 1466, their properties and the *Nomina mansionum lunae secundum Magistrum Gulielmum* and the *Imagines mansionum secundum Zoelen* (fol. 82^v) mentioned above.

or of the artist, who would merely have copied an Arabic model.

⁴ For example:

Urb. lat. 1384	Vat. lat. 4085
<i>il Nathy</i>	<i>il Nathay</i>
<i>il Sartayn</i>	<i>il Sartayni/Sartayni</i>
<i>Achal</i>	<i>Abal/Arbal</i>
<i>il Zivil misan</i>	<i>il Zir vsi Mizan</i>
<i>il Drak</i>	<i>il Drath</i>
<i>Xalech</i>	<i>Xalech/Xalich</i>
<i>il Tarpha</i>	<i>il Trapha</i>
<i>Rasyal</i>	<i>Ramal</i>
<i>il Jabhah u Calb il Asad</i>	<i>R Jabhah al (vs?) Jabyah uzabil asad</i>
<i>Achhullcabull</i>	<i>Achalul labul/al Achull cabul</i>
<i>Somach</i>	<i>Sormach</i>
<i>Hunahal</i>	<i>Unahal</i>
<i>Ariahat</i>	<i>Taribat</i>
<i>Adsiab</i>	<i>Adsiab</i>
<i>Abial</i>	<i>Ahbi(h)al</i>
<i>Haghjal</i>	<i>Haghjal</i>

fact that the Arabic/Latin glossary added as a *coda* to the *De imaginibus caelestibus*⁵ has been arranged in the *Imagines mansionum* so that each entry appears as a marginal notation flanking the relevant passage in the text.⁶ On closer comparison, however, one finds that the *Imagines mansionum* lists more than twice as many Latin definitions for the Arabic terms as the *De imaginibus caelestibus* glossary. This fact, taken in combination with the rather curious definition of *marzan* on fols 27^va–28^ra of Urb. lat. 1384,⁷ suggests that in its present condition it actually lacks two folios, rather than the single folio previously noted.⁸ Unfortunately, since the definitions are written as *marginalia* in Vat. lat. 4085, several were mutilated during later rebindings of the manuscript, leaving even this expanded version still somewhat short of complete.⁹

<i>Huphit aranih</i>	<i>Huphit aranih (aranih?) / Host arani</i>
<i>Sanissachin</i>	<i>Somissachin</i>
<i>Alfrathyas abryas</i>	<i>Afrathyas abryas</i>
<i>Naffial tagrial</i>	<i>Naffial tagual</i>
<i>Farg il dala il muachir</i>	<i>Fragidabu il muachir</i>
<i>Amrial lamial</i>	<i>Anzial et lamial</i>
<i>Botha il huah</i>	<i>Botha il huah</i>

⁵ Urb. lat. 1384, fol. 27^va–28^ra.
⁶ The definitions for those words not specifically signalled in the text (*baris, bar, bis, barhi, hial, and bab*) are included in the bottom margin of fol. 82^v.

⁷ Urb. lat. 1384, fol. 27^va: *Marzan id est nodus cubiti/28^ra: David, et est unum de quatuor principalibus receptis a Maumetanis.*

⁸ Lippincott and Pingree (as in n. 1), pp. 57 and 70.

⁹ Those additional definitions which survive include:

Folio 83^r
Xalech i. petition [um?]
 [Acharis] i. acerbe
Ramad i. cataractae oculorum
Ramial i. visor vel vi [...]
Avadin i. nolens me
Gibba i. frons
Asad i. leo
Calb i. cor
Chalb i. canis

Folio 83^v
Achull cabal i. amare obviare
 [Adbixa] i. pessime agere
 [Asarub] i. potatio suavis
 [Hadl] i. iustus vel iusticia
 [Unaha] i. dissipare
Asahd i. extirpare
Asarud i. proculsa d[...]
Tarihat i. a tristicia
Admah i. a malo

Folio 84^r
 [Abbi(h)al] i. abscondere
Admal i. malefaciens
 [Chachyur chadur] i. involve rete
 [Chauyachufa] i. impressiones

More important, however, is that this second copy of Ibn al-Hātim's treatise on the talismans of the lunar mansions includes the text missing from Urb. lat. 1384 due to the loss of fol. 20. The text from fol. 84^r of Vat. lat. 4085 reads as follows:

... Strucciones vocantur *il nahayun*. Sunt octo stellae, quatuor descendentes et quatuor ascendentes. Earum imago est animal cuius pars superior a zona scilicet de supra sit forma hominis, alia vero inferior in forma equi. In cuius manu sit arcus arabicus. Vadit ad venandum. Sculpes eam in gemma rubea et fumiges eam cum pilo vulpis. Valet ad amorem et iusticiam et obtinendas gratias et velocitatem venationis. Et sculpendo eam nomina nomen virtutis eius quod est *chachyur chadur*. Praevalebit tibi ad venationem et dominandum animalibus silvestribus.

Imberbis vocatur *il bilida* et est menda in coello resarcita ad formam intercelij. Cuius imago est homo cum quatuor faciebus et ponas ac si essent quatuor homines humeris coniunctis in simul. Sculpes eam in aere rubeo, et scribe nomen virtutis eius in quatuor illis faciebus, et ponas ...¹⁰

Considering who might have been the original owner of Vat. lat. 4085, one can only note the reference on fol. 82^r to the *Nomina mansionum lunae latina secundum Magistrum Guglielm[um]* and the fact that the hand preserved in it is extremely close to other autograph manuscripts by Guglielmo Raimondo de Moncada.¹¹ A relative chronology between the two works would be difficult to establish; but, if Vat. lat. 4085 does record Guglielmo's hand, it seems less fruitful to discuss chronology than to note the different function of each manuscript.¹² Urb. lat. 1384 is a humanist showpiece,

Host arani i. incute divisionem

Folio 84^v
 [Sanissacham] i. exacue gladiu[m]
 [Afrathyas abryas] i. habundet eufortuniss (sic) or cum fortuniss (sic)
 [Asyal] i. medere
 [Naffial tagual] i. cu[r?]rat animus
 [anzial et lamial] i. concipe ut non sit aqua
 Anuz i. ad homines

¹⁰ Vat. lat. 4085, fol. 85^r.

¹¹ In particular, note the similarity to the Vatican MS Barb. lat. 1775, reproduced in Chaim Wirszubski, *Flavius Mithridates, Sermo de Passione Domini*, Jerusalem 1963, pl. 1.

¹² It should be mentioned, however, that Vat. lat. 4085 is riddled with minor errors and that the Latin transliterations from the Arabic seem less proficient than those found in Urb. lat. 1384. This might either indicate a certain degree of carelessness on the part of the author (since there seem to be nearly as many errors in the Latin text as in the Arabic transliterations)

sumptuous and beautifully illustrated. The question of its use beyond being a precious *objet d'art* and testimony to some vague, polyglot aspiration on the part of its patron, Federico da Montefeltro, must be left open. Despite the fact that the manuscript is interesting for historians and art historians, one should not overlook the possibility that, for its Renaissance contemporaries, it was probably less read than admired. Vat. lat. 4085, on the other hand, represents a collection of texts compiled by a working astrologer. It is a personal collection reflecting one man's investigation of the Arabic astrological texts available during the fifteenth century.

KRISTEN LIPPINCOTT

WARBURG INSTITUTE

or give credence to Kunitzsch's idea (see n. 2 above) that Guglielmo was not quite the Arabist he claimed to be and that his translation in Urb. lat. 1384 was, in fact, a collaborative effort with a native speaker.

DID LEONARDO DEVELOP A THEORY OF CURVILINEAR PERSPECTIVE?

TOGETHER WITH SOME REMARKS ON THE 'ANGLE' AND 'DISTANCE' AXIOMS

THE QUESTION in my title concerns not only Leonardo scholarship but the wider understanding of that Renaissance paradigm of vision, perspective. A developed theory of curvilinear perspective—or evidence of an intention to work towards one—would decisively shift Leonardo from the stream of Renaissance thinking on vision. It would make him not so much a precocious herald of later periods as an anti-Renaissance artist, out to displace the theoretical foundations of the Renaissance model of sight. For such reasons it is important to be sure of claims made about his researches. Leonardo's theories of curvilinear perspective have been the subject of numerous studies since the appearance in 1957 of John White's *Birth and Rebirth of*

Pictorial Space. Even so, there has not been any general agreement on the nature of the theories.¹ Here I will present evidence that an historically plausible explanation of Leonardo's theories is possible without appealing to curvilinear perspective at all, so that if Leonardo worked on a theory of curvilinear perspective, the texts do not show evidence of it.

The passages which have been taken as evidence of curvilinear perspective are the following: Cellini's description of Leonardo's lost *Discorso*; a statement in G. B. Caporali's commentary on Vitruvius's *De architectura*; and the Leonardo passages MS G, fols 13^v and 13^r; MS E, fols 4^r and 16^r; British Museum, Arundel 263, fol. 62^r; MS K, fols 40^v and 41^r; and Madrid II, fol. 15^v.²

¹ In addition to the works I cite here, see James Ackerman, 'Leonardo's Eye', this *Journal*, xli, 1978, pp. 108–46, n. 7, and Carlo Pedretti, 'Leonardo on Curvilinear Perspective', *Bibliothèque d'humanisme et Renaissance*, xxv, 1963, pp. 69–87, n. 1. The recent book by Kim Veltman (K. Veltman and K. D. Keele, *Linear Perspective and the Visual Dimensions of Science and Art (Studies on Leonardo da Vinci I)*, Munich 1986), mentions many of the texts which I will discuss (see nn. 2, 11, 18, 26, 35 below). For the larger question of the definition(s) of curvilinear perspective best suited to the Fine Arts, see my 'Das Nüsslein Beisset Auf, Ihr Künstler!': Curvilinear Perspective in Seventeenth Century Dutch Painting', forthcoming in *Oud Holland*.

² This list is compiled from John White, *The Birth and Rebirth of Pictorial Space*, London 1957, pp. 207–15; three studies by Pedretti: i) as in n. 1; ii) *The Literary Works of Leonardo da Vinci, Compiled and Edited from the Original Manuscripts by Jean Paul Richter, Commentary by Carlo Pedretti*, Oxford 1977, v, 1; iii) *Leonardo da Vinci on Painting, A Lost Book (Libro A)*, Berkeley and Los Angeles 1964, pp. 160 ff.; Ackerman (as in n. 1); and Martin Kemp, 'Leonardo and the Visual Pyramid', this *Journal*, xl, 1977, pp. 128–49. Other sources duplicate their references. Veltman (as in n. 1), pp. 25–9, 144, 160–2, suggests that curvilinear perspective was one of three methods advocated by Leonardo to compensate for anamorphic distortions. Veltman adduces several texts in addition to those I consider here (MSS A, fol. 38^r; H¹, fol. 32^r; C.A., fol. 35^{ra}; C.A., fol. 123^{rb}). The other two methods, as set out in MS A, fol. 32^r, are the use of a peeephote [which he calls a *bus*] and the removal of the eye to a distance 'at least three times' that of the object). In these contexts, however, 'curvilinear perspective' refers to representations on curved surfaces—apparently spherical—in linear perspective. They are therefore a subset of the technique of painting on curved walls, and fall under the general heading of linear perspective. Leonardo recommends the curved surfaces because there will be less apparent distortion as the eye moves from place to place than there would be in the case of linear perspective representations on flat walls or ceilings. Madrid II, fol. 15^v, also adduced by Veltman (p. 162, figs 545–50), is strictly opposed to