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Eric M. Ramírez-Weaver, A Saving Science. Capturing the Heavens in Carolingian Manuscripts (Penn State University Press, 2017)

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Hand in hand with the increased interest in astrology and esotericism, constellations and their representations as research topics have received increasing attention. After Patrik McGurk’s 1966 volume in the still not-yet completed series of catalogues of medieval illustrated astronomical manuscripts,¹ initiated by Fritz Saxl at the Warburg Institute, astronomical illustrations were rather neglected for a long time. Recently, though, several works on the subject have been published in short succession:² *Sternbilder des Mittelalters. Der gemalte Himmel zwischen Wissenschaft und Phantasie* by Dieter Blume,


Mechthild Haffner, Wolfgang Metzger (2012, 2016),3 Illustrating the Phaenomena. Celestial Cartography in Antiquity and the Middle Ages (2013) by Elly Dekker,4 the ongoing digital Saxl Project under the lead of Kristen Lippincott,5 now Eric M. Ramirez-Weaver (R.-W.) has published an art-historical monograph on the Carolingian constellation pictures in the manuscript Madrid, Biblioteca Nacional, Ms. 3307, entitled A Saving Science. Capturing the Heavens in Carolingian Manuscripts (2017).

This very detailed, generously illustrated book is divided into an introduction and two parts with two chapters each. The introduction starts with the background: in 809, Charlemagne summoned a meeting in which violent controversies on astronomy and time reckoning (computus) were carried out. The result, the official Carolingian view, was subsequently recorded in a seven-part work, the Handbook of 809, which was probably edited by Abbot Adalhard of Corbie. While the first four books deal with the Christian feasts during a year, and the tools for their calculation, such as a martyrologium and the nineteen-year cycles, with the course of the sun and with the position of the moon pertaining to the date of Easter, Book 5 presents the 42 constellations in short, factual descriptions, while the final book 7 cites the complete text of De natura rerum by Beda Venerabilis (the Venerable Bede).

Manuscript Madrid 3307 is the most authentic copy of this manual. According to R.-W., it was produced in Metz for Bishop Drogo (illegitimate son of Charlemagne, 823-855 Bishop of Metz) and illustrated with a complete constellation cycle and four diagrams.

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5 https://www.kristenlippincott.com/the-saxl-project/ (visited 3 October 2017). To these titles should be added B. Anderson, Cosmos and Community in Early Medieval Art (Yale University Press, 2017), which I am sorry to have not yet read.
Although the manuscript was discovered and published by W. Neuss in 1940/41, it has not yet been studied carefully. Undertaking this, R.-W. mainly considers how the miniatures gain their own meaning as compared to the text. This approach sets itself apart to the studies of Saxl and Panofsky who, in the tradition of Aby Warburg, regarded medieval star pictures as merely an intermediate step between Antiquity and the Italian Renaissance. Furthermore the author is interested in the relation of the illustrations to the political function of the Handbook of 809, especially to the Carolingian educational reform and the demands of the Admonitio generalis (789) in dealing with tradition/legacy such as Emendatio or Correctio. Finally, the author doubts the dominant art-historical model of local schools in Carolingian book painting and proposes replacing it with a more variable model, which attaches more importance to individual artists, their travels, and to the individual books.

Under the heading “Unveiling the Heavens over Carolingian Skies,” the first part contains a detailed discussion of the manuscript Madrid 3307. Why did Charlemagne order the compilation of a textbook on astronomy and chronology? Looking at the stars was not only a sober science, but a spiritually motivated effort to understand Creation. In addition, there were practical benefits such as the recognition of the right time for nightly prayers (according to Benedict’s rule) or the determination of the feast of Easter.

On the basis of Neuss’ location proposal and Koehler’s proposed dating “after 820” (not verified until then by R.-W. himself) R.-W. believes that the production of the manuscript was related to the ordination of Drogo as Bishop of Metz in 823. He supposes that the Madrid manuscript could have been a present from Louis the Pious on this

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6 After the initial description, dating, locating and iconographic classification of the manuscript by Neuß (1940,1941), the detailed list of contents by Saxl, Verz. I 1915 (see the article about Vat. lat. 645) and the stilistic classification by W. Koehler, Karolingische Miniaturen, Bd. III (1960), Ramirez-Weaver’s study is based on the vast research of the historian Arno Borst (1994), (1998), (2006) about all aspects of the handbook of 809; and on the philologic studies of the history of the Aratea-text by Jean Martin, and the medieval reception oft he text by Hubert LeBourdèlles (1985).
occasion. For according to the decree of Charlemagne *Quae a presbyteris discenda sint* of c. 805, the computus ranked eighth among the fifteen things a bishop ought to have known. The further three copies of the manual, discovered by Neuss and Koehler, are likewise connected to an ecclesiastical dignitary from the royal family.7

The *Annales Prumienses*, which were gradually recorded in the nineteen-year tables by various hands, provide the basis for the classification and the history of Madrid 3307. To the known facts R.-W. adds that the manuscript might have been brought to Prüm in about 855, when Emperor Lothar retreated to this monastery to die there. According to Koehler (1960), the registration of a lunar eclipse 820 by Hand A provides a terminus post quem for the origin of the Madrid manuscript. The last entry by Hand H reported that in 922 Abbot Richarius was ordained as bishop of Tongres-Liège. In this context the manuscript probably came to Liège.

Two specimen calculations in the second book (II, 1 and II, 7-12) refer to the year 809, the date of the synod. In Book III, 10 there is a reference to the year 793 (when an earlier version of a computistic handbook was compiled according to A. Borst). R.-W. agrees with Neuss that the manuscript was written in Metz because of an entry in the Martyrologium (6v) that in 641 the relics of S. Arnulf were transferred to the monastery of Metz. However, the worship of S. Arnulf was widespread, so this event might have been mentioned in the archetype as well. Further, R.-W. argues that the style of the Madrid manuscript is consistently continued in the later book-painting of Metz. This provenance determination does not convince me. I think that the miniatures stylistically conform to those of the so called “Gruppe des Wiener Krönungsevangeliars,” and that they also relate to the court of Aachen. A production at the royal court would explain the use of colors in contrast to the drawings found in the other copies. Even if produced in

7 He links the copy Vat. lat. 645, ca. 827, to Hugo (Abbot of Saint Quentin, brother of Drogo); Vat. Reg. lat. 309, ca. 859, to Louis (840-860 Abbot of Saint-Denis, grandchild of Charlemagne); and Monza, Bibl. Capitolare, Cod. f-9/176 to Hubert (since 864 Abbot of Lobbes, brother-in-law of Lothar II.).
Aachen, the codex could have traveled to Metz as an imperial present and creating a strong influence on the book painting there. After its stay in Liège (at least until 1002), the Codex was known to be in Sicily in 1543. At the end of the 17th century it was brought to Spain together with other books confiscated by the prince of Uceda. In 1711 it arrived at the library of Phillip V, the Real Biblioteca in Madrid.

The second chapter deals with the iconography of the constellations in the Madrid manuscript. In this context, it is interesting that some contemporary literary sources point out the relationship of bishops or clerics to stars; for example, worthy bishops are called stellar vicars of Christ.

The Madrid miniatures rely mainly on illustrations of those texts used to create the compilation of the handbook: especially illustrations of the revised translation of the *Aratea, Recensio interpolata*, as in Paris, BN, Ms. lat. 12957, Corbie, c. 810 (?), a manuscript maybe known to the creator of the handbook, Adalhard of Corbie. Since neither the first translation from Corbie (*Aratus latinus*) nor the first version of a computistic handbook or type A (according to Borst) contained illustrations, the handbook would mark the start of medieval astronomical illustration in general. A bit earlier, according to R.-W. around 805, the partly illustrated Cologne *Aratus* (Cologne, Dombibliothek, Ms. 83 II) was created for Archbishop Hildebald of Cologne (possibly in response to the capitulary of Diedenhofen). While there are spaces for pictures, the cycle was never completed; it is also exceptional that these pictures were painted in colors. While I would agree that the diagrams were actually planned for the handbook from the very beginning, I doubt that the illumination of the handbook with star pictures was already executed in the times of Charlemagne. That the text *De ordine ac positione* in the handbook of 809 was not originally enriched by illustrations could explain how this text was later combined with three different picture cycles (for want of a model). In addition, the pictures of the Madrid
manuscript rely on the Germanicus illustrations of Leiden Vossianus Q. 79 of 816. The adequate illustration of the handbook of 809 aligns better with the well-known effort of Louis the Pious, to illustrate scientific works. Rightly R.-W. recalls that Carolingian artists generally used several different models simultaneously (polycyclic strategy) to create their scientific illustrations.

The iconographic study of the constellations reveals the painting practices and the intentions of the artists: the constellations of the Serpent and the Bears are represented in separate pictures (paratactic style). This, as well as the static representation of the animals standing on a missing groundline avoids narrative style (appropriate for pagan myth). The lack of marked stars is a result of the conviction that the images should not represent the real constellations, but rather serve as mnemotechnic aids. (It should be noted here that D. Blume actually did find traces of gold stars in the

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8 If D. Blume is right that golden stars were added to the constellations, then the Madrid miniatures had an appearance similar to the Leiden Codex.

Figure 1 Gemini, Cancer and Donkeys at the Manger; Madrid, Biblioteca Nacional, Ms. 3307, fol. 56v. Photo: Biblioteca Digital Hispánica (16 January 2018), http://bdh- rd.bne.es/viewer.vm?id=0000122617&page=1
In the representation of Hercules, the tree of the Hesperides is omitted in order to exclude allusions to the pagan myth. Likewise, the representation of Virgo doesn’t have scales in order to avoid an identification with the goddess Dike/Iustitia.

On the other hand, two donkeys with a manger are added to the image of Cancer (according to R.-W. for the first time in the tradition) in order to emphasize the meteorological aspects of the constellation described in Pliny (fig. 1). Here I miss the mention of the manuscript Vat. gr. 1087, which dates from the first half of the 14th century, but is probably related to a late-antique Greek edition of Aratus. In this manuscript, the donkeys are included from the outset (fig. 2). In Corbie there must have been a Greek copy of Aratus. In the image of the Charioteer, the Oleanian goat which once fed Zeus, is only tolerated on the edge, while her kids, which are important for weather prediction, are given a central place on the left arm.

The representation of Taurus, also in complete animal guise, makes sense because the Hyades as weather indicators can be shown on its tail. Hercules, the Twins, Perseus and

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9 Blume, Haffner, Metzger I.1 (2012), S. 356 see note 3.
Aquarius are represented naked, but of undefined sex. On the other hand, the female constellations like Virgo, Cassiopeia or Andromeda are clothed chastely, probably not to tempt the Christian/monastic reader. R.-W. explains the unusual representation of the Sagittarius as Satyr by the use of zodiacal representations found on celestial globes and maps, for instance the Hemispheres in the Recensio interpolata-Manuscript St. Gallen, Stiftsbibliothek, Cod. 902. Centaurus is characterized by a thyrsus as the physician Chiron, such as also described in the Scholia Basileensia, one of the sources of text. Along with the iconographic investigation, the author undertakes an attribution of the miniatures to four artists: the constellations of the northern sky were executed by the first master, whereas Perseus, Lyra and Cygnus were left to an assistant. The pictures, beginning with Capricorn on fol. 59v, i.e. south of the ecliptic, are the work of a second painter, who painted all other miniatures (except for Hare to Cetus) and the diagrams. He is distinguished by his skillful, differentiated characterization of surface textures, by the use of large contours, especially in animals. His expressionism points to the Reims School and he was responsible for the more-sophisticated compositions and the diagrams.

In Chapter 3 of “Representing the Cosmos for Carolingian Hearts and Minds,” the study’s second part, the diagrams which complemented excerpts from Plinius’ Naturalis Historia, II, are discussed in detail. They must have been part of the original concept of the manual, since the text refers to them explicitly. While the two first diagrams represent the solid order of the cosmos (creation) by their symmetry and the T-shaped axes of the second diagram refer to the cross / Christ, the eccentric lines and the asymmetrical composition of the third diagram (fol. 65v) is an independant Carolingian statement by the artist in the discussion “On the Apsides.”

The style of the Madrid miniatures relates to contemporary book painting in northern Italy. The drawing in a manuscript of Canon Law of about 800, kept in Vercelli, resembles the face of the left twin in the manuscript of Madrid. R.-W. assumes that Italian originals
(including constellation pictures) could have come to Corbie because of the captivity of the Lombard king Desiderius in 775 in Corbie. Furthermore, there are several references between the first master and the animal representations of the Bern Physiologus from Reims (late 820s / early 830s), which again follows the classicism of Louis the Pious. The style of the second master is better defined in his effect upon the later manuscripts of Metz, as in the so-called Loisel Evangelium (Paris, BN, Ms. lat., 17968). There are similarly differentiated textures, heavy contours, etc.

Aside from manuscripts, celestial globes could have been taken as models (like the one seen in the historiated initial of the Drogo Sacramentary, fol. 43v). This is indicated by the great number of mirror images, as well as the representation of Sagittarius as satyr.

The Berlin manuscript (Phillips 1832) (third quarter of the 9th century) contains notes by Martin Hibernensis of Laon. R.-W. considers the drawings to be a direct copy of Adalhard of Corbie’s concept, in other words, an independent witness of the original program of the 809 handbook.

In the fourth chapter the interpretation of Carolingian constellation pictures is discussed in general (apart from the Madrid manuscript). In this respect, R.-W. cites numerous contemporary texts: Hrabanus Maurus distinguishes between natural and superstitious astrology, whereby only the former is tolerable. He classifies everything as superstition connected with the pagan gods and myths. Thus, the omission of all attributes and requisites in the Madrid star pictures reminding of pagan myths is just the logical consequence of this definition. Natural astrology includes all benefits of celestial study for Christian life, including weather predictions and medical applications. This explains the addition of details such as the donkeys at the manger in the constellation of Cancer and the thyrsus to identify Centaurus with Chiron.

What do Carolingian authors say about the role of astronomy? For Alcuin (De vera philosophia) the search for the rules and functions of nature (including time reckoning as part of astronomy) is a spiritual task. According to Remigius of Auxerre and Eriugena,
scientific employment reveals already existing knowledge and sets the soul back into its original, pure condition. Scientific investigation is sanctifying the students’ soul (scientific soteriology).

A further crucial theme is the relation between text and illustration in the ninth century. According to the Opus Caroli (Libri Carolini), the word prevails over the picture as it is more correct. Consequently, images are not self-explanatory, but require the text. Thus the tituli in the constellation pictures of Madrid 3307 secure their right interpretation. Images are signs of higher ideas and serve as a stimulus for memory. The correctness of pictures and texts is recognized by comparison with the heritage/legacy. The special purposes of the paintings include decoration and recollection by similarity. In respect to the constellation pictures, this means that, by their resemblance (even without marked stars), they bring to mind the actual constellations and, in a wider sense, the creation of the stars and their arrangement by God.

Reading the book required a great deal of concentration, as the wealth of information is at times confusing and some of the details are far fetched (for example the career of the scientist W. Neuss or the philosophical reflections of M. Rampley on Aby Warburg). I further noticed that the headings do not always describe the content of the following chapter. However, these rather formal objections as well as the critical comments in the previous summary above do not diminish the merits of the book: the competent explanation of the complicated computistic matter, such as the 19-year tables or the diagrams, the characterization of the means of design, the intentions of the Carolingian book painters, and the striking distinction of the four executive artists.

I was most impressed by the last chapter because of the wealth of contemporary text sources selected to clarify the view of a ninth-century monk or bishop on the constellations and offering a (quasi-psychological) understanding of the study of Carolingian star pictures: preoccupation with a prominent area of the liberal arts as a means of personal sanctification. 

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