



BRILL



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## THE REUSE OF CLASSICAL ANTIQUITY IN THE PALACE OF MADINAT AL-ZAHRA' AND ITS ROLE IN THE CONSTRUCTION OF CALIPHAL LEGITIMACY

The Roman statues and sarcophagi reviewed here were discovered in different areas of the palace of Madinat al-Zahra', the celebrated palace city founded in the 930s at the foot of the Cordoban mountain range by 'Abd al-Rahman III (r. 912–61), the first of the Umayyad caliphs of al-Andalus.<sup>1</sup> The pieces had hitherto been considered irrelevant to the architectural and historical study of the caliphal palace, although their discovery and location in specific buildings of the complex represented an exceptional find within both Islamic and Andalusí architecture of the tenth century. The statues and sarcophagi are essential to understanding and explaining the function of these spaces, and to interpreting their meaning within the Cordoban palatine complex (fig. 1). Their appearance raises several questions: Why were classical spolia employed at a time when they were no longer in popular use? Why reutilize old pieces with so many connotations, featuring scenes and characters (gods and heroes) that were a priori pagan and hardly acceptable in an Islamic context? What meaning was assigned to these figures and what relationship did they have with their designated location?

In order to answer these questions we should first analyze the broader phenomenon of the revival of classical antiquity promoted by the caliphal court of Cordoba in the tenth century. In addition to the growth of knowledge and the sciences—prompted, to a great extent, by the copying and translation of Roman and Greek books—we should highlight the recovery of images of the pagan gods, heroes, and philosophers of antiquity, as well as the evident revival of classical forms in caliphal architecture. This renaissance is visible in the elegant cornice crowning the socle inside the mihrab of the Great Mosque of Cordoba and in the column bases

in Madinat al-Zahra' itself (figs. 2a and 2b).<sup>2</sup> Although we will not go into further detail here regarding this aspect of the reuse of antique forms, the role of sculptures and reliefs found at Madinat al-Zahra' during this revival in classical visual language may have been pertinent. Several authors have also emphasized the similarity between the Roman sarcophagi studied here and the basins created at the end of the tenth century for Madinat al-Zahira, the palace of Abu 'Amir al-Manсур (d. 1002), meant to rival Madinat al-Zahra'.<sup>3</sup> Finally, we propose some hypotheses about the function of the spaces where these Roman sculptures were displayed.

### THE ROMAN SCULPTURE AND SARCOPHAGI COLLECTION

Three miles from Cordoba, Madinat al-Zahra' was founded by 'Abd al-Rahman III following the proclamation of the Caliphate of Cordoba in 929. Once construction began, between 936 and 941, the administration and main state institutions were moved to the palace city; these included the mint and treasury, military barracks, and workshops for the production of luxury goods, such as *tirāz* (inscribed textiles) and ivories. Madinat al-Zahra' was divided into three main areas, with the terraced palace at the center. The new caliphal seat shared the distinction of being the capital city with Cordoba, where the Great Mosque and old Umayyad palace (*alcazar*) continued to play an essential role in the life of the caliphate. Historical accounts recorded by Ibn 'Idhari indicate that Berber troops destroyed Madinat al-Zahra' for the first time in 1009–10.<sup>4</sup>

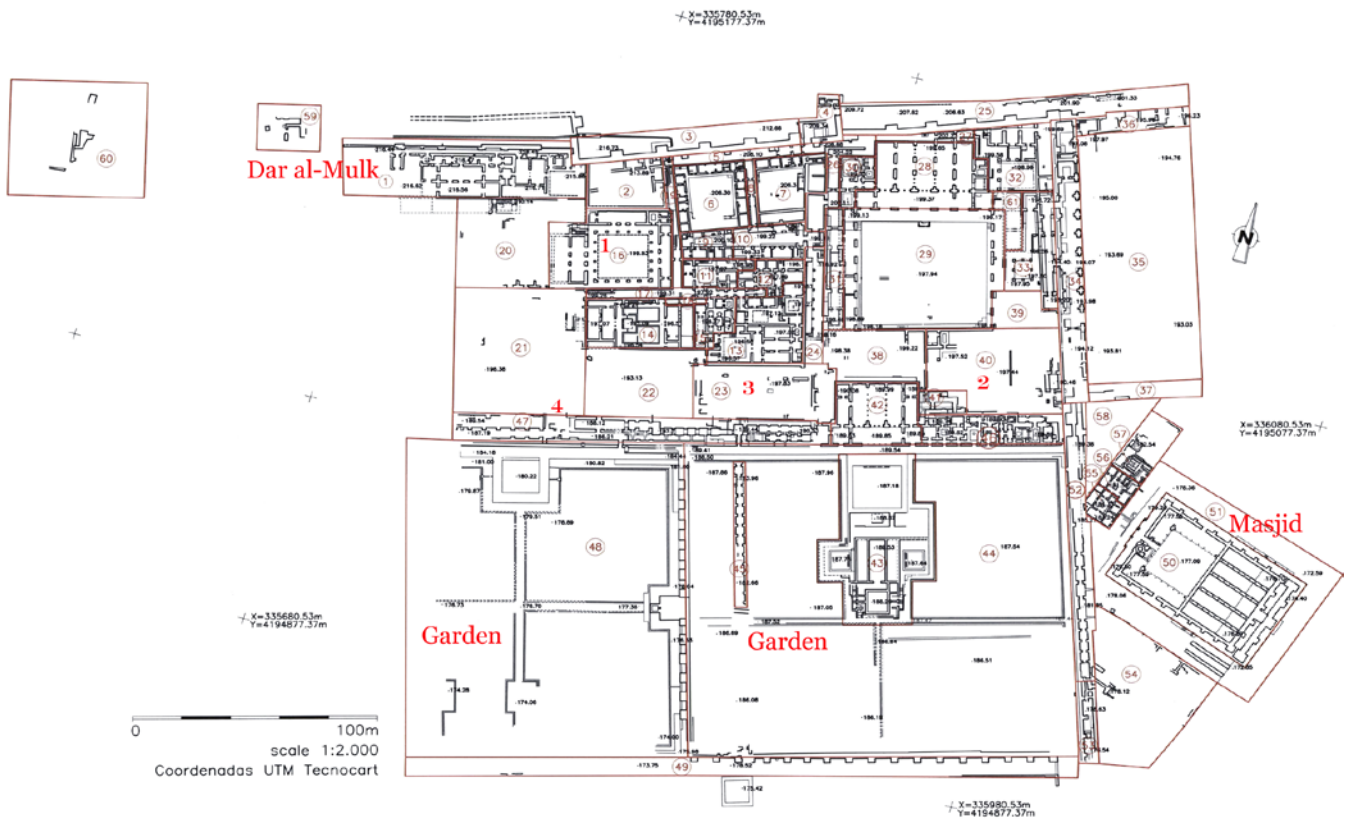


Fig. 1. Excavated areas of the Palace of Madinat al-Zahra': 1) Court of the Pillars; 2) Court of the Clocks; 3) court to be excavated; 4) Camino de Ronda Bajo (Lower Footpath). (Plan: Antonio Vallejo Triano, *La ciudad califal de Madinat al-Zahra': Arqueología de su excavación* [Cordoba, 2010], fig. 9 [reproduced with the permission of the author])



Fig. 2b. Left: Base of a column from the sarcophagus found in the vicinity of the Camino de Ronda Bajo, Madinat al-Zahra'. Right: Marble base from the Hall of 'Abd al-Rahman III in Madinat al-Zahra'. Museum of the Conjunto Arqueológico de Madinat al-Zahra', inv. no. 151.57. (Photos: Susana Calvo Capilla, with the permission of the Conjunto Arqueológico de Madinat al-Zahra')

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Fig. 2a. Top: Roman cornice (first century A.D.) found on Ramirez de Arellano Street, Cordoba (Archeological Museum of Cordoba, inv. no. CE028345). Bottom: cornice inside the mihrab of the Great Mosque of Cordoba (965). (Photos: Susana Calvo Capilla, with the permission of the Mosque of Cordoba and the Archeological Museum of Cordoba)

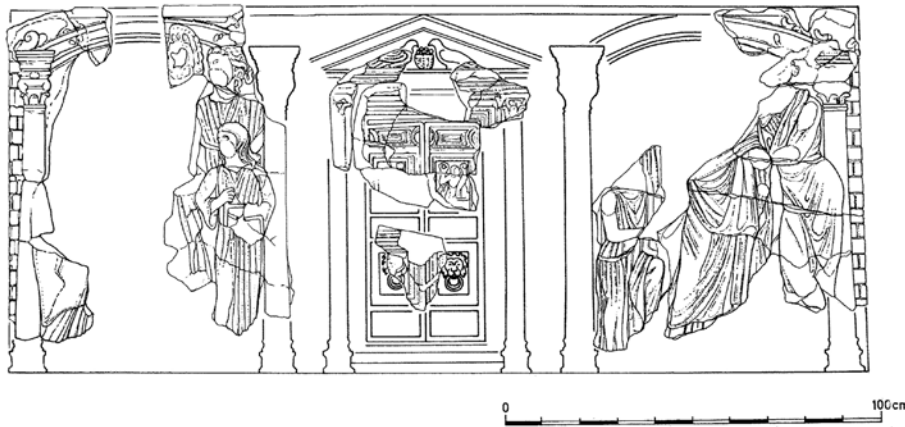


Fig. 3. Sarcophagus of the Gate of Hades. (Drawing of reconstruction: E. Candon and J. Beltrán, after José Beltrán Fortes, *Los sarcófagos romanos de la Bética con decoración de tema pagano* [Seville, 1999], fig. 41 [reproduced with the permission of the author])

The Roman sculptures and reliefs from al-Zahra' were discovered over an extended period of time, from the first excavation campaigns, undertaken by Ricardo Velázquez Bosco in 1912, to the most recent ones, under the direction of Antonio Vallejo (until 2012).<sup>5</sup> Each piece was found in advanced stages of deterioration, in some cases impeding the process of gathering all the fragments necessary to reconstruct them.

The fragments of the Sarcophagus of the Gate of Hades were uncovered in an area known as the Court of the Clocks, above the vaults of the baths and the rooms adjacent to the Salón Rico, or the Hall of 'Abd al-Rahman III, located in a lower terrace (fig. 1[2]).<sup>6</sup> The sarcophagus, dated around the third century A.D., is made of Parian marble and may have measured 1 meter by 2.2 to 2.3 meters (figs. 3, 4a, and 4b).<sup>7</sup> The scenes depicted are consistent with a model frequently repeated in many other sarcophagi, one of which was found in Cordoba in an excellent state of preservation (fig. 5).<sup>8</sup> At the front, on the two sides of the Gate of Hades or the Tabernacle, we see a couple—most likely the deceased—represented as philosophers and accompanied by two Muses. Each of the other sides features two philosophers, one sitting and the other standing, holding open and folded scrolls (*uolumina*) (figs. 6–8). In the upper part are openings—two on the right and one on the left—made later in order to use the sarcophagus as a fountain.

The Sarcophagus of Meleager was discovered during the earliest excavation campaigns of the palace city during the 1920s (fig. 9). The fragments were found in the drains that run under the Court of the Pillars, in a state that suggests they were deliberately destroyed (fig. 1[1]). The sarcophagus was manufactured in Roman workshops during the second quarter of the third century A.D. Made of Thassos marble, its dimensions are approximately 0.85 meters by 2.05 to 2.10 meters. The scene depicted at the front shows Meleager hunting the Calydonian Boar. According to José Beltrán, among the characters depicted are, from left to right, Heracles (or possibly Ancaeus<sup>9</sup>) dressed in an animal skin, Diana Venatrix, Castor and Pollux, Meleager—though only fragments of his head and left arm remain—and Atalanta (fig. 10). The sides of the sarcophagus are very fragmented, but they seem to feature hunting scenes with trees in the background.<sup>10</sup> The ornamented front faced the western portico of the court.

The fragments of two sarcophagi, one depicting "Philosophers and Muses" and another with a Bacchic scene, were discovered in a mound on the Camino de Ronda Bajo (Lower Footpath), north of the Lower Garden (fig. 1[4]). The different materials that accumulated there probably fell from the upper terraces. Made of Proconnesian marble, the Sarcophagus of Philosophers and Muses is exceptionally large, originally measuring circa 1.40 meters by 2.50 meters (figs. 11 and 12). It was made in



Fig. 4b. Sarcophagus of the Gate of Hades. Fragments of the right part of the front, marble, third century A.D. Court of the Clocks, Madinat al-Zahra'. Madrid, Deutsches Archäologisches Institut, Madrid, inv. no. D-DAI-MAD-WIT-R-116-91-10. (Photo: courtesy of the Deutsches Archäologisches Institut)

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Fig. 4a. Sarcophagus of the Gate of Hades. Fragments of the left part of the front, marble, third century A.D. Court of the Clocks, Madinat al-Zahra'. Madrid, Deutsches Archäologisches Institut, inv. no. D-DAI-MAD-WIT-R-117-91-07. (Photo: courtesy of the Deutsches Archäologisches Institut)



Fig. 5. Sarcophagus of the Gate of Hades, found in 1958 in the necropolis of Brillante, north of Cordoba, third century A.D. Alcazar of the Christian Monarchs, Cordoba. (Photo: Susana Calvo Capilla)

Roman workshops around 270–80 A.D.<sup>11</sup> On the front, figures are depicted before a hanging (*parapetasma*), which serves as the background. On each end there is a standing figure of a philosopher; at the center are some fragments of two seated figures wearing sandals; beside them are at least three standing female figures, probably Muses. Most likely the seated figures are either another philosopher and the deceased, or two deceased individuals. Some characters are holding *uolumina* and wearing cloaks (sing. *pallia*), both articles commonly used for the depiction of philosophers and masters. On the sides, another *parapetasma* serves as a background for two figures: on the right side is a standing philoso-



Fig. 6. Sarcophagus of the Gate of Hades: left side. Court of the Clocks, Madinat al-Zahra'. Madrid, Deutsches Archäologisches Institut, inv. no. D-DAI-MAD-WIT-R-116-91-03. (Photo: courtesy of the Deutsches Archäologisches Institut)



Fig. 7. Sarcophagus of the Gate of Hades: right side. Court of the Clocks, Madinat al-Zahra'. Madrid, Deutsches Archäologisches Institut, inv. no. D-DAI-MAD-WIT-R-116-91-11. (Photo: courtesy of the Deutsches Archäologisches Institut)



Fig. 8. One of the shorter sides of the Sarcophagus of the Muses, found on the Via Ostiense. Marble, second half of the second century A.D. Paris, Musée du Louvre, Inventaire MR 880, N° usuel Ma 475. (Photo: Susana Calvo Capilla, with the permission of the Musée du Louvre)

pher and the Muse Polyhymnia; on the left, we can only identify a fragment of the tunic and cloak of a female figure, probably a Muse accompanying another philosopher (similar to fig. 8).<sup>12</sup>

The only part recovered from the second aforementioned sarcophagus found on the Camino de Ronda Bajo is a fragment depicting the image of a female head in profile; she is dressed in a *chiton* (loose woolen tunic) and is shown playing an *aulós* (a type of wind instrument) (fig. 13). This fragment most likely belongs to a scene of Bacchic *thiasos*. Made of Parian marble, the sarcophagus was probably produced in a Roman workshop late in the reign of Septimius Severus (r. 193–211).<sup>13</sup>

More fragments belonging to two other sarcophagi were discovered in the same area as the previous pieces. In both cases, identifying the subject has been a challenge. The first could date back to the third century A.D.; according to Beltrán, it might be a section of a bucolic theme.<sup>14</sup> The second piece, a column sarcophagus (though only the bases of the columns remain), possibly dates to the fourth century A.D. and most likely represents a scene of *adventus* (Roman arrival ceremony). We



Fig. 9. Sarcophagus of Meleager. Marble, third century A.D. Court of the Pillars, Madinat al-Zahra'. (Photo: Susana Calvo Capilla, with the permission of the Archeological Site of Madinat al-Zahra')

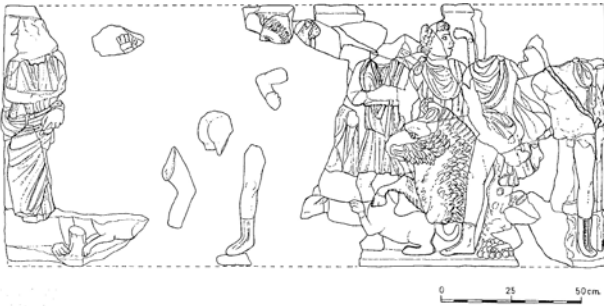


Fig. 10. Sarcophagus of Meleager. Court of the Pillars, Madinat al-Zahra'. (Drawing of reconstruction: E. Candon and J. Beltrán, after Beltrán Fortes, *Los sarcófagos romanos de la Bética*, fig. 63 [reproduced with the permission of the author])



Fig. 12. Sarcophagus of Philosophers and Muses. Madinat al-Zahra'. (Drawing: after José Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía* [Murcia, 2006], 138–41 [reproduced with the permission of the author])



Fig. 11. Sarcophagus of Philosophers and Muses: fragments of the front. Marble, third century A.D. Found on the Camino de Ronda Bajo, Madinat al-Zahra'. (Photo: Susana Calvo Capilla, with the permission of the Archeological Site of Madinat al-Zahra')



Fig. 13. Fragment of a sarcophagus with a Bacchic scene. Found on the Camino de Ronda Bajo, Madinat al-Zahra'. (Photo: Susana Calvo Capilla, with the permission of the Archeological Site of Madinat al-Zahra')

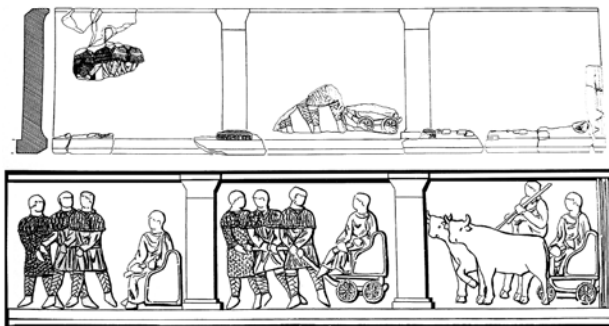


Fig. 15. Sarcophagus with *aduentus* (?) scene: Hypothetical reconstruction. (Drawing: after Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, fig. 42 [reproduced with the permission of the author])

can identify two four-wheeled carts, one of which is being pulled by an animal, the other by men clothed in peculiar garments (figs. 14, 15, and 2b).<sup>15</sup>

Another sarcophagus depicting a pastoral theme was discovered in 2003, in the drains of a court yet to be excavated, located northwest of the Hall of 'Abd al-Rahman III (fig. 1[3]).<sup>16</sup> The twenty fragments, flat pieces with reliefs showing animals and shepherds, probably date to the second half of the third century or the beginning of the fourth century A.D.

All the above-mentioned sarcophagi have openings on the bases and sides, as well as new carvings on the



Fig. 14. Sarcophagus with *aduentus* (?) scene. Fragments found in the vicinity of the Camino de Ronda Bajo, Madinat al-Zahra'. (Photo: Susana Calvo Capilla, with the permission of the Archeological Site of Madinat al-Zahra')



Fig. 16. Sarcophagus of Meleager. The openings on both ends were intended for its use as a basin. (Photo: Susana Calvo Capilla, with the permission of the Archeological Site of Madinat al-Zahra')

upper edges to adapt them to their later use as basins with water fountains (fig. 16). The positioning of these openings has helped researchers determine the exact orientation of each sarcophagus in the courts where they were found.<sup>17</sup> It is interesting to note that some sarcophagi were most probably renovated before being placed in the courts of al-Zahra', as indicated by the stucco layer covering the edges of the Sarcophagus of Philosophers and Muses.<sup>18</sup>





Fig. 17. Herm of Heracles as a child. Court of the Clocks, Madinat al-Zahra'. (Photos: Susana Calvo Capilla, with the permission of the Archeological Site of Madinat al-Zahra')

With regard to freestanding sculpture, there is an exceptional herm of Heracles as a child,<sup>19</sup> also found in the Court of the Clocks, above the vaults of the baths and the annex spaces to the Salón Rico (Hall of 'Abd al-Rahman III) (fig. 17). It is made of Numidic or *giallo antico* marble. The head and the lower part of the pillar were lost; the remaining piece is 45 centimeters high. This kind of herm of the Hellenistic tradition is quite rare, as is the depiction of Heracles as a child. In addition, small fragments of at least three Roman portraits in marble have been found. In one only is the base recognizable; another is a female portrait dating to the third century A.D., and the third appears to be a male figure.<sup>20</sup>

It is difficult to establish whether these Roman sculptures and reliefs originally came from Cordoba. The enormous expansion of Cordoba during the caliphal period, while a new palace city was being built, may suggest that they were discovered during the development

of the new western and northern extramural quarters, some of which were built on the site of an old Roman necropolis. However, it is not possible to determine whether the pieces had been removed earlier and reused, or if they were excavated in the tenth century. From the unusual abundance of findings in the area of the Roman Cordoba and their extraordinary quality, we may also conjecture that the Muslims might have brought Roman sarcophagi from outside Cordoba, from other Roman capitals such as Seville or Merida, or even from beyond the Iberian Peninsula, as Arab authors claimed.<sup>21</sup> The search for ancient materials in the capitals of Roman Hispania is evident in an anecdote about Merida related by several authors.<sup>22</sup> Al-Rushati attributed the account to 'Umar b. Hashim, who heard it during a meeting held at the residence of Hashim b. 'Abd al-'Aziz (d. 886), general of Muhammad I and also governor of Merida at the time. According to the court historian al-Razi, there was such great interest in gathering

marbles from the monuments of Merida that they were sometimes even wrenched out to be used again in contemporary works.<sup>23</sup>

Some authors mention the use of sarcophagi as fountains in the Alcazar of Cordoba and Madinat al-Zahra' itself. Al-Maqqari (d. 1631) makes two references to these fountains: "The Emirs built genuine marvels in their Alcazar [*qasr* of Cordoba]...[the water ran] through the handsome pools and wonderful ponds (*zafareches*) with Roman marble basins of beautiful designs."<sup>24</sup> The second story concerns two basins brought to Madinat al-Zahra' from Constantinople and Syria, respectively. According to al-Maqqari and the anonymous author of the *Dhikr*, a man named Ahmad, and also known as *al-Yūnānī* (the Ionian or Greek) and *al-Faylasūf* (the Philosopher), arrived with two carved basins (*al-manqūsh*), one a large golden basin from Constantinople (with strange figures), the other a smaller green piece from Syria carved with human figures (*bi-tamāthil al-insān*).<sup>25</sup> However, there is no explicit reference to the significance of these specific spolia within the context of the caliphal palaces. Nor are there any recorded accounts of how the sovereign or any of the people in his entourage interpreted the images depicted on the sarcophagi or the sculptures placed in the palace of Madinat al-Zahra'. In other contemporary cases of reuse, mentioned below, the ancient statues could have acquired an apotropaic character, when placed at the gates of cities, or were simply intended to be used as decoration, when placed in baths.

In fact, hardly any examples of similar use are known in other contexts of the contemporary Islamic world. The reused fragments of a Roman female statue found in the palace of Khirbat al-Mafjar are not comparable, because they were used in the foundations of the building, and were therefore not visible.<sup>26</sup> Herzfeld's photographs of Samarra show the reutilization of architectural materials, in some cases decorated with figural reliefs, originally from the Sassanid ruins of Hatra, among other places, but little is known about their location or the function they served (if any) in the Abbasid city.<sup>27</sup> Excavations at Qasr al-Mshatta, Khirbat al-Mafjar, and Qasr al-Hayr al-Gharbi found limestone sculptures of classical influence made ad hoc for these palaces at the end of the Umayyad period (eighth century). In these cases,

we are not dealing with the reuse of Greek and Latin sculptures but with manifest evidence of the continuity of the classical idiom and iconography in art designed for the governing elites of a region that was deeply Hellenized; these sculptures indicate a deliberate choice of a visual means of expression of regal grandeur, which is a feature confirmed in Umayyad architecture and urban planning.<sup>28</sup>

However, numerous accounts referring to the cultural environment of the Cordoban court in the tenth century suggest that in intellectual circles there was a certain familiarity with the heroes, philosophers, and Muses of antiquity. I am referring here specifically to the revival of knowledge of Greece and Rome, the translation of works by classical authors, and a profound interest and admiration for the learned men of classical antiquity among Andalusians, who regarded them as models of conduct and wisdom. Thus al-Andalus joined a movement that had started in the Eastern courts of the Umayyads and the Abbasids during the first centuries of Islam. As we shall see, the presence of sarcophagi and classical statues depicting philosophers, Muses, and heroes in the palace of Madinat al-Zahra' should be related, in my opinion, to the intellectual environment of the courts of 'Abd al-Rahman III and al-Hakam II (r. 961–76).

#### CLASSICAL CULTURE AND ITS INFLUENCE ON THE EXERCISE AND LEGITIMATION OF POWER

A close reading of the first literary and scientific works written in Arabic between the eighth and the tenth centuries clearly and convincingly reveals the importance of the contributions of the classical and Hellenic legacy to the formation of Arab-Muslim culture. The Greek philosophers and learned men were incorporated into the Muslims' cultural heritage, and used by them as a basis of knowledge and a starting point for the revival of the sciences. Classical works were first recovered and treasured, translated, and assimilated, and then excelled in an unprecedented intellectual process, the first steps of which were taken during the time of the Umayyad caliph 'Abd al-Malik (r. 685–705) and his sons al-Walid (r. 705–15) and Hisham (r. 724–43). These developments

reached their climax with the Abbasid caliph al-Ma'mun (r. 813–33) and the establishment of the Bayt al-Hikma.<sup>29</sup> Philosophy (ethical, moral, and political) was an essential science for the creation of Islamic cultural identity. Aristotle (384–322 B.C.), “the first master” and father of philosophy for the Arabs, played a crucial role in this process, while his pupil, Alexander the Great (356–323 B.C.), who evolved into a philosopher and monotheist king in the Hellenistic and Syriac traditions, became a model of the good ruler, leaving his mark in the Koran.<sup>30</sup> In this way, Muslims became the legitimate heirs to the philosophical and scientific tradition of ancient Greece and, consequently, to the Hellenistic empire of Alexander the Great.<sup>31</sup> According to A. K. Bennison, the Abbasids further cultivated this policy of recovering Greek and Latin works and promoting the sciences in order to consolidate caliphal legitimacy through the creation of an Arab-Islamic corpus of knowledge, in short, a new Arab-Islamic culture of their own.<sup>32</sup>

In the first stages of the development of Muslim society, philosophers acted, theoretically at least, as royal counselors and motivators in the education of princes. Arab wisdom literature emerged in the eighth century, at the end of the Umayyad period, drawing inspiration from two great traditions: on the one hand, that of the Greeks, based on philosophical texts that were largely ascribed to Aristotle and connected to his role as master and guide of Alexander;<sup>33</sup> and, on the other hand, Mesopotamian culture, through Persian and Sassanid texts glossing the political virtues of the Iranian kings Ardashir (d. 242 A.D.) and Chosroes (d. 579 A.D.). These traditions coalesced in the first Arab prose texts, such as the widely disseminated *Rasā'il Aristāṭālīs ilā l-Iskandar* (*Epistles of Aristotle to Alexander*).<sup>34</sup> The content was essentially pedagogical and emphasized morality, the purpose being to educate princes in virtues and moral principles and introduce them to the art of war and philosophical knowledge.<sup>35</sup>

With regard to al-Andalus, the tenth century witnessed the accumulation and nurturing of scientific knowledge, probably inspired by a similar phenomenon that had occurred in the previous century in al-Ma'mun's court. This development coincided with the classical renaissance stimulated on one side by the Macedonian dynasty in Constantinople beginning in the late ninth

century, and, on the other side, by the Aghlabids in Ifriqiya, followed by the Fatimids in Egypt, during the ninth and tenth centuries. The Andalusī authors of the caliphal period seemed to know, or were at least acquainted with, the huge corpus of knowledge located in Baghdad that had been created through the translation of Greek and Persian books into Arabic, together with the scientific and philosophical contributions of the Muslim authors. Journeys to the East and the arrival of scholars and books from Byzantium and the territories of the Abbasid caliphate added to the number of ancient Latin books circulating in the Iberian Peninsula since the ninth century. Andalusī authors had access to both Greek and Latin texts, as well as works by Muslim philosophers.<sup>36</sup> This is the only way to explain how the Cordoban physician Ibn Juljul (d. ca. 987) knew the works of Hippocrates, Dioscorides, Plato, Aristotle, Galen, Orosius, Eusebius of Caesarea,<sup>37</sup> Isidore of Seville, and al-Kindi when he wrote his dictionary of physicians and learned men (finished in 377 [987]), and why he decided to include biographies of Socrates, Democritus, Ptolemy, and Euclid in it as well.

The main inspiration behind this intellectual movement in al-Andalus was al-Hakam II (r. 961–76). His interest in the arts and sciences is proof that the Cordoban caliphs—just like the Ptolemaic and Sasanid kings in ancient times, and later the Abbasid caliphs as well—were conscious of the importance of having scholars and philosophers in their retinue in order to legitimize and consolidate their sovereignty—and, in the case of al-Andalus, to stake their claim to the caliphate. “Heir apparent al-Hakam...endeavored to obtain scientific knowledge and surround himself with wise men,” while his father “rivaled his son and heir al-Hakam in his zeal for knowledge (*'ilm*) and his inclination towards the wise.” These were the words of al-Razi (tenth century), as passed on by the Cordoban author Ibn Hayyan (d. 1076), when he described the arrival in 942 of al-Qali (d. 957), a grammarian and philologist from the school of Baghdad.<sup>38</sup>

Andalusī authors portray the first caliph, 'Abd al-Rahman III, as the great architect of the Umayyad caliphal state because his military and political feats allowed him to achieve peace within the territory and to establish a strong and secure centralized power. The figure of al-

Hakam, however, is not associated with great military accomplishments. Instead he is lauded in the same texts for his affinity for learning, his dedication to science, and his patronage of the arts and sciences (including philosophy). Accounts incorporated by Ibn Hayyan confirm that ‘Abd al-Rahman III supported—and probably encouraged—the work of his heir as a promoter of scientific and cultural activities, which contributed to the consolidation of the new Umayyad caliphate. Although scholars and books arrived quite frequently from the East during the rule of ‘Abd al-Rahman III, the ultimate impetus for elevating the cultural landscape of Cordoba came from Prince al-Hakam when he rose to the caliphate with the title of *al-Mustaṣfir billāh*.

Indeed, in his *Kitāb Ṭabaqāt al-umam* (Book of Categories of Nations), Sa‘id al-Andalusi (d. 1070) noted that al-Hakam II was “inclined towards the study of science and towards those who developed it.” Consequently, he “sent for the most brilliant and prestigious works and the rarest writings related to the ancient and modern sciences, from Baghdad, Egypt, and other provinces of the East.” Because of al-Hakam’s passion for science and preoccupation with developing all virtues and uplifting his spirit, Sa‘id compared him to the Abbasid caliphs and the greatest learned monarchs.<sup>39</sup>

Al-Maqqari quotes several earlier authors in his *Nafh al-tīb* to describe al-Hakam II as “a lover of science who gathered more books than any other sovereign,” and provides details of his passion (*gharām*) for books.<sup>40</sup> According to Abu Muhammad ibn Hazm, one of the authors whose work was copied by al-Maqqari, “the treasure of knowledge and books (*khizānat al-‘ulūm wa-l-kutub*) was in the house of the Banu Marwan, and the catalogue of books, including only the titles and summaries, took up forty-four volumes of twenty pages each.” The caliph sent his emissaries to Baghdad to look for originals and copies, and paid generous amounts of golden dinars: “No one before him had owned a library as rich as his anywhere, except perhaps al-Nasir al-‘Abbasi b. al-Mustadi. At his library he assembled experts in transcription and the copying of books, who were also skilled in preservation and bookbinding,” in addition to correctors and illuminators.<sup>41</sup>

Biographies of several scholars, both Andalusi and foreign, who lived in the tenth century, prove that these

words were not mere exaggeration or an effort to equate the Cordoban court with Baghdad by presenting al-Hakam II as the successor to al-Ma‘mun. Bio-bibliographical dictionaries often name the scholars that the caliph hired in his service or established in the Alcazar of Madinat al-Zahra’ or Cordoba to increase the scientific, literary, and philosophical circles of the court. These learned men could devote themselves to teaching their subject, practicing their science, and composing books that would subsequently enrich the library of al-Hakam II.<sup>42</sup> At the same time, a remarkable translation project was initiated, rendering Latin and Greek works into Arabic, the implications of which have yet to be properly evaluated. Also, there are frequent accounts of the arrival of wise people from the East, sometimes invited by Prince al-Hakam II, as in the previously mentioned case of Abu ‘Ali al-Qali (d. 957), a grammarian and philologist from the school of Baghdad.<sup>43</sup> Many of these wise men were devoted to the “sciences of the Ancients” (astronomy, philosophy, and non-Islamic sciences, in general), as is evidenced by the number of intellectuals who were enlisted for that very reason during the rule of Ibn Abi ‘Amir al-Mansur (r. 976–1002).<sup>44</sup> Al-Hakam II also had male and female slaves devoted to scientific work, whose training he looked after personally.<sup>45</sup>

Although the exact location of the caliphal libraries is still unknown, there is no doubt the books were distributed between the two main caliphal residences of Cordoba and Madinat al-Zahra’.<sup>46</sup> We do, however, know the names of several of the library directors. For example, Talid, a *fatā* (member of the slave elite at court) of Caliph al-Hakam II, directed the library (*ṣāhib ‘alā al-khizānat al-‘ulūm wa-l-kutub bi-dār Banī Marwān*) and compiled registries and catalogues—ultimately completing forty-four lists of fifty-five pages each.<sup>47</sup> A certain Ibn al-Makwi’ (d. 1010) was commissioned by al-Mansur to organize the books in al-Hakam’s library by subject. Al-Makwi’ accepted the job since this was a unique opportunity to work with rare tomes.<sup>48</sup>

Collecting books and building immense libraries, in addition to being surrounded by learned people, was part of a legitimation policy developed by rulers since classical antiquity. The most outstanding and representative example is the Alexandrian library, founded by



Fig. 18. Detail from the front of the sarcophagus of Marcus Cornelius Statius. Marble, ca. 150 A.D. Paris, Musée du Louvre, Cp 6547, N° usuel Ma 659. (Photo: Susana Calvo Capilla, with the permission of the Musée du Louvre)

Ptolemy I around 295 B.C. The Ptolemaic dynasty saw culture as a means of domination, and they absorbed the knowledge of the regions they ruled. The Alexandrian library was part of a well-defined political strategy aimed at exalting the Greek identity and its cultural superiority over other nations, thus legitimizing its political authority.<sup>49</sup> This was not merely a book depository; in fact, the Arabs referred to the *Museion* as the Bayt al-Hikma.<sup>50</sup> A variety of tasks were carried out there, including the correction of works, the copying and translating of texts, and the preparation of a catalogue of all the works gathered in the library. It is known that many tutors of princes worked in a library, such as Aristotle, the designated tutor to the children of Philip of Macedon (fig. 18).<sup>51</sup>

As with the Ptolemaic dynasty, the admiration, preservation, and promotion of the knowledge of the Ancients comprised an essential part of Andalusian state policy, and the library of Cordoba must have played a role similar to that of the Alexandrian library. The assimilation of the Hispanic Roman and Visigoth heritage and the nurturing of the arts and sciences allowed al-Hakam II to create a corpus of Andalusian knowledge and, consequently, a national and independent identity that served to legitimate his assumption of the caliphal title.

The education of princes played an essential role in this cultural policy. Both al-Hakam II and his son, Prince Hisham, received an exquisite education, following a

curriculum that, as in the Abbasid court, included religious sciences, called *‘ulūm* (plural of *‘ilm*), as well as the encyclopaedic knowledge collected in treatises on *adab*.<sup>52</sup>

Several passages collected by Ibn Hayyan suggest the importance accorded the education of princes in the Cordoban court. His *Muqtabis* mentions ‘Abd al-Rahman III’s dedication to the education of his children on two occasions: “They polished their talent through skilled preceptors (sing. *mu‘allim*) chosen for each child to free them from the darkness of ignorance and draw them towards the light of knowledge (*min ghamrat al-jahl ilā nūr al-ma‘rifa*), depending on the qualities each possessed....”<sup>53</sup> Among those who taught Prince al-Hakam were the legal scholar (*faqīh*) and traditionist Qasim b. Asbagh (d. 951)<sup>54</sup> and the mathematician Muhammad b. Isma‘il al-Hakim (d. 942–43), who was well-versed in the “sciences of the Ancients.”<sup>55</sup>

Al-Hakam II did the same with his own son. Ibn Hayyan quotes an account of the year 361 (972), documented by al-Razi, describing the first lesson given by the *faqīh* Ahmad ibn Muhammad ibn Yusuf, known as al-Qastalli, to Prince Hisham when the boy was only seven. The caliph sent for the new preceptor to give him precise instructions, while he ordered the preparation of several spaces for the lessons:

He decided that a department called *Dār al-Mulk* in *al-qaṣr* of al-Zahrā’ be renovated and embellished; that all things necessary should be arranged and prepared, and an entrance opened west of the *faṣīl al-fityān* (hallway for the slave officers), so that the prince could easily access the aforementioned department. Also, he instructed that the prince’s lessons should take place, for more favorable odds, in the *al-majlis al-sharqī* (eastern part) of the department.

Finally, the chronicler adds a very interesting detail regarding the palace school: the prince would not be alone, but accompanied by other children, “who were educated with him,” probably the offspring of the Umayyad family and the most distinguished dignitaries in the court.<sup>56</sup>

Three years later, in April 975, the caliph sent for another tutor, Ibn Yahya al-Laythi, the prestigious legal scholar and traditionist, to teach the prince all things related to legal science and traditions (hadiths), in les-

sons to be held twice a week. This time, the school was established in the Alcazar of Cordoba, following the caliph, who had recently moved there. The prince studied Malik's *Muwatta'* (Compilation of Hadith), using the annotated copy that belonged to his grandfather, which his father had used before him.<sup>57</sup> There are other documented tutors, such as the Sevillian scholar al-Zubaydi (d. 989), disciple of the above-mentioned al-Qali from Baghdad, who taught Hisham mathematics and Arabic;<sup>58</sup> and Maslama b. al-Qasim al-Qurtubi al-Zayyat (d. 964), trained in the East and author of the *Ghāyat al-Ḥakīm* (*Picatrix*), which I will discuss below. Maslama was responsible for the education of Prince 'Abd Allah, al-Hakam II's brother, who was beheaded in 951 after being accused of conspiring against his father, 'Abd al-Rahman III.<sup>59</sup>

The admiration for classical philosophy, particularly the work of Aristotle, probably reached al-Andalus early, and with it the first wisdom literature with Aristotle and Alexander the Great as protagonists.<sup>60</sup> Due to their extensive proliferation, these books, often halfway between history and myth, became the main source of information on the life of the philosopher and the Macedonian conqueror. Aristotle and Alexander appear in most *adab* works, as well as Andalusí bio-bibliographical dictionaries of the tenth and eleventh centuries.

One of the first examples of *adab* literature is the *'Iqd al-Farīd* (The Unique Necklace), written by the Cordoban scholar Ibn 'Abd Rabbihi (d. 940). In the first chapter, entitled "Book of the Pearl on the Ruler," the author gathers a series of anecdotes drawn from the writings presumably addressed by Aristotle to Alexander the Macedonian, with the aim of advising rulers.<sup>61</sup> Ibn 'Abd Rabbihi also mentions the Sasanid king Ardashir, a figure present in Arab wisdom literature since the earliest translations of the *Epistles of Aristotle to Alexander*.<sup>62</sup> In the second chapter, "The Book of the Nonpareil Jewel on Wars and Their Affairs," Ibn 'Abd Rabbihi includes a passage featuring Alexander and "his preceptor" (presumably Aristotle), in which the latter advises him to be magnanimous after conquering a city.<sup>63</sup> These and other passages in the *'Iqd al-Farīd* suggest that the Cordoban author must have had access to the aforementioned Eastern epistolary works.<sup>64</sup>

A significant number of the sources used by Ibn Juljul in the composition of his *Kitāb ṭabaqāt al-aṭibbā wa'l-ḥukamā* (Book of Generations of Physicians and Wise Men), a bio-bibliographical dictionary completed in 987, were, Vernet and Sayyid argue, Latin works translated into Arabic, such as Paulus Orosius's *History*, Dioscorides's *De Materia Medica*, and Isidore of Seville's *Etymologiae* and *De Natura Rerum*,<sup>65</sup> which, like Hippocrates's *Sections*, must have been widespread among Christian communities in al-Andalus since the ninth century.<sup>66</sup> Many of these were translated into Arabic within the circle of the Cordoban court. Among the translators of Orosius's work were the aforementioned Qasim b. Asbagh, who taught the court historian al-Razi and Prince al-Hakam, and a Christian author who may have been the "kadi of Christians." All the details suggest that the Arabic version of Orosius's book may have been commissioned by Prince al-Hakam for his library, as Ibn Khaldun asserts.<sup>67</sup> Ibn Juljul writes that he participated in the translation of the Greek text written by Dioscorides, along with a monk called Nicholas from Constantinople.<sup>68</sup>

In his dictionary, Ibn Juljul included several Greek and Roman philosophers and physicians, among them Aristotle. All the accounts regarding the latter's life, as well as his missives to Alexander and his testament or list of works, were included in the epistolary texts mentioned above, as well as in other philosophical works, such as the *Risāla* by al-Kindi (d. in Baghdad, ca. 870), quoted by Ibn Juljul.<sup>69</sup> The Cordoban physician includes one of the most famous passages, mentioned above, in which Aristotle counsels Alexander on the need to be magnanimous toward the defeated and to secure the peace after a conquest.<sup>70</sup> In the list of books written by Aristotle, Ibn Juljul refers to "a book on politics regarding the administration of government known as *Sīrr al-Asrār*," one of the earliest allusions to the text. He says the book contains an epistle with eight speeches (regarding the state, law, justice, the army, and money), engraved on an octagonal dome built over the tomb of the philosopher.<sup>71</sup>

Further evidence of the possible introduction of the Aristotelian *Epistles* and the mirrors for princes—into al-Andalus is included in the *Ghāyat al-Ḥakīm* (as noted earlier, the Arabic origi-

nal of the *Picatrix*), a book on astrology and magic recently attributed by Fierro to Maslama b. Qasim al-Qurtubi (d. 964).<sup>72</sup> In several passages of the *Ghāyat*, al-Qurtubi mentions a series of epistles that specialists have identified as the *Rasā'il Ikhwān al-Ṣafā'* (Epistles of the Brethren of Purity). Allusion is made to the Latin classification of science education known as the *quadrivium*, with the first epistles focusing on arithmetic, geometry, astronomy, and music, as well as cosmography; another two epistles are on Aristotle and the division between the theoretical and practical sciences.<sup>73</sup> Maslama may have become acquainted with these philosophical trends, which attempted to combine Greek philosophy with Islamic doctrine, during his stay in Basra in 936, when he also contacted the Harrani school.<sup>74</sup> After his return, Maslama b. Qasim lived in Madinat al-Zahra', where he worked as a tutor at the court.

The cases of Maslama b. Qasim and al-Zubaydi, mentioned earlier, are essential to any discussion of the pedagogical use of mirrors for princes, as well as of (more generally) philosophy and science (largely imported from the East) at the caliphal court of Cordoba. The reference to the *Ikhwān al-Ṣafā'* in the *Ghāya* also confirms that the scientific and philosophical vivacity of the Abbasid East had reached al-Andalus early on. In short, all these works offers a glimpse into the complex intellectual atmosphere of al-Andalus—or Cordoba, at least—in the tenth century.<sup>75</sup>

Sa'īd al-Tulaytuli or al-Andalusi (d. 1070) includes in his *Kitāb Ṭabaqāt al-umām* (History of Sciences, or, Category of Nations) a laudatory biographical sketch of Aristotle and his pupil, Alexander “of the Two Horns” (*Dhū l-Qarnayn*), depicting the former as the most illustrious Greek and the latter as the sovereign who “banished polytheism from Greece” (*al-shirk fī bilād al-Yūnāniyyīn*).<sup>76</sup> In his translation of the *Ṭabaqāt*, Blachère introduced a series of fragments with anecdotes from Aristotle's life that were apparently lost in the known copies but quoted in Ibn al-Khatib's *Iḥāṭa*. In this paragraph, Sa'īd asserted that “King Phillip had hired him as preceptor for his seven children, of which Alexander was the youngest. Aristotle taught him philosophy and the four disciplines (*quadrivium*).”<sup>77</sup>

In fact, Alexander the Great casts a long shadow in the Arab cultural tradition and in medieval Islam. The Koran (18, 83–98) ascribes a key role to *Dhū l-Qarnayn* in the promotion of the knowledge of the only God and, therefore, in the spread of monotheism.<sup>78</sup> The first caliphs admired Alexander as a model of equity and justice, the ideal sovereign.

Heracles, associated and often mistaken for Alexander, was also included in the Arab tradition.<sup>79</sup> This mythological figure became a historical character both in the East and in al-Andalus. In fact, Jean Seznec underlines that one of the ways in which Greek and Roman mythology survived during the Middle Ages was through the assimilation of its characters as real heroes: mythic sovereigns were glorified and gods were humanized as founders of the main dynasties and precursors of civilizations.<sup>80</sup> In al-Razi's History of the Kings of al-Andalus (tenth century) there is an important chapter on ancient Hispanic history based on Latin authors such as Orosius and Isidore of Seville. The text identifies *Hirqilish* as the first Greek sovereign to rule over the Iberian Peninsula after defeating King Geryon. He then founded Cadiz, had his statue—the “idol”—built in that city, and marked the three angles of the Peninsula.<sup>81</sup>

#### OTHER PAGAN IMAGES IN ISLAMIC CORDOBA

Several sources suggest that the southern gates of Cordoba and Madinat al-Zahra', in both cases called *Bāb al-ṣūra* (Gate of the Image), were crowned by a female statue. Although the Cordoban gate—also known as the Bridge (*al-Qanṭara*)—was documented as far back as the ninth century, we do not know exactly when the sculpture was placed there. The use of statues, as well as talismans, often in the shape of animals, on the gates of a city as a form of protection was a widespread practice in ancient times and at the start of the Middle Ages.<sup>82</sup> Indeed, the Cordoban statues were not the only examples on the Iberian Peninsula, as we know of several Roman statues used for protection on the walls of Eciija when the city was conquered in the eighth century.<sup>83</sup>

The two female statues placed on the *Bāb al-ṣūra* at Cordoba and at Madinat al-Zahra' were most likely pa-

gan goddesses transformed into personifications of the zodiac constellation of Virgo (*al-‘Adhrā’*) or the planet Venus (*al-Zuhara*), protecting stars of Cordoba and al-Andalus according to several Arab authors. “In that year [397H/1006–7],” says Ibn ‘Idhari, “there was a gathering of the seven stars and a conjunction with *al-Sunbula*, that is, *al-‘Adhrā’*, protector of Cordoba, whose image was placed by the wise men (*ḥukamā’*) of Antiquity on a prominent part of the Southern gate.”<sup>84</sup> The statue mentioned in the sources crowned the Bridge Gate until the downfall of the Umayyad dynasty and the *fitna*, which, according to astrologers of the time, were triggered by the conjunction of Virgo in Saturn.<sup>85</sup> If, as al-Biruni (d. 1048) and Ibn Ghalib (twelfth century) maintained, the planet Venus was the protector of al-Andalus,<sup>86</sup> this would lend weight to the argument proposed by authors such as Ruggles and Acién that the name of the madina founded by ‘Abd al-Rahman III near Cordoba—*al-Zahrā’*—had its origins in *al-Zuhara*. This would also explain the placement of the statue on its southern—and most important—gate.<sup>87</sup>

The survival of pagan divinities during the Middle Ages was partly favored by their association with the planets and the stars.<sup>88</sup> Muslim astronomers preserved almost unaltered the images assigned by Greek astronomers to the planets and the constellations of the zodiac, most of which were drawn from mythology.<sup>89</sup> The immense development of astronomy and astrology in the entire *Dār al-Islām* decisively contributed to the preservation of the names, attributes, and images of Greek and Roman deities among Muslim intellectual circles, although the association of paganism with astrology also provoked distrust and attacks from the most orthodox and traditional religious groups.<sup>90</sup>

Images of classical antiquity also survived in illuminated books. Although the earliest illustrated Arab manuscripts have not survived, sources report the presence of miniatures in scientific books circulating around the Islamic world. According to Ibn Juljul, the Byzantine emperor sent ‘Abd al-Rahman III a magnificently illustrated copy of Dioscorides’s *De Materia Medica*, along with the *History* of Orosius. We could assume that these miniatures were mere depictions of the medicinal plants mentioned in the text. However, other Byzantine and Abbasid manuscripts of Dioscorides’s work include an illustrated frontispiece featuring the author and his dis-

ciples. The manuscript produced in Constantinople for Princess Anicia Juliana in 515 (Juliana Anicia Codex, Österreichische Nationalbibliothek, Cod. med. 1, originally from Anatolia), includes five full-page miniatures: one shows Anicia seated, flanked by the personifications of Prudence and Magnanimity; another two show a group of six physicians each, one surrounding Galen, the other around the centaur Chiron; finally, the last two miniatures show Dioscorides accompanied by nymphs or personifications of Discovery and Intelligence. Galen and the centaur Chiron appear to be teaching the disciples seated around them, dressed in cloaks and tunics like Greek and Roman scholars (fig. 19).<sup>91</sup>

The Arabic notes in the margins suggest that Anicia Juliana’s Dioscorides was in circulation in Islamic territories, and this in turn would explain the presence of similar illustrations in an Arabic manuscript of 1229, possibly illuminated in northern Mesopotamia (currently in the Topkapı Palace Museum Library in Istanbul). It includes a double frontispiece showing the master Dioscorides with two disciples presenting him with a book. Consequently, it should not be surprising to find initial miniatures of this type among those of the *De Materia Medica*, which arrived in Cordoba from Constantinople during the tenth century.<sup>92</sup>

Rice asserts that the oldest scientific illustrations known are those of the *Kitāb Ṣūwar al-kawākib al-thābita* (Treatise on the Fixed Stars), written by ‘Abd al-Rahman al-Sufi around 965, manuscripts of which date to the first decades of the eleventh century.<sup>93</sup> However, the illuminated works were not only scientific (on medicine and astronomy). Rice believes that manuscripts on *adab* must have also included illustrations designed to reinforce the didactic purpose of the stories, and this in turn increased the value of the manuscript. Rice bases this argument on indirect evidence, such as an allusion that Ibn al-Muqaffa (d. ca.757) makes to the existence of illustrations in the *Kalila wa Dimna* at the beginning of his Arabic translation of the work. Also, a History of the Sasanid Kings was translated from Persian into Arabic by order of the Umayyad caliph Hisham in the early eighth century and probably included miniatures with the portraits of twenty-five kings and queens, like the original Persian manuscript Mas‘udi claims to have seen.<sup>94</sup>





Fig. 19. Vienna Dioscorides. Frontispieces of the manuscript produced in Constantinople for Princess Anicia Juliana in 515 (Juliana Anicia Codex). Vienna, Österreichische Nationalbibliothek, Cod. med. 1. (Photo: courtesy of the Österreichische Nationalbibliothek)

#### THE PALACE SPACES WHERE ROMAN RELIEFS WERE FOUND: A HYPOTHESIS ABOUT THEIR FUNCTION

Although the earlier accounts may seem somewhat anecdotal, they provide valuable information about the cultural and scientific activity that took place in the capital of the caliphate, as well as the operation of the palace library.<sup>95</sup> Various surviving sources confirm the initiation of an ambitious intellectual enterprise spearheaded by al-Hakam II even before he assumed power. There is no doubt that all the intellectual and cultural activities sponsored by the court took place within a specific setting inside the Cordoban caliphal residences, sometimes in the old Umayyad *alcazar* but mainly in the palace of Madinat al-Zahra'. In brief, the new royal city was not just an official residence, a performance stage for the display of caliphal power and a seat where the Umayyad administration and its state institutions were centralized. Madinat al-Zahra' included spaces devoted to the advancement of knowledge, to books (libraries and *scriptoria*), and to the study and training of princes.

At least four of the Roman sculptures studied were found deliberately destroyed in the drainage systems of three buildings of the palace of Madinat al-Zahra' (fig. 20).<sup>96</sup> All of these buildings are located in the middle terrace and at least two of them—those known as the Court of the Pillars and the Court of the Clocks<sup>97</sup>—have a different architectural structure from the rest of the excavated courts (which were used for domestic and ceremonial purposes). The decoration and materials found in these spaces exemplify this difference. The last court, where archeological findings show a similarly unique structure, is located west of the Salón Rico.<sup>98</sup>

The few fragments of ceramics found in the drains of the Court of the Pillars and the Court of the Clocks have traditionally been used to identify the courts as administrative spaces, a label that proves vague enough to include any function. The structure of both courts is also a novelty in the palace; unlike the rest of the complex, their porticoes were constructed using lintelled structures supported by pillars (fig. 21). The Court of the Pillars (a square of approximately 22 meters by 20.5 meters) had four porticoes with five openings that were around



Fig. 20. Aerial view of the excavated area of the Palace of Madinat al-Zahra', with the locations of buildings decorated with sarcophagi. (Photo: courtesy of Córdoba Vuela, Escuela de Paramotor)

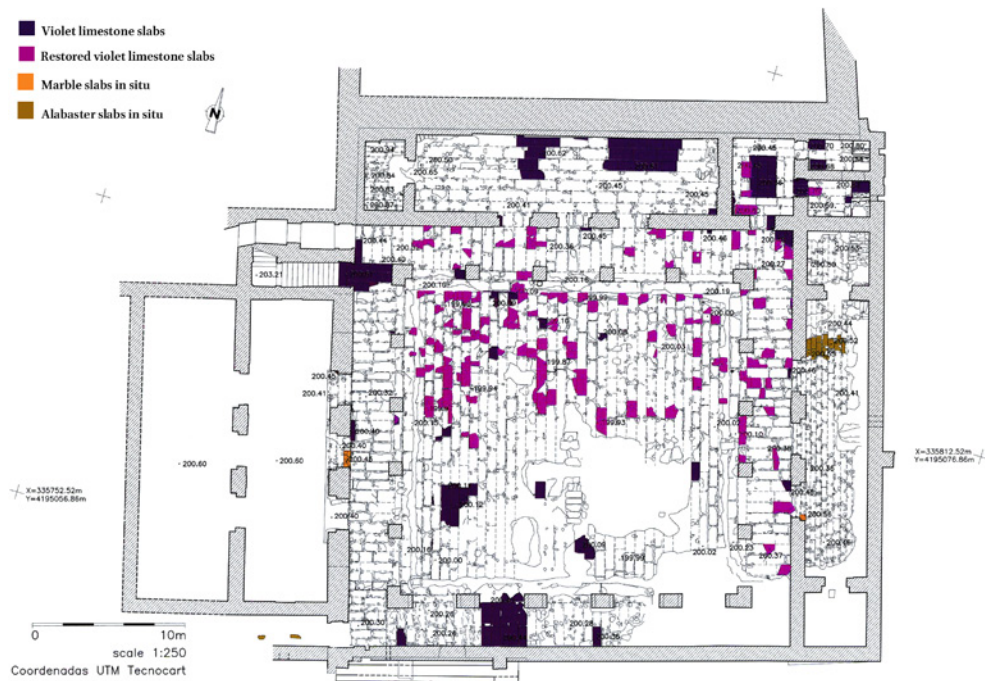


Fig. 21. Plan of the Court of the Pillars, with different kinds of paving: violet limestone, alabaster, and marble. (After Vallejo Triano, *La ciudad califal*, fig. 43 [reproduced with the permission of the author])

5 meters high, according to Hernández's estimations (fig. 22).<sup>99</sup> Behind the eastern, northern, and western galleries, there are spacious rectangular halls (between 4 and 5.4 meters in depth) with three openings for access; its southern gallery corresponds to the entrance. The Court of the Clocks (approx. 30 meters per side) has only two porticoes, standing on five pillars, and beyond them spacious rectangular halls more than 5.5 meters in depth (fig. 23).<sup>100</sup>

With regard to the decoration, these two courts do not have the carved panels that adorn the walls of the main public and residential halls in the palace. The walls of the halls around the Court of the Pillars were plastered white except for its dadoes, which were painted *a la almagra* (with red clay) to a height of approximately 70 centimeters (fig. 24).<sup>101</sup> The paving, however, was remarkably rich, with violet limestone for the court and marble and alabaster for the halls, and no calcarenite

and brick, the most widely used materials in residential and administrative spaces.

The strategic location of both complexes is also worth mentioning: the Court of the Pillars is at the foot of the caliphal residence (*Dār al-Mulk*) and was connected to the upper terrace by a staircase built in the northwestern corner of the court, the base of which has survived to date (fig. 25).<sup>102</sup> Directly west of the complex, the Hall of the Double Columns, still barely explored, is another space remarkable for its unique decoration (gilded mosaics) and for being so far the only place where Koranic inscriptions have been found, apart from the Great Mosque.<sup>103</sup> In addition, the Court of the Pillars is the result of the remodeling of an area that was previously used as housing; this reconstruction may have followed the building of the Salón Rico (Hall of 'Abd al-Rahman III).<sup>104</sup>



Fig. 22. View of the Court of the Pillars, west side. Above and to the left is the Dar al-Mulk. (Photo: Susana Calvo Capilla)

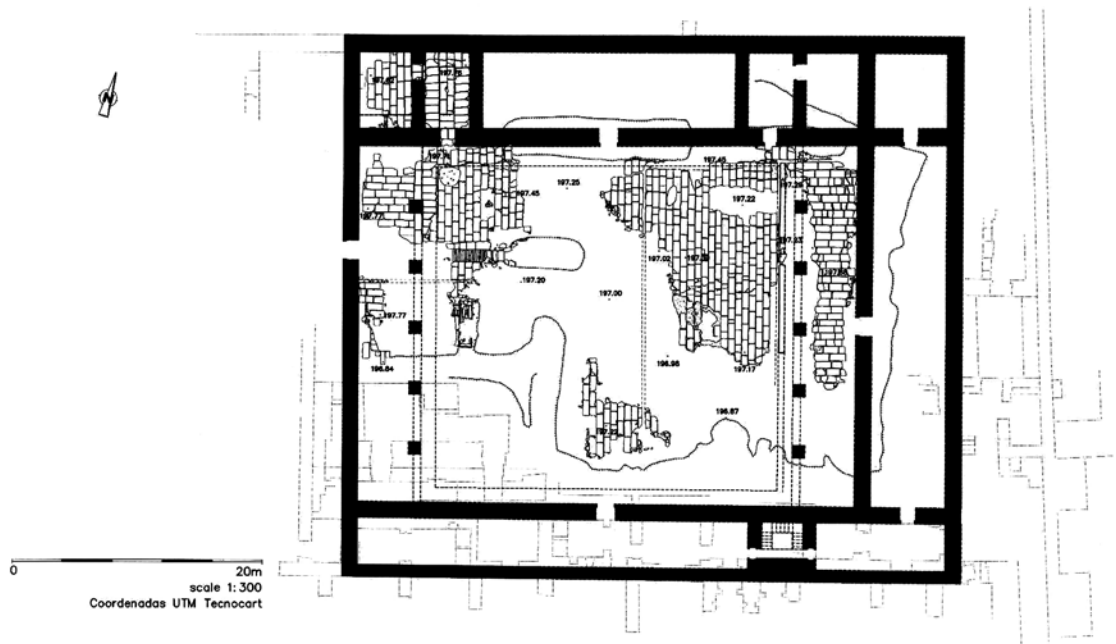


Fig. 23. Plan of the Court of the Clocks. (After Vallejo Triano, *La ciudad califal*, fig. 58 [reproduced with the permission of the author])

The Court of the Clocks is located in the southeastern end of the middle terrace, in front of the building known as the Salón Grande (fig. 26). This location offers an unencumbered view of the upper garden in front of the Hall of ‘Abd al-Rahman III, as well of the Great Mosque. The most remarkable find in this space was a series of fragments of three solar quadrants, which suggests it may have been used for astrological studies or, perhaps, for the manufacture of sundials, used to determine the times of prayer (fig. 27). Hernández suspects that the court may have been built “in a location that enjoyed an exceptionally expansive horizon” over the mosque of al-Zahra’, so that the court astronomers could determine the hours of prayer (*mīqāt*) and thus help muezzins, who, due to the location of the mosque in a hollow, did not have access to the sighting of the moon.<sup>105</sup>

The manufacture of solar quadrants featured prominently in the treatises on astronomy and *mīqāt*.<sup>106</sup> Establishing the direction of the qibla wall, determining the five times of daily prayer, and specifying the festivities of the Muslim calendar were an impetus for studies on astronomy in general and religious astronomy (*‘ilm al-mīqāt*) in particular.<sup>107</sup> Due to the influence of reli-



Fig. 24. North hall of the Court of the Pillars. Traces of the white mural plaster can be seen, along with the dadoes painted in red. (Photo: Susana Calvo Capilla)

gious astronomy, together with the composition of calendars and astro-meteorological treatises (*anwā’*) such as the *The Calendar of Cordoba*, legal scholars were persuaded to accept the rest of the astronomical sciences (theoretical and mathematical), and even astrology (*‘ilm al-nujūm*), which they had previously rejected due to its connection with paganism.



Fig. 25. The palatial complex as seen from the Dar al-Mulk, the caliphal residence located in the upper terrace: 1) Court of the Pillars; 2) Court of the Clocks; 3) court to be excavated; 4) Dar al-Mulk; 5) Salón Rico (Hall of ‘Abd al-Rahman III); 6) upper garden. (Photo: Susana Calvo Capilla)

In the ninth century, during the Abbasid caliphate, there were major developments in astronomy thanks to the direct observation of the stars as well as to the translation and study of Greek and Persian sources.<sup>108</sup> Many of the Greek and Indian works translated and elaborated upon in the Abbasid lands started reaching al-Andalus during the ninth and tenth centuries. Caliph al-Hakam II had a team of astronomers and astrologers in his service.<sup>109</sup> Ahmad ibn Faris, an Egyptian who joined that group around 968 and worked there until 981, was sent by the caliph to Fuengirola to observe and check the visibility of the star *Suhayl* (Canopus).<sup>110</sup> The discovery of quadrants in Madinat al-Zahra' provides evidence for the practice of the mathematical and astronomical sciences in Cordoba at the time.<sup>111</sup> Therefore it is not too farfetched to assume that astronomers and astrologers also developed their expertise at Madinat al-Zahra'.<sup>112</sup>

The correct orientation of the qibla of the Great Mosque in Madinat al-Zahra' towards Mecca also proves the progress made in astronomical sciences within the caliphal court.<sup>113</sup> When al-Hakam II decided to enlarge the old Great Mosque in Cordoba, his astronomers urged him to reorient and correct the qibla, as they had already done in the palatine mosque under the rule of his father. However, according to al-Maqqari's account, the astronomical calculation came into conflict with religious tradition, and both the ulama and *fuqahā'* opposed the change.<sup>114</sup>

Unfortunately, we do not yet have enough formal or typological examples to identify the buildings described as scientific or intellectual spaces, since there are no material traces of the earliest Eastern institutions—such as the Bayt al-Hikma and other Abbasid centers dedicated to the recovery, preservation, and promotion of the



Fig. 26. Upper garden in front of the Salón Rico, with the ruins of the baths to the right. The Court of the Clocks was above these baths. (Photo: Juan Carlos Ruiz Souza)



Fig. 27. Fragment of one solar quadrant found in the Court of the Clocks (limestone). Museum of the Archeological Site of Madinat al-Zahra', inv. no. 30135. (Photo: Susana Calvo Capilla, with the permission of the Museum of the Archeological Site of Madinat al-Zahra')

sciences. Only Arabic sources have passed on valuable descriptions of some of these libraries (fig. 28).

The Bayt al-Hikma of Baghdad was a repository for books and a place for scholarly research, where classical works were translated and annotated, and scientific and philosophical treatises were developed; it also included an observatory (*marṣad*), located near the Shammasiyya Gate.<sup>115</sup> Little is known about Samarra apart from the fact that its royal libraries were slightly separated from the palaces themselves, as claimed by Sourdél.<sup>116</sup> Al-Muqaddasi (d. ca. 990) offers a detailed description of the library of the Buyid sovereign 'Adud al-Dawla (r. 949–83) in his palace in Shiraz (in Khurasan). The author states that he visited the library, which was an independent department located in the upper level of the palace that had 360 rooms surrounded by pavilions, pools, water channels, and gardens.<sup>117</sup>

Following the example of the Abbasids in Baghdad, the Aghlabids (800–909) founded an institution called the Bayt al-Hikma at Raqqada, which included a large

library and a place for producing astronomical instruments. Mathematicians, astronomers, and physicians educated in Baghdad worked at this institution. The library was probably seized after 909 by the Fatimids, who relocated it first to Mansuriyya and then to Cairo (in 969).<sup>118</sup> In 1005, al-Hakim founded an institution in Cairo known as the Dar al-'Ilm (House of Knowledge), to which all the books in the palace library were moved. According to al-Maqrizi (d. 1442), who copied the Fatimid chronicler al-Musabbihi, the library was located in a wing of an ancient hospital inside the great palace and comprised forty rooms lined with books.<sup>119</sup> The library of Sultan Nuh ibn Mansur, in Bukhara, was described by Ibn Sina (d. 1037) after his visit there to treat the sultan for an illness.<sup>120</sup>

In all the cases mentioned above, the libraries are described as having halls or small rooms lined with wooden bookcases, as well as meeting rooms for scholarly circles. In the Cairo Dar al-Hikma “conferences” were organized, and the library at Basra held poetry sessions.<sup>121</sup> The palaces also hosted sessions for literary circles (*majālis*), offering music and wine,<sup>122</sup> as well as meetings for scientific and philosophical debate. These palatine “intellectual salons” were most popular in the Abbasid court during the ninth and tenth centuries, both in Baghdad and Samarra.<sup>123</sup> Scholarly meetings probably took place in the Andalusī caliphal palaces, although the most famous *majālis* in al-Andalus were those promoted by the kings of the Taifas during the eleventh century.<sup>124</sup>

The aforementioned descriptions suggest that in the ninth and tenth centuries no established architectural typology had emerged regarding the function of a library and reading room, as it had similarly not yet been established in Byzantium, as far as we know.<sup>125</sup> In order to find buildings specifically designed to store books and serve as venues for debate, teaching, and studying, we must go back to classical and late antiquity.<sup>126</sup> Focusing on the latter, during the 1960s the University of Warsaw carried out excavations in Kom el-Dikka, located in the urban center of ancient Alexandria (Egypt). Archaeologists unveiled an extraordinary complex of public buildings, erected halfway through the sixth century on the site of a *gymnasion* and an agora dating from Ptolemaic and Roman times. Among the buildings discovered



Fig. 28. Library. From a *Maqāmāt* of al-Hariri, copied and illustrated by Yahya b. Mahmud b. Yahya b. Abi al-Hasan b. Kuwarriha al-Wasiti, dated 7 Ramadan 634 (May 4, 1237), Baghdad (?), Iraq. Paris, Bibliothèque nationale de France, Ms. Arabe 5847, fol. 5v. (Photo: courtesy of the Bibliothèque nationale de France)

there were an odeon, baths, a portico, and, behind it, twenty small lecture halls between 9 meters and 11 meters long, and around 5 meters wide. This find was important because it confirms what we knew only through texts, i.e., the existence of famous academies/schools of ancient Alexandria.<sup>127</sup> There is no doubt that the Arabs learned of the place after conquering Egypt (in 642), because some of them were still in existence after that time.<sup>128</sup>

Given the absence of any typological equivalent to help us identify the purpose of these complexes in the palace of Madinat al-Zahra', could we consider the presence of ancient reliefs and sculptures with pagan matter

as indications of spaces related to scientific and intellectual activities? The iconography on the statues and reliefs selected for the palace does not seem random. At least two of the pieces selected for the caliphal palace highlight heroes such as Heracles, while two others feature scenes of the Muses and philosophers.

Stirling and Brown underline the significance of classical *paideia* (the Greek system of education and training; Latin *humanitas*) in the education of the aristocratic elite in late antiquity.<sup>129</sup> This training reinforced social status and provided pupils with a coded language only they could understand. Stirling questions our ability to identify the purpose of a space or the identity of the owner of a house through the images used in its decoration. However, she also asserts that statues were not always gathered or collected for religious reasons (as the presence of Diana or Dionysus would seem to indicate that the collector was pagan). She believes that in late antiquity statues may have also had an “academic” meaning, and although this is not easy to prove, the presence of Hermes (patron of education) and of Heracles (patron of the *gymnasion*) seems to suggest that they probably did.

In Roman funerary art, these scenes of Muses and philosophers are linked with a desire to praise the deceased as a learned and wise person, insofar as Wisdom and the path that leads to it, through Knowledge, raises man above himself and brings him closer to divinity and immortality. The deceased man or woman is shown surrounded by Muses and philosophers (Homer, Pythagoras, Socrates, Plato, and Aristotle), attending one of their lessons as a disciple or teaching as *paedagogus*. In turn, the nine Muses, daughters of Zeus and Mnemosyne, “are personifications of all the types of knowledge which can ennoble the soul and purify it through a sort of spiritual *katharsis* in order for it to access the kosmos and the only wisdom.”<sup>130</sup> The deceased are depicted holding a *uolumen*—an allusion not only to Wisdom and Science, but to their high social status, as only Roman patricians received such a refined education; the deceased were heroized through Wisdom (figs. 3 and 5). According to Zanker, Muses and philosophers were used in this way throughout late antiquity, even after the arrival of Christianity.<sup>131</sup> For the last pagans, who lived in the fourth and fifth centuries, the ancient philosophers and Muses



Fig. 29. Philosophy school of Asclepiodotus in Aphrodisias (Turkey). Portraits of Pindar, Pythagoras, and Alexander, early fifth century. Turkey, Aphrodisias Museum. (Photo: Susana Calvo Capilla, with the permission of the Aphrodisias Museum)

were models of wisdom as well as a source of inspiration, hence the presence of their portraits in philosophy schools and other spaces dedicated to education and study. As the learned class started to supplant gods, they became the object of an almost religious devotion as “saintly men.”

In the philosophy school of Asclepiodotus in Aphrodisias (Turkey), active during the fourth and fifth centuries, the exedra of the peristyle was decorated with a gallery of ancient philosophers, as well as Alexander the Great and several Muses (fig. 29).<sup>132</sup> In brief, wisdom was the consequence of divine inspiration and became a means of attaining knowledge of the divine; the same notion drove the early Christians to represent Jesus Christ as a philosopher and master.<sup>133</sup>

Likewise, in ancient Greece, Heracles was the patron of the *gymnasion*, an institution designed for intellectual and physical activities, as well as a meeting place for philosophers and sophists. The *gymnasion* was an entertainment facility connected to physical exercise that ended up becoming a place designed for teaching and medicine. Like the *palaestras* (wrestling schools), porticoes, theaters, and libraries in Greece, *gymnasia* were often decorated with herms with an apotropaic purpose, a tradition subsequently imitated in Rome,<sup>134</sup> as we can see in the scenes of children playing found depicted on sarcophagi made for children in the second and third centuries.<sup>135</sup>

The reutilization of Roman sarcophagi and sculptures in the Cordoban court may have been the result of



a similar desire to introduce a visual reference to classical antiquity in an environment where Greek and Roman texts translated into Arabic were an essential source of knowledge. Located in spaces designed for teaching, the nurturing of the arts, the practice of the sciences, and the preservation of knowledge, the figures of Heracles, along with those of the Muses and philosophers, may have served as inspiration as well as a form of protection. In these palatine environments, sarcophagi lost their value as funerary images and the mythological stories depicted on them were possibly transformed or adapted from their original meanings.<sup>136</sup> However, this did not prevent them from becoming allegories for the “science of the Ancients,” and a visual reference to a past that Muslims had already claimed as their own in the eighth and ninth centuries, and which the Andalusi Umayyads now used as a means to legitimize their accession to the caliphate. In my opinion, only in such contexts, devoted to learning and the practice of knowledge, could the new symbolic meanings of these classical artifacts be appreciated and understood. Beyond these palatine spaces, these artifacts would have been rejected by the Maliki legal scholars and ulama because of their pagan origin.<sup>137</sup>

In the previous section I argued that the figures of Greek and Roman philosophers and heroes were not only well known in al-Andalus but represented a model for the most learned elite during the time of al-Hakam II. Surviving Andalusi texts of the tenth century verify that wisdom and educational epistolary literature of Greek and Sasanid origin reached the Iberian Peninsula quite early. If we also consider the survival of certain images from Greek and Roman mythology and cosmology, such as the apotropaic female statues crowning the gates of Madinat al-Zahra' and Cordoba, we have sufficient evidence to conclude that the choice of sculptural reliefs representing scenes of philosophers and Muses surrounded by books in a studious environment was a deliberate action designed to exalt ancient and Hispanic heritage in the legitimation of the Cordoban caliphate.<sup>138</sup>

The exceptional case of the palace of Madinat al-Zahra' underlines the singularity and creative vitality of Andalusi society and culture in the tenth century, and emphasizes the role of Caliph al-Hakam II in promoting and sponsoring the arts and sciences, an effort intended

to be one of the pillars in the construction of political theory in al-Andalus.

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## NOTES

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2. Susana Calvo Capilla, “Madinat al-Zahrā' y la observación del tiempo: El renacer de la Antigüedad Clásica en la Córdoba del siglo X,” special issue, *Anales de Historia del Arte* 22, 2 (2013): 131–60. One should bear in mind that around the same time there developed a heightened interest in classical knowledge and imagery in Byzantium, then under the rule of the Macedonian dynasty, which started with Basil I (r. 867–86). The so-called Macedonian Renaissance prompted a return to the Greco-Roman world through the recovery of Greek texts as well as classical forms and aesthetics—particularly *Atticism*—which inspired Byzantine artists. This revival of antiquity in Byzantium was probably a politically motivated response to the pro-Hellenic movement promoted by the Abbasid caliphs during the ninth century. Juan Signes Codoñer, “Helenos y Romanos: La identidad bizantina y el Islam en el siglo IX,” *Byzantion* 72 (2002): 404–48.
3. Suggested by José Beltrán Fortes, “La colección arqueológica de época romana aparecida en Madinat al-Zahrā' (Córdoba),” *Cuadernos de Madinat al-Zahrā'* 2 (1988–90): 109–10.
4. Muḥammad Ibn 'Idhārī, *Al-Bayān al-Mugrib = La caída del Califato de Córdoba y los Reyes de Taifas*, trans. Felipe Maíllo Salgado (Salamanca, 1993), 61–62, 66–67, 89, and 98.
5. Ricardo Velázquez Bosco, *Excavaciones en Medina Azahara: Memoria sobre lo descubierto en dichas excavaciones* (Madrid, 1923); Rafael Jiménez Amigo et al., *Excavaciones en Medina Azahara: Memoria de los trabajos realizados*, Memorias de la Junta Superior de Excavaciones y Antigüedades 67 (Madrid, 1924); Rafael Jiménez Amigo et al.,

- Excavaciones en Medina Azzahra (Córdoba): Memoria de los trabajos realizados por la comisión delegado-directora de los mismos*, Memorias de la Junta Superior de Excavaciones y Antigüedades 85 (Madrid, 1926); Félix Hernández Giménez, *Madīnat al-Zahrā': Arquitectura y decoración* (Granada, 1985); Antonio Vallejo Triano, *La ciudad califal de Madīnat al-Zahrā': Arqueología de su excavación* (Córdoba, 2010).
6. Hernández Giménez, *Madīnat al-Zahrā'*, 54–55.
  7. José Beltrán Fortes, *Los sarcófagos romanos de la Bética con decoración de tema pagano*, Serie Historia y Geografía 40 (Seville, 1999), 93–111. After the publication of this work, new fragments of almost every sarcophagus were found and documented by José Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, Corpus de Esculturas del Imperio Romano 1, 3 (Murcia, 2006), 131–34.
  8. The Sarcophagus of the Gate of Hades was found in 1958, in the necropolis of Brillante, north of Córdoba. Studied by Antonio García y Bellido, "El sarcófago romano de Córdoba," *Archivo Español de Arqueología* 32, 99–100 (1959): 3–37.
  9. Although this figure has usually been identified as Heracles, he is probably the hunter Ancaeus or Iphicles, the twin brother of Heracles, according to Paul Zanker et al., *Living with Myths: The Imagery of Roman Sarcophagi* (Oxford, 2012), 361–62.
  10. Beltrán Fortes, *Los sarcófagos romanos de la Bética*, 128–41; Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, 134–37.
  11. Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, 138–41. It is one of the largest sarcophagi documented in the regions of Bética and Hispania.
  12. For a study on the meaning of this type of image, see Miguel Noguera Celdrán, "Algunas consideraciones sobre el sarcófago con musas y pensadores del Museo de la Catedral de Murcia," *Imafronte* 8–9 (1992–93): 293–311; and Pedro Rodríguez Oliva, "El sarcófago con escenas de enseñanza de la antigua colección Casa-Loring en la Finca de 'La Concepción' de Málaga," *Baetica: Estudios de Arte, Geografía e Historia* 25 (2003): 409–32.
  13. Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, 126–27.
  14. *Ibid.*, 143.
  15. *Ibid.*, 145–52, figs. 38–42. It is approximately 0.6 meters tall and seems to have been made up of different pieces. It is worth recalling the similarity between these bases and the ones holding the columns carved by caliphal workshops for Madīnat al-Zahra'.
  16. Vallejo Triano, *La ciudad califal*, 236–37, 465–504. Court no. 23 on the plan published by this author. Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, 144. Unconnected fragments from Christian-themed sarcophagi are in storage in the Museum of Madīnat al-Zahra'. Their exact location is unknown. Beltrán Fortes et al., *Los sarcófagos romanos de Andalucía*, 164–71.
  17. Vallejo Triano, *La ciudad califal*, 237–41, figs. 191 and 192.
  18. I am grateful to Prof. A. Uscatescu for this detail.
  19. José Beltrán Fortes, "Hermeracae hispanos," in *Estudios dedicados a Alberto Balil in Memoriam* (Malaga, 1993), 163–74.
  20. Beltrán Fortes, "La colección arqueológica," 112–13; Vallejo Triano, *La ciudad califal*, 262–63, fig. 208.
  21. Discussed in Calvo Capilla, "Madīnat al-Zahrā'" 131–33.
  22. Abū Muḥammad al-Rushāṭī (d. 542 [1147]), *Al-Andalus en el Kitāb Iqtibās al-anwār y en el Ijtisār iqtibās al-anwār*, ed. E. Molina López and J. Bosch Vila (Madrid, 1990), 54–55; Muḥammad ibn 'Abd al-Mun'im al-Himyarī, *La péninsule Ibérique au Moyen Âge d'après le Kitāb arrawḍ al mi'tār fi ḥabar al-aḳṭār*, trans. and ed. E. Lévi-Provençal (Leiden, 1938), 212 [ed. 177].
  23. Aḥmad b. Muḥammad b. Mūsā al-Rāzī (d. ca. 961), *Crónica del Moro Rasis (Ta'rikh mulūk al-Andalus)*, ed. Diego Catalán and Soledad de Andrés (Madrid, 1975), 71–72. The romanized version by Aḥmad b. Muḥammad b. Mūsā al-Rāzī is more prolix than those by al-Rushāṭī and al-Ḥimyarī, which are very similar to each other.
  24. Aḥmad ibn Muḥammad al-Maqqarī, *Nafh al-ṭib min ghuṣn al-Andalus al-raṭīb*, ed. Iḥsān 'Abbās, 8 vols. (Beirut, 1968), 1:464 (*al-ṣahārij al-ghariba fi aḥwāḍ al-rukhām al-Rūmīyya al-manqūsha al-'ajība*).
  25. Al-Maqqarī, *Nafh al-ṭib*, 1:568–69; al-Maqqarī, *The History of the Mohammedan Dynasties in Spain extracted from the Nafhu-t-tib by Ahmed ibn Mohammed al-Makkari [sic]*, trans. Pascual de Gayangos, 2 vols. (London, 1840–43), 1:236n9. Similarly, according to the description in the *Dhīkr*, on "the small green basin there were carvings and sculptures of human figures" (*al-ḥawḍ al-aḳḥḍar al-ṣaghūr... wa fihi nuqūsh wa-tamāthīl 'alā ṣūrat al-insān*), and it is specified that it was brought from Syria by the "philosopher Ahmad b. Karam": *Dhīkr bilād al-Andalus. Una descripción anónima de al-Andalus*, ed. and trans. Luis Molina, 2 vols. (Madrid, 1983), 1:163, and 2:173. According to Maribel Fierro, *La heterodoxia en al-Andalus durante el periodo omeya* (Madrid, 1987), 162, this is one of the first appearances of the term "philosopher" in Andalusī texts.
  26. Gloria S. Merker, "A Statuette of Minerva in the Rockefeller Museum, Jerusalem," *Eretz-Israel: Archeological, Historical, and Geographical Studies* 19 (1987): 15–20; Barbara Finster, "Die Verwendung von Spolien in umayyadischer Zeit," in *Spolien im Umkreis der Macht = Spolia en el entorno del poder: Actas del Coloquio en Toledo del 21 al 22 de septiembre 2006*, ed. Thomas G. Schattner and Fernando Valdés Fernández (Madrid, 2009): 273–86.
  27. Ernst Herzfeld Papers, 1899–1962, Series 4: Photographic Files 1903–1947: Freer/Sackler Archives, Smithsonian Institution Research Information System, SIRIS, <http://www.siris.si.edu>.
  28. Glen W. Bowersock, *Hellenism in Late Antiquity* (Ann Arbor, 1996): 72–73, 81; Hana Taragan, "Atlas Transformed: Interpreting the 'Supporting' Figures in the Umayyad Palace at Khirbat al-Mafjar," *East and West* 53 (December 2003): 9–29; Rina Talgam, *The Stylistic Origins of Umayyad Sculpture and Architectural Decoration*, 2 vols. (Wiesbaden,

- 2004), 1:121–25; Alexandra Uscatescu and Juan Carlos Ruiz Souza, “El ‘occidentalismo’ de Hispania y la *koiné* artística mediterránea (siglos VII–VIII),” *Goya, Revista de Arte* 347 (2014): 95–115.
29. Dimitri Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early ‘Abbasid Society (2nd–4th/8th–10th centuries)* (London: Routledge, 1998), 53–60.
  30. Daniel de Smet, *Dictionnaire du Coran*, ed. Mohammad Ali Amir Moezzi (Paris, 2007), s.v. “Dhu l-Qarnayn”; Eve Feuillebois-Pierunek, “Les figures d’Alexandre dans la littérature persane: Entre assimilation, moralisation et ironie,” in *Épopées du monde: Pour un panorama (presque) général*, ed. Eve Feuillebois-Pierunek (Paris, 2012), 181–85.
  31. The catalogue of Greek and Persian books translated into Arabic and preserved in the libraries of Baghdad grew into an enormous corpus of knowledge enriched with Muslim scientific and philosophical contributions, as we can see in the *Fihrist* (Catalogue) compiled by Ibn al-Nadīm (d. ca. 998), who around 987 gathered all the books available in Baghdad libraries: Ibn al-Nadīm, *The Fihrist of al-Nadīm: A Tenth-century Survey of Muslim Culture*, ed. and trans. Bayard Dodge, 2 vols. (New York and London, 1970), 594–606; Gutas, *Greek Thought*, 95–104.
  32. Amira K. Bennis, *The Great Caliphs: The Golden Age of the ‘Abbasid Empire* (New Haven, 2009), 193–94. On the Abbasid aim for a “universal library,” see Houari Touati, *L’armoire à sagesse: Bibliothèques et collections en Islam* (Paris, 2003), 161–82.
  33. Aristotle’s lessons to Alexander the Great had already become part of the education of princes and members of the elite in Greek and Hellenistic society, and were, together with Homeric texts, integral to the *paideia*: Mario Grignaschi, “La figure d’Alexandre chez les Arabes et sa genèse,” *Arabic Sciences and Philosophy* 3, 2 (1993): 225–230.
  34. According to Grignaschi, the origin of Arab-Islamic wisdom literature could lie in this collection of epistles ascribed to Aristotle and translated into Arabic, probably by Salīm Abu ‘l-‘Ala’, the secretary of the Umayyad caliph Hisham b. ‘Abd al-Malik: Mario Grignaschi, “Remarques sur la formation et l’interprétation du ‘Sirr al-asrār’,” in *Pseudo-Aristotle, the Secret of Secrets: Sources and Influences*, ed. W. F. Ryan and Charles B. Schmitt (London, 1982), 3–7; Mario Grignaschi, “Les *Rasā’il ‘Aristāṭālisa ‘ilā-l-Iskandar* de Sālim Abū-l-‘Alā’ et l’activité culturelle à l’époque omayyade,” *Bulletin d’Études Orientales* 19 (1965–66): 45. Latham believes that these *Epistles* could derive from an entire body of ancient Greek literature of the later periods, which revolved around the figure of Alexander the Great: J. D. Latham, “The Beginnings of Arabic Prose Literature: The Epistolary Genre,” in *Arabic Literature to the End of the Umayyad Period*, ed. A. F. L. Beeston et al., vol. 1 of *The Cambridge History of Arabic Literature* (Cambridge, 1983), 154–79.
  35. Several other later works based on the pseudo-Aristotelian *Epistles* may also be classified as secular literature or included in the *adab* genre: the *Kitāb al-Siyāsa fī tadbīr al-rī’āsa*, which focuses on the advice for good governance in the original text, and the famous *Sirr al-Asrār* (Secret of Secrets), which was subsequently translated into Latin. Another collection of epistles of encyclopaedic content was the *Rasā’il Ikhwān al-Ṣafā’* (Epistles of the Brethren of Purity), which shares similar characteristics with the *Sirr al-Asrār*: Grignaschi, “La figure d’Alexandre,” 205–34; Adeline Rucquoi and Hugo O. Bizzarri, “Los Espejos de Príncipes en Castilla: Entre Oriente y Occidente,” *Cuadernos de Historia de España* 79, 1 (2005): 7–30.
  36. María Jesús Viguera Molins, “Bibliotecas y manuscritos árabes en Córdoba,” *Al-Mulk* 5 (2005): 101–6. In fact, the first emir interested in the “sciences of the Ancients” was ‘Abd al-Rahman II (r. 822–52), who sent his emissaries to Iraq to look for and copy books on medicine, astronomy, philosophy, and the sciences. According to Ibn Hayyan, it was the first time these works were introduced in Al-Andalus, where they were studied by the emir himself and his heir, Prince al-Hakam: Ibn Ḥayyān, *Crónica de los emires Alḥakam I y ‘Abdarrahmān II entre los años 796 y 847 (Almuqtabis II-1)*, trans. Maḥmūd ‘Alī Makkī and Federico Corriente (Zaragoza, 2001), 169–70.
  37. The Greek Chronicle of Eusebius of Caesarea was translated into Arabic from its Latin version during the rule of al-Hakam II, according to Juan Vernet Ginés, “Los médicos andaluces en el *Libro de las generaciones de médicos*, de Ibn ‘Yūlyūl,” *Anuario de Estudios Medievales* 5 (1968): 450–51.
  38. Ibn Ḥayyān, *Crónica del Califa ‘Abdarrahmān III an-Nāṣir entre los años 912 y 942 (al-Muqtabis V)*, trans. María Jesús Viguera and Federico Corriente (Zaragoza, 1981), 360; Ibn Ḥayyān, *al-Muqtabas (V)*, ed. Pedro Chalmeta, Federico Corriente, and M. Ṣubḥ (Madrid, 1979), 323; al-Maqqarī, *Nafh al-ṭīb*, 1:386. Most Andalusī texts used in this study employ the Koranic term ‘ilm when referring to science and knowledge. The term *ḥikma* (wisdom) also features in the Koran, but with a slightly more restrictive sense than ‘ilm, and was eventually associated with philosophy: see Franz Rosenthal, *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam* (Leiden, 1970). The word ‘ilm may refer to both secular and religious science, according to Youssef Eche, *Les bibliothèques arabes publiques et semi-publiques en Mésopotamie, en Syrie et en Égypte au Moyen-Âge* (Damascus, 1967), 394.
  39. Ṣā’id al-Andalusī, *Kitāb Ṭabaqāt al-umam = Historia de la filosofía y de las ciencias, o, Libro de las categorías de las naciones*, trans. Eloisa Llaveró Ruiz and Andrés Martínez Lorca (Madrid, 2000), 142. For the Arabic text, see Ṣā’id al-Andalusī, *Kitāb Ṭabaqāt al-umam = Livre des catégories des nations*, trans. Régis Blachère and ed. Louis Cheikhó (Paris, 1935), 164.
  40. Al-Maqqarī, *Nafh al-ṭīb*, 1:395, as cited by Viguera Molins, “Bibliotecas,” 105.
  41. Al-Maqqarī, *Nafh al-ṭīb*, 1:385–86, 394 (the books kept at the Alcazar of Cordoba were looted by the Berbers); Julián Ribera y Tarragó, *Bibliófilos y bibliotecas en La España musulmana* (Pamplona, 2008; 1st ed. Zaragoza, 1895), 123–

- 25n244; al-Maqqarī, *History of the Mohammedan Dynasties*, trans. Gayangos, 2:169; Ruth Stellhorn Mackensen, "Moslem Libraries and Sectarian Propaganda," *The American Journal of Semitic Languages and Literatures* 51, 2 (1935): 109. Al-Hakam gathered a team of calligraphers and skilled artists, including a man he sent for from Baghdad, called Zifir al-Bagdadi: Eche, *Les bibliothèques*, 273.
42. At least 897 books from the caliphal library have been documented, according to Maribel Fierro, "Manuscritos en al-Andalus: El proyecto H.A.T.A.," *Al-Qanṭara* 19, 2 (1998): 490–92; David Wasserstein, "The Library of al-Hakam II al-Mustansir and the Culture of Islamic Spain," *Manuscripts of the Middle East* 5 (1990–91): 99–105; François Géral, "Les bibliothèques d'al-Andalus," in *Regards sur al-Andalus (VIIIe–XVe siècle)*, ed. François Géral (Madrid, 2006). The most well-known examples are al-Khushani, born in Qayrawan (d. 361 [971]), who produced at least two bio-bibliographical dictionaries preserved to date, and 'Arib ibn Sa'īd, who collaborated with a Christian to write the famous *Calendario de Córdoba*.
43. Juan Vernet Ginés, *Literatura árabe* (Barcelona, 2002), 125; al-Maqqarī, *History of the Mohammedan Dynasties*, trans. Gayangos, 2:171; Ibn Ḥayyān, *Crónica*, 360; Ibn Ḥayyān, *al-Muqtabas* (V), 323.
44. Fierro, *La heterodoxia en al-Andalus*, 163; Ana Echevarría, *Almanzor: Un califa en la sombra* (Madrid, 2011), 209–14.
45. He once sent a young female servant (*waṣīfa*), a *kātiba* of great intelligence, with an astronomer named al-Qassam to study astronomy (*ta'dīl*) and the use of astrolabes. Another female slave (*jāriya*) of al-Hakam II, called Lubna (d. 984 or 986), was a *kātiba*, grammarian, poet, and mathematician, as well as a good calligrapher: María Luisa Ávila, "Las mujeres 'sabias' en al-Andalus," in *La mujer en al-Andalus: Reflejos históricos de su actividad y categorías sociales*, ed. María Jesús Viguera (Madrid and Seville, 1989), 180 and 166.
46. Ibn Hayyan documents an interesting case regarding the intellectual and administrative work developed by Prince al-Hakam, including the place where this work was carried out: 'Abd al-Rahman offered his son a palace called Dar al-Mulk, which was located beside the river, where he himself resided before his children were born and he moved to the Alcazar. Prince al-Hakam used the palace in Cordoba for "his personal possessions, as a warehouse (*majāzin*) for his things, storage for his books (registries, *dafātirihi*), and offices (*majālis*) for his scribes and service administrators (*dawāwīnihi*), and established his trusted servants and long-serving scribes (*kuttābihi*) there." Ibn Ḥayyān, *Crónica*, 22–23; Ibn Ḥayyān, *al-Muqtabas* (V), 16–18.
47. Mohamed Meouak, "Les 'marges' de l'administration hispano-umayyade (mileu IIe/VIIIe–début Ve/XIe siècles): Prosopographie des fonctionnaires d'origine Ṣaqlabī, esclave et affranchie," in *Homenaje a José Ma. Fórneas*, ed. Manuela Marín, Estudios Onomástico-biográficos de Al-Andalus 6 (Madrid, 1994), 321; Ribera y Tarragó, *Bibliófilos*, 124n246.
48. Susana Peña Jiménez, "Ibn al-Makwī," in Marín, *Homenaje a José Ma. Fórneas*, 353–83 (esp. 359 and 366). The purge of the library ordered by al-Mansur is described by Ṣā'īd al-Andalusī, *Libro de las categorías*, trans. Llavero Ruiz and Martínez, 142–43.
49. Rudolf Blum, *Kallimachos: The Alexandrian Library and the Origins of Bibliography*, trans. from the German by Hans H. Wellisch (Madison, Wisc., 1991; 1st ed., 1977), 98–104. On the fate of the two Alexandrian libraries, see Mostafa El-Abbadi, *Vie et destin de l'ancienne Bibliothèque d'Alexandrie* (Paris, 1992), 145–79. The library of Alexandria, divided into the *Museion* (in the Brucheion palace) and the *Serapeion*, was created to preserve Greek literature and knowledge, at the time admired as a superior and flourishing culture in comparison with Ancient Egypt, which was also admired but regarded as a dead civilization.
50. Eche, *Les bibliothèques*, 44–45.
51. Such as Zenodotus of Ephesus, poet and philologist, who was director of the Alexandrian library and tutor of the children of Ptolemy I. The first catalogue, titled *Pinakes*, was compiled by Callimachos (d. ca. 240 B.C.) and included approximately 120 volumes.
52. Albert Dietrich, "Quelques aspects de l'éducation princière à la cour abbaside," in "L'enseignement en Islam et en Occident au Moyen Age," ed. Georges Makdisi, Dominique Sourdel, and Janine Sourdel-Thomine, special issue, *Revue des Etudes Islamiques* 44 (1976): 89–104.
53. Ibn Ḥayyān, *Crónica*, 20–21; Ibn Ḥayyān, *al-Muqtabas* (V), 14–16.
54. Maribel Fierro, "Qāsim b. Aṣḥab y la licitud de recibir regalos," in *Homenaje al profesor José María Fórneas Besteiro*, ed. Concepción Castillo Castillo et al., 2 vols. (Granada, 1995), 2:977–81.
55. Miquel Forcada Nogués, *Ética e ideología de la Ciencia: El médico-filósofo en al-Andalus (siglos X–XII)* (Almería, 2011), 185–86. Forcada thinks that this figure played a role in al-Hakam's inclination toward these branches of knowledge.
56. Ibn Ḥayyān, *Anales palatinos del Califa de Córdoba al-Hakam II, por 'Isā ibn Aḥmad al-Rāzī (360–364 H. = 971–975 J.C.)*, trans. Emilio García Gómez (Madrid, 1967), 98–99; Ibn Ḥayyān, *Muqtabis fi akhbār balad al-Andalus* (VII), ed. 'Abd al-Rahmān Ḥājī (Beirut, 1983), 76. This account sets a clear precedent for the Nasrid palace school, located in the Court of the Lions in the Alhambra, according to Juan Carlos Ruiz Souza, "El palacio de los Leones de la Alhambra: ¿Madrasa, Zāwiya y Tumba de Muḥammad V? Estudio para un debate," *Al-Qanṭara* 22, 1 (2001): 77–120. In the same way, Cynthia Robinson considers that the Court of the Lions could have been more than a school, and she proposes something similar to a Bayt al-Hikma in "Marginal Ornament: Poetics, Mimesis, and Devotion in the Palace of the Lions," *Muqarnas* 25 (2008): 185–204.
57. Ibn Ḥayyān, *Anales palatinos*, 257; Ibn Ḥayyān, *Muqtabis* (VII), 216–17.
58. Al-Zubaydi is also the author of a famous summary of the *Kitāb al-Ayn*, the first Arabic dictionary, attributed to al-Khalīl ibn Aḥmad al-Farāhīdī (beginning of the ninth century). M. G. Carter, "Arabic Lexicography," in *Religion, Learning, and Science in the 'Abbasid Period*, ed. M. J. L.

- Young, John Derek Latham, and Robert Bertram Serjeant, vol. 3 of *The Cambridge History of Arabic Literature* (Cambridge, 1990), 110–11; J. Haremska, *Biblioteca de al-Andalus* (Almería, 2012), s.v. “al-Zubaydi.”
59. Maribel Fierro, “Plants, Mary the Copt, Abraham, Donkeys and Knowledge: Again on Batinism during the Umayyad Caliphate in al-Andalus,” in *Differenz und Dynamik im Islam: Festschrift für Heinz Halm zum 70. Geburtstag = Differenz und Dynamics in Islam: Festschrift für Heinz Halm on His 70th Birthday*, ed. Hinrich Biesterfeldt und Verena Klemm (Würzburg, 2012), 127–31.
  60. Physicians educated in mathematics and philosophy were undoubtedly among the transmitters: see Forcada Nogués, *Ética e ideología*, 164–99.
  61. “Aristotle wrote to Alexander: ‘Rule your subjects with beneficence and you will win their affection, seeking of which by beneficence is more enduring than by oppression. And know that you only rule their bodies, so unite their hearts with their bodies by affection. Know also that if the subjects are able to speak, they are able to act too. Therefore do your best so that they do not speak and you will be safe they will not act.’ Ardashir said to his companions, ‘I only govern the bodies and not the intentions; I only rule in justice and not in order to please; I only examine the deeds and not the consciences.’” Ibn ‘Abd Rabbihi, *The Unique Necklace = al-Iqd al-Farid*, trans. Issa J. Boullata, 3 vols. (Reading, 2007), 3:17.
  62. *Ibid.*, 1:16.
  63. Ibn ‘Abd Rabbihi, *Unique Necklace*, trans. Boullata, 1:89. The passage could be drawn from one of the epistles (*Rasā’il*) from Aristotle to Alexander entitled *Sīyāsāt al-mudun* (The Government of Cities): Grignaschi, “La figure d’Alexandre,” 226–27. In the chapter entitled “Book of the Chrysolite on Generous Men and Liberal Givers,” Aristotle said, “He who comes to you from his homeland has begun by thinking well of you and having confidence in you.”; this was one of the pieces of advice he gave to Alexander: Ibn ‘Abd Rabbihi, *Unique Necklace*, trans. Boullata, 1:155. In “The Book of the Mother-of-Pearl on Condolences and Elegies,” Alexander comforts his mother after his own death: Josefina Vegli-son, *El collar único de Ibn Abd Rabbihi* (Madrid, 2007), 92–93.
  64. Walter Werkmeister, *Quellenuntersuchungen zum Kitāb al-Iqd al-farid des Andalusiers Ibn ‘Abdrabbih (246/860–328/940): Ein Beitrag zur arabischen Literaturgeschichte* (Berlin, 1983); Grignaschi, “Les *Rasā’il ‘Aristātātīs ‘ilā-l-Iskandar*,” 15–16; C. E. Bosworth, “Administrative Literature,” in Young, Latham, and Serjeant, *Religion, Learning, and Science*, vol. 3 of the *Cambridge History of Arabic Literature*, 166–67. A literary genre exceptionally successful and widespread in Islam, *adab* emerged at the beginning of the eighth century. Encyclopaedic in nature, it includes all the disciplines necessary to acquire a general culture, to create an instructive framework for dealing with court life or a position in public office. However, *adab* was more than just a collection of moralistic anecdotes containing concepts from the sciences, rhetoric, poetry, and history intended to create the “façade” of a learned person without any substance. For Julia Bray, *adab* is saturated with humanism: it is conceived as mythopoesis, a creation or production of myths; thus, a distinctive Arab mythology is created through stories that reflect a wide-ranging truth—not a sacred one—like the truth expressed in human actions. In the case of Ibn ‘Abd Rabbihi, the aim was to use parables to illuminate the relationship between divine will and wisdom, on the one hand, and to comprehend *adab* as human experience, on the other. In this sense, *adab* literature played an active role in society and in the creation of Arab-Islamic culture, in this case, in Andalusia. Julia Bray, “Abbasid Myth and the Human Act: Ibn ‘Abd Rabbih and Others,” in *On Fiction and Adab in Medieval Arabic Literature*, ed. P. F. Kennedy (Wiesbaden, 2005), 1–53.
  65. Vernet Ginés, “Los médicos andaluces,” 445–62.
  66. In the same way, Cyrille Aillet, *Les Mozarabes: Christianisme, islamisation et arabisation en péninsule Ibérique (IXe–XIIe siècle)* (Madrid, 2010), 158–59, 185–213; Ibn Juljul, *Kitāb Ṭabaqāt al-aṭibbā’ wa’l-hukamā = Les générations des médecins et des sages*, ed. Fu’ad Sayyid (Cairo, 1955). When Ibn Juljul wrote his book, there was only one precedent with the same title, written by Iṣḥāq b. Hunayn (d. 910). However, according to Fu’ad Sayyid, it does not seem likely that the Andalusī author knew Ibn Hunayn’s work or handled any other books on the subject written in Greek and translated into Arabic in Baghdad.
  67. Levi Della Vida and Penelas support the hypothesis that the book circulated in al-Andalus before the arrival of the Byzantine embassy in 948–49: Giorgio Levi Della Vida, “La traduzione araba delle storie di Orosio,” *Al-Andalus* 19 (1954): 257–93. For the translations of Latin texts and their promotion within the caliphal court, see the introduction by María Teresa Penelas in Paulus Orosius, *Kitāb Hurūšyūš: Traducción árabe de las “Historiae adversus paganos” de Orosio*, ed. María Teresa Penelas (Madrid, 2001), 30–42.
  68. A partial translation from the Greek text may have been made by a Sevillian botanist and physician at the end of the ninth century, with the help of a female slave named Ana al-Qriqiya (“the Greek”), who was originally from Sicily. See Manuela Marín, *Mujeres en al-Andalus*, Estudios Onomástico-biográficos de Al-Andalus 11 (Madrid, 2000), 654–56.
  69. José Antonio García-Junceda and Rafael Ramón Guerrero, “La vida de Aristóteles de Ibn Yūlūl,” *Anuario del Departamento de Historia de la Filosofía y de la Ciencia Materias* (Madrid, 1984), 109–23; Rafael Ramón Guerrero, *La recepción árabe del ‘De Anima’ de Aristóteles: Al-Kindi y al-Farabi* (Madrid, 1992); Ibn Juljul, *Kitāb Ṭabaqāt al-aṭibbā’*, 119.
  70. Ibn al-Nadim (d. ca. 990) apparently worked with similar information on Aristotle when he compiled the *Fihrist*, the aforementioned catalogue of the books available in Baghdad in 987, around the same time that Ibn Juljul wrote his dictionary: Vernet Ginés, *Literatura árabe*, 127; Ibn al-Nadīm, *Fihrist of al-Nadīm*, ed. and trans. Dodge, 594.

71. García-Junceda and Ramón Guerrero, "La vida de Aris-tóteles," 121–23.
72. Traditionally, it was thought that Maslama b. Qasim al-Qurtubi of Madrid (d. ca. 1007) was the author of the *Ghāyat al-Ḥakīm*. By moving the date of composition of the *Ghāya* back to the middle of the tenth century, Fierro also moves back the production and distribution of the *Ikhwān al-Ṣafā'*: Maribel Fierro, "Bāṭinism in Al-Andalus: Maslama b. al-Qāsim al-Qurṭubī (d. 353/964), Author of the 'Rutbat al-Ḥakīm' and the 'Ghāyat al-Ḥakīm' (Picatrix)," *Studia Islamica* 84 (1996): 97–112.
73. Godefroid de Callatāy, "Ikhwān al-Ṣafā': Des arts scientifiques et de leur objectif," *Le Muséon* 116 (2003): 231–58; Godefroid de Callatāy, *Ikhwan al-Safa': A Brotherhood of Idealists on the Fringe of Orthodox Islam* (Oxford, 2005); Julio Samsó, *Las ciencias de los Antiguos en al-Andalus* (Almería, 2011), 498–99. Although the exact date when the epistles were written remains unknown, they may have been the result of a long composition process, spanning from the end of ninth century to the end of the tenth. One or two centuries after the composition of the *Rasā'il Ikhwān al-Ṣafā'*, this epistolary work—originally didactic—acquired a different character as its esoteric features were reinforced: Fierro, "Bāṭinism," 97–112.
74. Harrani Sabians preserved classical knowledge and took part in the translation and study of the ancient sciences for which the Abbasid caliphs of the ninth century became known. Two Harrani physicists settled in the Cordoban court during the tenth century, but there was already another physician of that origin in Cordoba in the ninth century. According to Samsó (*Las ciencias*, 500), the knowledge of astrology among the Harrani Sabians was fundamental to the composition of the *Ghāya*.
75. These last two texts also seem to verify that al-Andalus was already familiar then with the works of the earliest Arab thinkers, al-Kindi and al-Farabi (d. 950): Rafael Ramón Guerrero, "Textos de al-Fārābī en una obra andalusí del siglo XI: 'Ġāyat al-Ḥakīm' de Abū Maslama al-Ma'yūrī," *Al-Qanṭara* 12, 1 (1991): 3–17; Sara Stroumsa, "Philosopher-king or Philosopher-Courtier?," in *Identidades marginales*, ed. Cristina de la Puente, Estudios Onomástico-biográficos de Al-Andalus 13 (Madrid, 2003), 433–59, at 443.
76. Ṣā'id al-Andalusī, *Libro de las categorías*, trans. Llaveró Ruiz and Martínez Lorca, 30, 37, 79–80, 87–88; Ṣā'id al-Andalusī, *Livre des catégories*, trans. Blachère and ed. Cheikho, 81–82. Ibn Sa'id mentions "the numerous and magnificent epistles" written by Aristotle to the Macedonian king, and details the contents of the "Letter to the Golden Palace," which corresponds with missive no. 14 of the *Rasā'il 'Aristāṭālis ilā l-Iskandar*: Grignaschi, "Les *Rasā'il 'Aristāṭālis 'ilā l-Iskandar*," 69–73.
77. Ṣā'id al-Andalusī, *Libro de las categorías*, trans. Llaveró Ruiz and Martínez Lorca, 87–88; Ṣā'id al-Andalusī, *Livre des catégories*, trans. Blachère and ed. Cheikho, 67–68.
78. Grignaschi, "La figure d'Alexandre," 205–34; de Smet, "Dhu l-Qarnayn." "Polytheism banished from Greece by grace of this king," according to Ṣā'id al-Andalusī, *Libro de las categorías*, ed. Llaveró Ruiz and Martínez Lorca, 79 and 87; Manuela Marín, "Legends on Alexander the Great in Moslem Spain," *Graeco-Arabica* 4 (1991): 71–89.
79. The image of Heracles in ancient times was associated with and mistaken for that of Alexander the Great: e.g., the golden *tetradrachmas* of Philip II of Macedon (r. 359–36 B.C.) and Alexander (r. 336–23 B.C.) show the young Heracles with the lion's skin over his head; the coins of Lysimachus of Thrace and Ptolemy I Soter of Alexandria (end of the fourth century B.C.) include an image of Alexander the Great with Ammon's horns and an elephant's skin over his head: Felix Dürnbach, *Dictionnaire des antiquités grecques et romaines*, ed. Charles Daremberg and Edmond Saglio, 10 vols. (Graz, 1969), s.v. "Hercules"; François Lenormant, *Dictionnaire des antiquités grecques et romaines*, s.v. "Alexandre"; François de Callatāy, "Royal Hellenistic Coins from Alexander to Mithridates," and Catharine C. Lorber, "The Coinage of the Ptolemies," in *The Oxford Handbook of Greek and Roman Coinage*, ed. William E. Metcalf (Oxford, 2012), 178 and 211–12, respectively; D. T. Potts, "La renaissance de l'Arabie du Nord-Est à l'époque hellénistique," in *Routes d'Arabie: Archéologie et histoire du royaume d'Arabie saoudite*, ed. Ali Ibrahim al-Ghabban et al. (Paris, 2010), 380–81.
80. Kurt Weitzmann, "The Survival of Mythological Representations in Early Christian and Byzantine Art and Their Impact on Christian Iconography," *Dumbarton Oaks Papers* 14 (1960): 45–68; Jean Seznec, *La survivance des dieux antiques: Essai sur le rôle de la tradition mythologique dans l'humanisme et dans l'art de la Renaissance* (Paris, 1980).
81. Al-Rāzī, *Crónica del Moro Rasis*, paragraph LXXV, lines 18–19 and 126–27; René Basset, "Hercule et Mahomet," *Journal des Savants* 1 (1903): 391–402. The figure of Heracles was included among the local deities and heroes in Eastern pre-Islamic cultures such as the Parthians and the Sassanids, as well as in the Arab pre-Islamic pantheon: Bowersock, *Hellenism in Late Antiquity*, 71–82. About the presence of the Isidorian texts in al-Andalus, see Aillet, *Les Mozarabes*, 158–59 (the ninth-century manuscript of *De natura rerum* known as the *Códice Ovetense* probably came from Cordoba).
82. Marín, "Legends on Alexander the Great," 71–89; Giovanna Calasso, "Les remparts et la loi, les talismans et les saints: La protection de la ville dans les sources musulmanes médiévale," *Bulletin d'Études Orientales* 44 (1992): 83–104; Michael Greenhalgh, "Spolia in Fortifications: Turkey, Syria and North Africa," in *Ideologie e pratiche del reimpiego nell'alto medioevo*, 2 vols., Settimane di Studi del Centro Italiano di Studi sull'Alto Medioevo 46 (Spoleto, 1999), 785–935; Finbarr B. Flood, "Image against Nature: Spolia as Apotropaia in Byzantium and the Dar al-Islam," *The Medieval History Journal* 9, 1 (2006): 143–66. Although we do not know whether any of them were classical, there were statues at the entrances to some Umayyad palaces (Qasr al-Hayr al-Garbi and Khirbat al-Mafjar) and Abbasid palaces

- such as Ukhaydir: see Gertrude Bell, *Palace and Mosque at Ukhaydir: A Study in Early Muhammadan Architecture* (Oxford, 1914), as cited by K.A.C. Creswell, *Early Muslim Architecture*, 2 vols. (Oxford, 1940), 2:51.
83. Ibn Ḥayyān, *Crónica*, 53.
  84. Ibn 'Idhārī, *La caída del Califato de Córdoba y los Reyes de Taifas: Al-Bayān al-Mugrib*, trans. Felipe Maíllo Salgado (Salamanca, 1993), 21. The most literal translation is by Emilio de Santiago Simón, "Unas notas en torno a la 'Bāb al-Ṣūra' de Córdoba," *Miscelánea de Estudios Árabes y Hebraicos* 18–19 (1969–70): 131–32; Samsó, *Las ciencias*, 80.
  85. According to Ibn 'Idhārī in "Unas notas," trans. Santiago Simón, 131–32.
  86. Luce López-Baralt, *Islam in Spanish Literature: From the Middle Ages to the Present* (Leiden, 1992), 60–62; al-Maqqarī, *History of the Mohammedan Dynasties*, trans. Gayangos, 1:121.
  87. D. Fairchild Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain* (University Park, Pa., 2003), 64; D. Fairchild Ruggles, "Mothers of a Hybrid Dynasty: Race, Genealogy, and Acculturation in al-Andalus," *Journal of Medieval and Early Modern Studies* 34, 1 (Winter 2004): 83–84; Manuel Ación Almansa, "Materiales e hipótesis para una interpretación del Salón de 'Abd al-Raḥmān al-Nāṣir," in *Madīnat al-Zahrā': El Salón de 'Abd al-Raḥmān III*, ed. Antonio Vallejo Triano (Córdoba, 1995), 177–95, at 190. *Zuhra* was a popular name given to women among the Moriscos: see Ana Labarta, *La onomástica de los Moriscos valencianos* (Madrid, 1987), 53. *Al-Zahra'* (the dazzling) was also the surname of Fatima, the daughter of the Prophet, as pointed out by Maribel Fierro, "Madīnat al-Zahrā', el paraíso y los fatimíes," *Al-Qanṭara* 25, 2 (2004): 316–19.
  88. Michael G. Morony, *Iraq after the Muslim Conquest* (Princeton, N.J., 1984), 387. In fact, he quotes the case of Venus, *al-Zuhra* or *al-'uzzā*, "the Strong, the Powerful," worshiped by the Lakhmids during the sixth century.
  89. Virgo was not always *al-'Adhrā'* for Muslim astrologers, who also used the Mesopotamic name *al-Sunbula*: Stefano Carboni, *Following the Stars: Images of the Zodiac in Islamic Art* (New York, 1997), 3–6, 15, 35.
  90. For the anti-astrological attitude of legal scholars (*fuqahā'*) and sovereigns in al-Andalus, see Samsó, *Las ciencias*, 75–80; Carboni, *Following the Stars*, 3–6.
  91. Michael J. Rogers, "Text and Illustrations: Dioscorides and the Illustrated Herbal in the Arab Tradition," in *Arab Painting: Text and Image in Illustrated Arabic Manuscripts*, ed. Anna Contadini (Leiden, 2010), 41–47.
  92. The portrayal of the physicist is similar to that of the evangelists in the Byzantine Evangelia of the ninth century: Linda Komaroff, entry no. 288, "De Materia Medica by Dioscorides," in *The Glory of Byzantium*, ed. Helen C. Evans and William D. Wixom (New York, 1997), 429–33.
  93. D. S. Rice, "The Oldest Illustrated Arabic Manuscript," *Bulletin of the School of Oriental and African Studies* 22, 1 (1959): 207–20; Persis Berlekamp, *Wonder, Image, and Cosmos in Medieval Islam* (New Haven and London, 2011), 50–54, 120–30. Berlekamp gathers accounts on the origin of the illustrations in astronomical works and the highly interesting case of the illuminated manuscript of the Epistles of the Brethren of Purity, completed in Bagdad in 1287: Istanbul, Süleymaniye Library, Ms. Esad Efendi 3638, fols. 3b–4a.
  94. Rice, "Oldest Illustrated Arabic Manuscript," 208.
  95. Géal, "Les bibliothèques," 25–29.
  96. Hernández Giménez, *Madīnat al-Zahrā'*, 74–75; Beltrán Fortes, "La colección arqueológica," 111; Serafín López Cuervo, *Medina az-Zahra': Ingeniería y formas* (Madrid, 1983), 79. These authors identify a deliberate action in the greater level of destruction seen in these pieces, and they attribute it to the time of the *fitna* or to the Almohad period: Vallejo Triano, *La ciudad califal*, 236–37. Plain sarcophagi, also reused in the palace, were destroyed as well, so religious causes are not evident: Vallejo Triano, *La ciudad califal*, 262.
  97. Antonio Vallejo Triano et al., "Resultados preliminares de la intervención arqueológica en la 'Casa de Ya'far' y en el edificio de 'Patio de los Pilares' de Madīnat al-Zahrā'," *Cuadernos de Madīnat al-Zahra'* 5 (2004): 199–239. For the Court of the Clocks, no. 40 in the Archaeological Ensemble, see Vallejo Triano, *La ciudad califal*, 236–37, 494–95.
  98. Court no. 23 in the plans of Vallejo Triano, *La ciudad califal*, 492 and 496.
  99. Hernández Giménez, *Madīnat al-Zahrā'*, 71–73.
  100. Vallejo Triano, *La ciudad califal*, 491; Antonio Almagro Gorgea, "Análisis tipológico de la arquitectura residencial de Madīnat al-Zahra'," en *Al-Andalus und Europa: Zwischen Orient und Okzident* (Petersberg, 2004), 124. These authors believe the typology of both courts is similar to the one used in later buildings such as *funduqs* (Vallejo) and madrasas (Almagro), but the origin is not clear.
  101. Hernández Giménez, *Madīnat al-Zahrā'*, 74.
  102. Vallejo Triano, *La ciudad califal*, fig. 30. The staircase turns around a rectangular core, as in the minarets.
  103. M. Antonia Martínez Núñez, "El Corán en los textos epigráficos andalusíes," in *El Corán ayer y hoy: Perspectivas actuales sobre el islam; Estudios en honor al profesor Julio Cortés*, ed. Miguel Hernando de Larramendi and Salvador Peña (Córdoba, 2008), 136–37. There is no absolute certainty that the epigraphs come from that hall. Vallejo Triano, *La ciudad califal*, 364.
  104. Vallejo Triano et al., "Resultados preliminares," 206–11.
  105. Hernández Giménez, *Madīnat al-Zahrā'*, 54. Vallejo identifies the ruined building no. 40, or Court of the Clocks, as the House of the Viziers (*Dār al-Wuzarā'*) mentioned in the sources. However, three aspects make me question the validity of this theory: the presence of clocks, the sarcophagus, and the herm of Heracles, as well as the features of the southern hall of this court, which is too narrow and seems more like a transition space (divided by a staircase), making it difficult to identify it as the "southern hall" of the *Dār al-Wuzarā'* described by Ibn Ḥayyān, *Anales palatinos*, 69; Ibn Ḥayyān, *Muqtabis* (VII), 50.
  106. David A. King, "Los cuadrantes solares andalusíes," in *El legado científico andalusí*, ed. Juan Vernet Ginés and Julio Samsó (Madrid, 1992), 89–102; David A. King, "On the Role

- of the Muezzin and the *Muwaqqit* in Medieval Islamic Society,” in *Tradition, Transmission, Transformation: Proceedings of Two Conferences on Pre-modern Science Held at the University of Oklahoma*, ed. F. Jamil Ragep and Sally P. Ragep (Leiden, 1996), 285–46.
107. Samsó, *Las ciencias*, 77–80; Ibn ‘Āṣim, *Kitāb al-Anwā’ wa-l-azmīna: Al-qawl fi-l-shuhūr = Tratado sobre los anwā’ y los tiempos: Capítulo sobre los meses*, trans and ed. Miquel Forcada Nogués (Barcelona, 1993); Manuela Marín, “*‘Ilm al-nuġūm e ‘Ilm al-ḥidān en al-Andalus*,” in *Actas del XII Congreso de la U.E.A.I., Málaga, 1984* (Madrid, 1986), 509–35.
  108. The Abbasid caliph al-Ma’mun founded the first two astronomical observatories (sing. *marṣad*), one in Baghdad and another in Damascus. Although they were temporary, these observatories laid the foundation for other observatories created in subsequent centuries. The Arabs corrected the Ptolemaic dogma through observations and new mathematical calculations, and also incorporated the knowledge of Persian astronomy: David Pingree, “The Greek Influence on Early Islamic Mathematical Astronomy,” *Journal of the American Oriental Society* 93, 1 (1973): 32–43; Muammar Dizer, “Observatories and Astronomical Instruments,” in *Science and Technology in Islam*, ed. A. Y. al-Hassan, 2 vols., Different Aspects of Islamic Culture 4 (Paris, 2001), 2:236–39, 246–47.
  109. Samsó, *Las ciencias*, 465–199. Samsó suggests that when Prince al-Hakam ascended to the caliphate, he probably “revived the popularity of astrology in the court.” The presence of astrologers in the palace was closely connected with the promotion of astronomy and the rest of the sciences in al-Andalus throughout the tenth century.
  110. Miquel Forcada Nogués, *Enciclopedia de Al-Andalus* (Almería, 2004–2013), s.v. “Aḥmad b. Fāris”; Miquel Forcada Nogués, “Astrology and Folk Astronomy: The *Mukhtasar min al-Anwā’* of Aḥmad b. Fāris,” *Suhayl* 1 (2000): 107–206; Ibn Ḥayyān, *Anales palatinos*, 187; Ibn Ḥayyān, *Muqtabis* (VII), 148; Sonja Brentjes, “Courtly Patronage of the Ancient Sciences in Post-Classical Islamic Societies,” *Al-Qanṭara* 29, 2 (2008): 403–440.
  111. Joan Carandell, “Dos cuadrantes solares andalusíes de Medina Azara,” *Al-Qanṭara* 10, 2 (1989): 329–42; King, “Los cuadrantes,” 98–99. Both authors analyze the possible reasons for the crude execution of these sundials.
  112. The hypothesis about an astrological meaning for the vegetal decoration in the Hall of ‘Abd al-Rahman in the Madinat al-Zahra’ (Acién, “Materiales,” 188–91; Fierro, “Plants,” 127–28) is not convincing enough in my opinion.
  113. Monica Rius, *La alquibla en al-Andalus y al-Magrib al-Aqṣā* (Barcelona, 2000), 106; Julio Samsó, “La ciencia árabe-islámica y su papel,” *Revista de Libros* 75 (March 2003): <http://www.revistadelibros.com/articulos/la-ciencia-arabe-islamica-y-su-papel> [accessed February 25, 2014]. The same can be said about palatine oratories in the Alhambra.
  114. Susana Calvo Capilla, “Analogies entre les Grandes Mosquées de Damas et Cordoue: Mythe ou réalité,” in *Umayyad Legacies: Medieval Memories from Syria to Spain*, ed. Antoine Borrut and Paul M. Cobb (Leiden, 2010), 286.
  115. Heinz Halm, *The Fatimids and Their Traditions of Learning* (London and New York, 1997), 72–73.
  116. Dominique Sourdel and J. Sourdel-Thomine, *La civilisation de l’Islam classique* (Paris, 1983), 313.
  117. It was “a long oblong gallery in a large hall” with rooms on either side, the walls of which were lined with “bookcases made of wood, and decorated”: al-Muqaddasī, *The Best Divisions for Knowledge of the Regions: A Translation of Ahsan al-Taqasim fi Ma’rifat al-Aqalim*, trans. Basil Anthony Collins (Reading, Eng.: 1994), 263–64; D. Fairchild Ruggles, ed., *Islamic Art and Visual Culture: An Anthology of Sources* (Malden and Oxford, 2011), 12–13; Bennisson, *Great Caliphs*, 180–81.
  118. In fact, the scientific activity promoted at Raqqada by Ibrahim II (d. 902) might have served as a model for the caliphs of Cordoba, according to Forcada Nogués, *Ética e ideologia*, 163–64; Ḥaṣan Ḥusnī ‘Abd al-Wahhāb, “Bayt al-Hikma ou ‘Maison de la Sagesse’ d’Ifriqiya,” *IBLA* (Tunis) 28, 112 (1965): 353–72; Nejla M. Abu Izzeddin, *The Druzes: A New Study of Their History, Faith, and Society* (Leiden, 1993), 63.
  119. Sourdel and Sourdel-Thomine, *La civilisation*, 313–14; Abu Izzeddin, *Druzes*, 83–84; Bennisson, *Great Caliphs*, 181. In Halm’s opinion, the Dar al-‘Ilm created by al-Hakim was modeled after the institution founded by the Persian vizier Abu Nasr Sabur ibn Ardashir between 991 and 993 in al-Karkh, a southern suburb of Baghdad inhabited by the Shi’a. Description of al-Maqrīzī in Halm, *Fatimids*, 72–73.
  120. Avicenna, *The Life of Ibn Sīnā*, ed., annot., and trans. W. E. Gohlman (New York, 1974), 35–37.
  121. The Basra library hosted gatherings of dilettante erudites who talked about poetry in meetings where both residents and foreigners were welcome: Mackensen, “Moslem Libraries,” 88–89.
  122. In a study of the painted amphora found in the palace of Jawsaq al-Khaqani in Samarra, Rice identifies a potential location for the majlis in a room adjoining the main hall, which was domed and had a cruciform plan: D. S. Rice, “Deacon or Drink: Some Paintings from Samarra Re-examined,” *Arabica* 5 (1958): 15–19.
  123. Bennisson, *Great Caliphs*, 181; Samer M. Ali, *Arabic Literary Salons in the Islamic Middle Ages: Poetry, Public Performance, and the Presentation of the Past* (Notre Dame, Ind., 2010). In the Abbasid lands, cities also hosted meetings of the *mutakallimūn* (Islamic theologians), who engaged in a kind of scientific and philosophical debate to which non-Muslim learned men were welcome. For *mutakallimūn* meetings and their potential existence in al-Andalus, see Fierro, *La heterodoxia en al-Andalus*, 164n20; Echevarría, *Almanzor*, 213.
  124. As studied by Cynthia Robinson, “Seeing Paradise: Metaphor and Vision in *Taiḥa* Palace Architecture,” *Gesta* 36, 2 (1998): 145–155; Cynthia Robinson, *In Praise of Song: The Making of Courtly Culture in Al-Andalus and Provence, 1005–1134 A.D.*, The Medieval and Early Modern Iberian World 15 (Leiden, 2002).
  125. In Iraq madrasas appeared as institutions with their own buildings during the tenth century: George Makdisi, *The*



- Rise of Colleges: Institutions of Learning in Islam and the West* (Edinburgh: University Press, 1981), 24–33; Géal, “Les bibliothèques,” 21–22; John Pedersen, “Some Aspects of the History of the Madrasa,” *Islamic Culture* 3 (1929): 529–37.
126. Lionel Casson, *Las bibliotecas del mundo antiguo* (Barcelona, 2003); El-Abbadi, *Vie et destin*, 145–79; *La biblioteca infinita. I luoghi del sapere nel mondo antico*, ed. Roberto Meneghini and Rossella Rea (exh. cat.) (Milan: Electa, 2014).
127. The walls of each auditorium are lined with a double or triple bench on the lower part, and with a prominent seat in the middle of one of the sides, as a sort of a *cathedra*. Grzegorz Majcherek, “The Auditoria on Kom el-Dikka: A Glimpse of Late Antique Education in Alexandria,” in *Proceedings of the Twenty-Fifth International Congress of Papyrology, Ann Arbor, July 29–August 4, 2007*, ed. Traianos Gagos, American Studies in Papyrology (Ann Arbor, Mich., 2010), 471–84. On the architectural typology of ancient libraries, see Gisella Cantino Wataghin, “Le biblioteche nella tarda antichità: L’apporto dell’archeologia,” in *Lecture, livres, bibliothèques dans l’Antiquité tardive* (Colloque international Paris, INHA, 16–17 avril 2010), ed. Jean-Michel Carrié, *Antiquité Tardive* 18 (Turnhout, 2010): 21–62.
128. Ibn Jubayr (twelfth century) still mentions the ancient buildings intended for philosophers and teachers (*ahl al-rī’āsa*), as well as for the observation of the stars. Ibn Jubayr, *Rihla = A través del Oriente: El siglo XII ante los ojos*, trans. Felipe Maíllo Salgado (Barcelona, 1988), 55.
129. Lea Margaret Stirling, *The Learned Collector: Mythological Statuettes and Classical Taste in Late Antique Gaul* (Ann Arbor, Mich., 2005), 229–31, and 205; Peter Brown, *Power and Persuasion in Late Antiquity: Towards a Christian Empire* (Madison, Wis., 1992), 35–70 (examines the devotion to the Muses in scholarly circles trained on *paideia* in late antiquity).
130. García y Bellido, “El sarcófago romano de Córdoba,” 26–30; Noguera Celdrán, “Algunas consideraciones sobre el sarcófago,” 307.
131. Paul Zanker, *The Mask of Socrates: The Image of the Intellectual in Antiquity* (Berkeley, 1995), 307–30; Garth Fowden, “The Pagan Holy Man in Late Antique Society,” *The Journal of Hellenic Studies* 102 (1982): 33–59.
132. R. R. R. Smith, “Late Roman Philosopher Portraits from Aphrodisias,” *The Journal of Roman Studies* 80 (1990): 127–55; Zanker, *Mask of Socrates*, 311–14; Stirling, *Learned Collector*, 205–27. We know another gallery of statues of poets and philosophers from the Ptolemaic period in Memphis, Egypt: Jean-Philippe Lauer and Charles Picard, *Les statues ptolémaïques du Sarapieion de Memphis* (Paris, 1955).
133. Zanker, *Mask of Socrates*, 289–307.
134. Cicero mentions the presence of Hermeracleae in Athenian palaestra and gymnasia during the fourth century; he actually bought several *hermae* of Athena for his library. In Pierre Paris, *Dictionnaire des antiquités grecques et romaines*, s.v. “Hermae, Hermulae.”
135. “Child’s Sarcophagus: Athletic Games” (end of second century/beginning of third century A.D.: Paris, Musée du Louvre, inv. no. MR 775; “Sarcophagus” (s. II): Side, Turkey, Side Archaeological Museum.
136. Taragan, “Atlas Transformed,” 12, 22–27.
137. At the same time that the study of the “sciences of the Ancients” was promoted in the palace, al-Hakam II, disregarding the warnings of the legal scholars (*fuqahā’*) on the dangers of philosophy and astronomy, undertook the enlargement of the Great Mosque of Cordoba, where the religious orthodoxy was publicly ratified through an epigraphic program that emphasized the Maliki creed and “divine determinism.” See Susana Calvo Capilla, “La ampliación califal de la mezquita de Córdoba: Mensajes, formas y funciones,” *Goya: Revista de Arte* 323 (2008): 89–106; Forcada Nogués, *Ética e Ideología*, 185–92.
138. Gutas, *Greek Thought*, 88–95; Salvatore Settis, “Continuità, distanza, conoscenza: Tre usi dell’antico,” in *Memoira dell’antico nell’arte italiana*, ed. Salvatore Settis, 3 vols. (Turin, 1984–86), vol. 3, *Dalla tradizione all’archeologia*, 373–486. The ancient Hispanic heritage was part of this cultural claim: see Janina Safran, *The Second Umayyad Caliphate: The Articulation of Caliphal Legitimacy in al-Andalus* (Cambridge, Mass., 2000), 164–65; and Aillet, *Les Mozarabes*, 208–9.