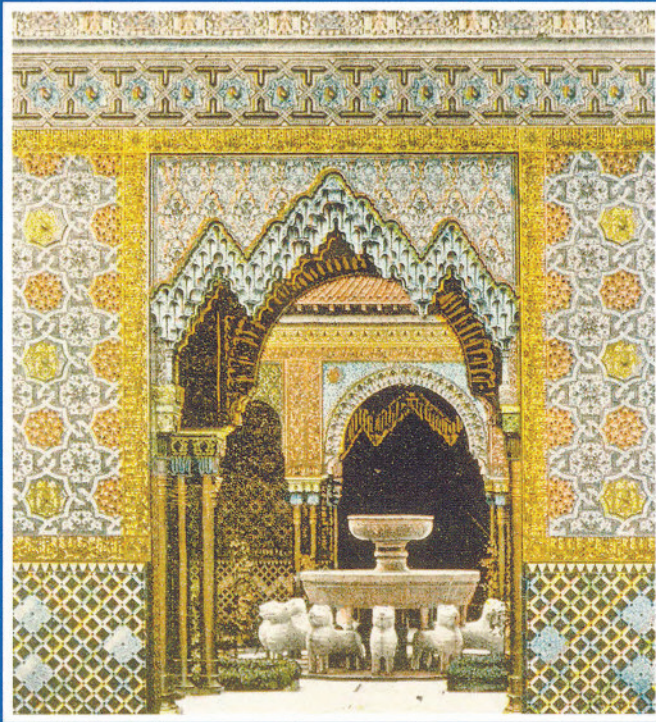


# Revisiting *Al-Andalus*

Perspectives on the Material Culture  
of Islamic Iberia and Beyond

*Edited by Glaire D. Anderson  
and Mariam Rosser-Owen*



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# THE DWELLINGS OF MADĪNAT AL-ZAHRĀ': A METHODOLOGICAL APPROACH

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## 1. INTRODUCTION

The second half of the tenth century, during the reigns of 'Abd al-Raḥmān III and al-Ḥakam II, was a time of fervent construction. The new court city of Madīnat al-Zahrā' provided a unique set of circumstances for these activities, which brought about intense development in the design of new architectural forms, as well as in the definition of architectural programs and functional types. Because of this innovation, the new capital city became a veritable laboratory for experimentation and for the development of architectural forms.<sup>1</sup> Many of these were the fruit of long evolutionary processes, beginning with the first construction at the Great Mosque of Córdoba, which is the earliest extant example of Andalusī architectural culture. Other new forms were undoubtedly created during the course of this massive project, which clearly required abundant contributions of material and human resources, not only for the city's construction, but also for its conception and design.

The scarcity of information available today on Andalusī architecture before the year 936 compels us to consider Madīnat al-Zahrā' as the point of origin of much of the architecture of subsequent periods, as there is no evidence to prove otherwise.<sup>2</sup> Although many forms and

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\* A simpler version of this article, sans computer reconstructions, was published as Antonio Almagro Gorbea, "Análisis tipológico de la arquitectura residencial de Madīnat al-Zahra'", in *Al-Andalus Und Europa zwischen Orient und Okzident* ed. Martina Müller-Wiener et al. (Düsseldorf: Michael Imhof Verlag, 2004), pp. 117–124. The introduction was translated by Margaret Hander, and the catalogue by Glairé D. Anderson.

<sup>1</sup> Antonio Almagro, "La arquitectura en al-Andalus en torno al año 1000: Madīnat al-Zahra'", in *La Península Ibérica en torno al año 1000. VII Congreso de Estudios Medievales* (León, 2001), pp. 165–191.

<sup>2</sup> Until recently, the only structures believed to date from the eighth or ninth centuries were military. Now, the increasing number of examples allows us to understand this period as a more creative one than had previously been thought. The recent discoveries in the Morería area of Mérida, for example, indicate the existence of residential buildings that were well organized, and based on compositional principles that have not yet been analyzed contextually or comparatively. See Pedro Mateos Cruz and Miguel

types probably had influences earlier than their first appearance in the palatine city near Cordoba, their employment there undoubtedly played a role in defining their very nature and subsequent development. In fact, it is important to note that the full range of architectural types found in al-Andalus during the following five centuries was already present at Madīnat al-Zahrāʾ.

It must be clarified that the term ‘architectural type’ may be understood as a manner of spatial organization that follows a particular set of criteria, and tends to correlate with the functional aim of the structure in question. However, in Islamic architecture in general and in al-Andalus in particular, this relationship is not always evident. Andalusī residential structures or dwellings show different characteristic architectural types, all of which are present at Madīnat al-Zahrāʾ. In addition, there is evidence for other architectural types that seem to have been born and died there, as they were never seen again in later houses or palaces that otherwise adhered to the same models. In Islamic architecture generally, and especially in al-Andalus, architectural types are frequently applied to several uses, often impeding the definitive identification of the true functions of a structure. The building forms themselves did not dictate a particular function, rather this was determined by the activities carried out within each architectural space.

As a result, it is impossible to assert that all the buildings analyzed in this study were unequivocally used as residences. While it is comparatively easy to identify which structures were designated for the ceremonies and functions of the royal court, because of the grandness of their layout and the sumptuousness of their décor, it is not known which architectural forms hosted the palace’s various administrative functions. It is therefore possible that some of the structures analyzed here as dwellings were actually destined for more service uses. Furthermore, some of the plans presented here contradict earlier restorations, which could have been carried out without sufficient information.

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Alba Calzado, “De Emerita Augusta a Marida”, in *Visigodos y Omeyas. Un debate entre la Antigüedad Tardía y la Alta Edad Media*, ed. Luis Caballero and Pedro Mateos, *Anejos de Archivo Español de Arqueología* 23 (Madrid: Instituto de Historia, 2000), pp. 143–168, especially pp. 156–163.

## 2. METHODOLOGY

This study has been conducted following the methodology that has become customary in the research conducted by the Escuela de Estudios Árabes in Granada. Each project is based on a precise survey of the architectural remains to be analyzed. Considering Madīnat al-Zahrā'’s expanse, extreme elevation changes and terracing system, we opted for an aerial photogrammetric survey.<sup>3</sup> It was then necessary to complement this with a field survey, so as to detect errors, misinterpretations and omissions of significant details. The data obtained from measuring the aerial photos was then linked to and complemented with other drawings obtained through photogrammetry on the ground. We thus produced plans at various scales, which served as the foundation for our hypotheses of the original building forms, which were initially drawn in AutoCAD. These studies were based on the existing site remains, as well as on information drawn from comparative studies of buildings from coeval, earlier and later periods.

Next, each structure was digitally modelled, creating a complete model of the overall compound. The use of computerized media to generate virtual reconstructions that allow for the observation of spatial qualities has become a powerful means for the diffusion of research, but it also permits us to conduct analyses that lead to deeper architectural knowledge. The modelling process includes the following steps: a preliminary study of the objectives of the model; analyses of similar cases to establish criteria for the rendering of uncertain, doubtful or indefinite features; a draft virtual model that establishes levels of metric precision and realism, the management and illumination of the model; and, finally, a critique of the preliminary results.

The qualitative leap that occurs when information is transferred into the digital environment is immense. In this medium, the model becomes a powerful source of information on measurements, materials and perception, which can provide information that is useful in countless ways. Once this model is generated, it offers a wide range of possibilities. It can be used to obtain a particular visual representation or to perform linear, area or volume measurements. It can help in associating material qualities and textures, or we can use it to explore photorealistic effects

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<sup>3</sup> Photogrammetry is the technique based on the use of photographs for measuring, and then making plans of land, buildings and any other objects.

(as in Fig. 10), or to navigate through simulated virtual environments. The products of these digitally-configured spaces are numerous.

This tool enables us to understand the architectural characteristics of a reconstructed space through immersion, and to observe its spaces through a generated perceptive experience. It provides us with the opportunity to carry out a perceptual analysis through simulating a particular trajectory through space. It allows us to recognize spatial sequencing, to observe architecture from several positions chosen at random, and to obtain a bird's eye view of the landscape or of the reconstructed architecture. In other words, we may enjoy and contemplate the architecture of the past using a tool of the future.

### 3. TYPOLOGICAL ANALYSIS

Not including the gardens and esplanades, at least 50% of the excavated area of the palace of al-Zahrā' is occupied by structures that we believe to be residential (Fig. 1),<sup>4</sup> that is, a total of seventeen buildings or constructed units. Among these, we may establish a primary classification based on whether a building's spaces are organized around a patio or not.<sup>5</sup> Where a patio is included, this is always the element around which the building is organized, through which it receives light and ventilation, and around which internal traffic is patterned. This group is the more prevalent of the two and within it we find buildings without porticos, buildings with porticos around their perimeters, buildings with porticos on only one side, or on opposite sides. While some are true porticos with pillars, others are actually anterooms-porticos.<sup>6</sup> These have been included in the portico group in this study.

An additional typological classification relates to the layout of the main halls within residential units. There are two basic groups: rooms arranged frontally, and those arranged transversally. In both groups, there is a tendency for the main hall to be accompanied by two lateral

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<sup>4</sup> Antonio Almagro Gorbea, "Jardín con plantas (y alzados) de papel", in *Arquitectura en al-Andalus. Documentos para el siglo XXI*, ed. Alfonso Jiménez et al. (Barcelona: El Legado Andalusi, 1996), pp. 205–284, especially p. 211.

<sup>5</sup> Antonio Orihuela Úzal, *Casas y Palacios Nazaríes* (Barcelona: El Legado Andalusi, 1996), pp. 19–26.

<sup>6</sup> Georges Marçais, "Salle, Antisalle. Recherches sur l'évolution d'un thème de l'architecture domestique en pays d'Islam", *Annales de l'Institut d'Études Orientales X* (1952), pp. 274–301.

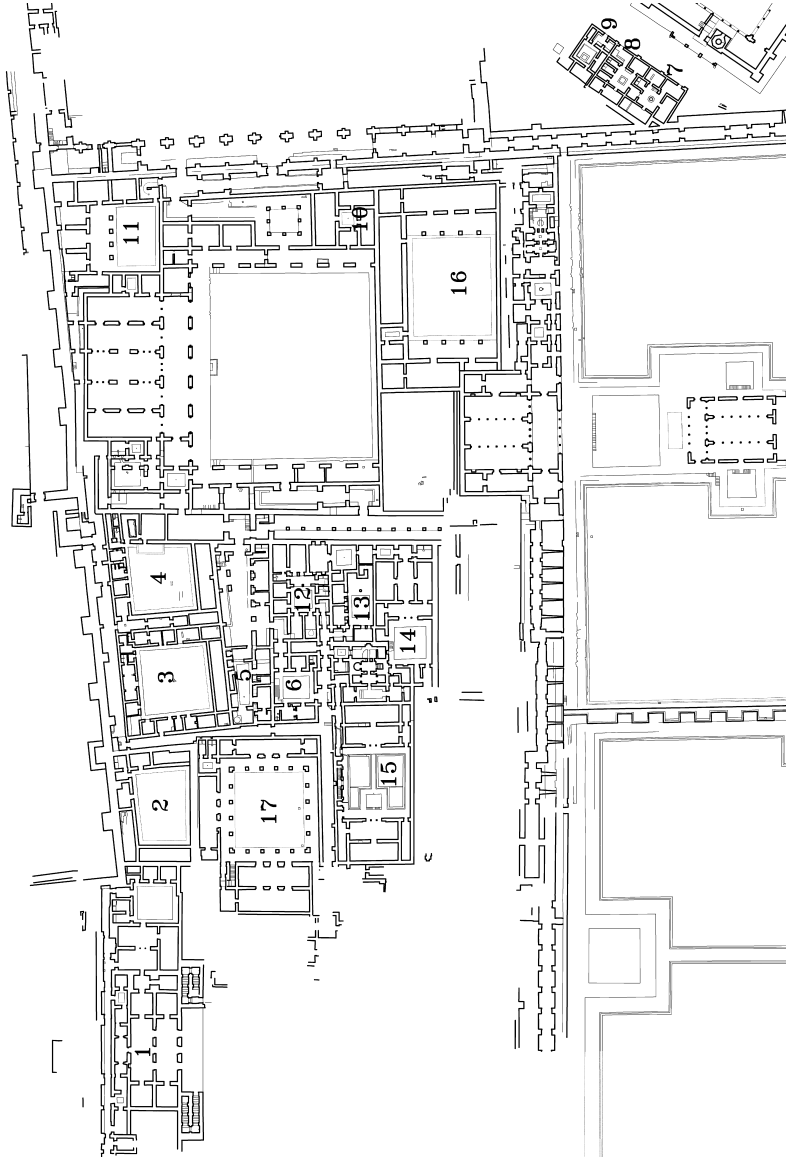


Fig. 1. General Plan of the palace of Madīnat al-Zahrā' with the location of the residential buildings marked.

rooms. In the first type the three rooms tend to be of similar size. If the reception room is arranged transversally, it tends to be somewhat longer, while the other two rooms tend to be smaller in size, and more square-shaped in their proportions.

This classification invites suggestions about the possible origins of these architectural types, as well as their later development. The most common model—the house with a patio—corresponds to the type of Mediterranean house that is also widespread throughout the Near East. Its origins possibly lie in the Roman architectural tradition of the Iberian Peninsula, or perhaps in the residential structures found in the earliest Islamic architecture that, in turn, propagated the Eastern Roman tradition. It is important to emphasize a tendency that is also characteristic of Umayyad models of the eastern Mediterranean, i.e. the relative scarcity of porticos in the buildings of Madīnat al-Zahrā', especially of porticos that run the entire perimeter of the patio. This absence clearly breaks with the tradition of the classical Roman peristyle dwelling, and later becomes a norm of Andalusī architecture. Patios with one or two porticos on opposite sides—according to the model that becomes more widespread in al-Andalus—seem to be of Eastern origin, and appear to find their closest chronological parallels in the palace of Ukhaidir in Iraq, and the Fatimid houses of Fustat.<sup>7</sup>

As for the layout of the main halls, the longer room with two side rooms seems also to be Eastern in origin, but this model was not long-lived in al-Andalus. Houses like that next to the Dār al-Jund (Fig. 5, n. 11) clearly draw on precedents such as Ukhaidir, and the Syrian *buyūt* of the Umayyad desert palaces.<sup>8</sup> The *oecus* of the Roman villae, which as reception rooms could have had a function similar to that of the main halls of the Islamic houses,<sup>9</sup> cannot be considered a direct precedent, because the side rooms that often accompany the *oecus* for the purposes of symmetry rarely connect to the main room.

The main halls laid out transversally, with or without rooms at their extremes, are the prototype for the main hall of Andalusī houses and

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<sup>7</sup> K. A. C. Creswell, *Early Muslim Architecture, vol. II, Early Abbasids, Umayyads of Cordova, Aghlabids, Tulunids and Samanids, A.D. 751–905* (Oxford: Oxford University Press, 1940), pp. 71–73; Creswell, *The Muslim Architecture of Egypt, vol 1* (Oxford: Oxford University Press, 1952), fig. 63.

<sup>8</sup> Creswell, *Early Muslim Architecture, vol. I, Umayyads A.D. 622–750* (Oxford: Oxford University Press, 1969).

<sup>9</sup> María Cruz Fernández Castro, *Villas Romanas en España* (Madrid: Ministerio de Cultura, Dirección General de Bellas Artes, Archivos y Bibliotecas, 1982), p. 202.

palaces. Most typical are those located on the north and east sides of the Court of the Pillars (Fig. 9, n. 18), which already show the unmistakable proportion and layout of the rooms of later Andalusí dwellings. The precedent for this model has not yet been identified, although perhaps it was adopted because it was simpler than the type previously mentioned.<sup>10</sup>

#### 4. CATALOGUE

The second half of this article consists of a catalogue of the dwellings of Madīnat al-Zahrā' with brief accompanying descriptions which are complemented by the work of López Cuervo,<sup>11</sup> Hernández Giménez,<sup>12</sup> and Vallejo Triano.<sup>13</sup>

##### 4.1. *Houses without courtyards*

###### 1. *Residence of the Caliph (Dār al-Mulk) (Fig. 2a)*

Situated in the highest zone of the city even as it is dominated by the supposed *alcazaba*, the dwelling which is believed to be the private residence of the caliph occupies a privileged site, due not only to the security of its position but to its view overlooking the rest of the city and the surrounding landscape. The excavated remains of this site are organized in two groups of rooms. The main zone consists of three parallel halls fronted by a large terrace, open to the city and the landscape (though possibly covered and porticoed along its front façade), and which enjoyed a panoramic view over the city and the Guadalquivir valley. Remains of what appears to be a double staircase linked the terrace to the unexcavated lower zone to the south, and to the rest of the city's residential zone. From this terrace-portico, one entered a hall which probably had three doors similar to those which linked

<sup>10</sup> Christian Ewert, "Tradiciones omeyas en la arquitectura palatina de la época de los taifas. La Aljafería de Zaragoza", in *Actas del XXIII Congreso Internacional de Historia del Arte*, Vol. II (Granada, 1973), pp. 62–75.

<sup>11</sup> Serafín López Cuervo, *Medina az-Zahra, Ingeniería y Formas* (Madrid: Ministerio de Obras públicas y Urbanismo, 1985).

<sup>12</sup> Félix Hernández Giménez, *Madīnat al-Zahra. Arquitectura y decoración* (Granada: Patronato de la Alhambra, 1985).

<sup>13</sup> Vallejo Triano, Antonio, "La vivienda de servicios y la llamada Casa de Ya'far", in *La Casa Hispano-Musulmana. Aportaciones de la Arqueología*, ed. Jesús Bermúdez López and Andrés Bazzana (Granada: Patronato de la Alhambra y Generalife, 1990), pp. 83–103.



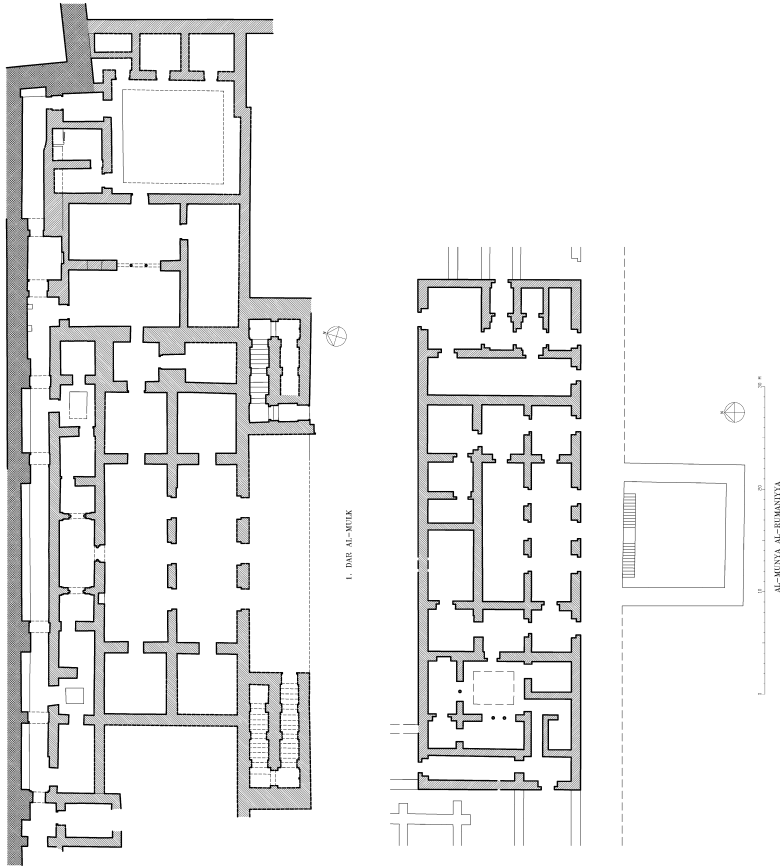


Fig. 2. Houses without courtyards.

this hall with the next. The hall has two square rooms located at both ends. The next hall has a similar arrangement, with square chambers as well. The third hall is visibly much narrower and forms a small hall with two small chambers; these in turn provide access to two rooms which open onto two small courtyards. From these one is able to walk down a service corridor that separates the entire arrangement from the wall. Communication between the main hall and the small third one was through a single arch, similar to those which provide access to the two rooms. Surfaces are decorated with panels of carved stone with the typical geometric designs and carved vegetal ornament. Perhaps the most outstanding elements of this ensemble are the pavements, made up of large tiles of fired clay of an intense red colour, alternating with smaller cut stones and stone strips, forming distinct square and chevron-patterned borders. The ceramic tiles with geometric designs of inlaid stone are equally outstanding (Fig. 3).

The western side of this complex remains unexcavated, while the eastern side contains another ensemble of rooms organized around a courtyard which can be identified as a service area or as a more private zone. This courtyard lacks porticoes but has a walkway or perimeter pathway and an entrance from the corridor next to the city wall. A latrine is located next to this entrance. On the eastern side there was probably a set of rooms, while on the western side there are two large rooms connected by a wall pierced by a triple-arched passage. These two rooms appear to be the result of a reconstruction which unified various rooms, judging by the fragmented character of its pavements. The easternmost hall has one doorway to the courtyard and another to a third room situated on the south side. The western hall is connected to the east bedroom of the central hall of the principal nucleus through a room in between. Another doorway provides access to the corridor adjacent to the city wall. As a result the door to the courtyard, the triple archway and the access doors to the central hall are aligned, forming an axis that possibly indicates the more important character of these rooms. The Dār al-Mulk's service quarter may be included within the following group of houses, those with courtyards and without portico, but because of their secondary character within the organization of the caliphal residence we considered it separately.

This residence constitutes a singular arrangement, whose closest parallel is the Muniyat al-Rummāniyya, near Madīnat al-Zahrā' (Fig. 2b),

according to Velázquez Bosco's interpretation of the plan,<sup>14</sup> and which also commands a vast perspective from the height of a terrace. According to our interpretation, the plan of the residence at al-Rummāniyya consists of two long halls arranged parallel to one another, with rooms at either end, connected to one another and to the exterior through triple-archways. In front of the halls is a wide platform with a pool, all of which look out over garden areas or cultivated areas organized in terraces. Behind the principal halls there is a hall with more private rooms, though these lack a courtyard to provide them with light and air. This zone is accessed from the rooms of the central hall. To this main nucleus, a type of private residence was attached at the western end, organized around a small courtyard without porticos. On the opposite side, there is a series of service rooms and another series of unexcavated structures.

A similar spatial organization is seen in the western side of the so-called Court of the Pillars (Patio de los Pilares), which will be described below. However, this architectural configuration did not really continue, except for a possible reflection in the Alphonsine changes to the courtyard of the Alcázar of Seville.<sup>15</sup>

#### 4.2. *Houses with courtyards but without porticos*

This type constitutes the most numerous group, at al-Zahrā' and throughout al-Andalus. In the upper area immediately at the perimeter wall are three buildings of great size organized around large courtyards. Their location in the most peripheral section of the residential sector leads us to believe that they had a service function and were destined for a large number of people. The large size of the courtyard suggests that they were occupied by a group more numerous, and of a lower class, than the buildings described above. Of these, the one

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<sup>14</sup> On the Muniyat al-Rummāniyya, which was destroyed to make way for the farmhouse which today occupies the site, see the contribution by Anderson in this volume. Ricardo Velázquez Bosco, who excavated the site, mentions spaces which were not reflected in his plan, leading us to conclude that he was not especially attentive to the archaeological details. As a result, we cannot verify the accuracy of the plan of al-Rummāniyya. See Ricardo Velázquez Bosco, *Medina Azzahra y Alamiriya* (Madrid: Junta para Ampliación de Estudios é Investigaciones Científicas, 1912); and Manuel Ocaña Jiménez, "La ruinas de Alamiría, un yacimiento arqueológico erróneamente denominado", *Al-Qantara* 5 (1984), pp. 365–381.

<sup>15</sup> Antonio Almagro, "El Patio del Crucero de los Reales Alcázares de Sevilla", *Al-Qantara* 20 (1999), p. 346 ff.

situated more to the west has suffered the most damage, and as a result its reconstruction is the most problematic. It also occupies the most elevated position, mediating between the Residence of the Caliph and the other buildings.

2. *Upper West Courtyard (Fig. 4, no. 2)*

This dwelling is situated next to the Residence of the Caliph (Dar al-Mulk), although at a slightly lower level. It is difficult to interpret this structure, due to the level of destruction of the south zone of this building. Its plan is roughly trapezoidal, its courtyard paved with limestone, and it has halls on the three short sides. In contrast to the other two structures with similar characteristics situated further to the east, this dwelling is attached to the north wall of the medina. A latrine, accessed via a small passage entered from the courtyard, is located at its northeast corner. Adjacent to the latrine is another room paved with clay tiles. There is little else to say about this structure. The problem of access is especially confusing: the only point which could practically have been the entrance was the southwest corner, a site near the stair of the Court of the Pillars, at a lower level. This structure may have had a connection with that situated at its feet and with the Dār al-Mulk, which we also believe to have been accessible from this area.

3. *Upper central courtyard (Fig. 4, no. 3)*

This building has a square plan with a large central courtyard and rooms on all four sides. It is separated from the previous dwelling by the street by which the aqueduct enters the palace. The courtyard has walkways around its perimeter and is paved with thick slabs of limestone. If it was indeed a dwelling, it had to have been a service quarter. It has a hall with two sleeping alcoves at the centre of the north side and an adjacent latrine, with other common latrines located at the far eastern end of this hall. We believe that it was accessed via the west, from the street which descends, at the point at which the levels of the courtyard and the street coincide, although the wall there has been reconstructed without space for a doorway.

4. *Upper east courtyard (Fig. 4, no. 4)*

This building is very similar to the previous one, although its east and west bays cover spaces corresponding to different points of access to the lower terrace. Its entrance may have been situated at the highest point of the street which descends to the presumed palace guard area,

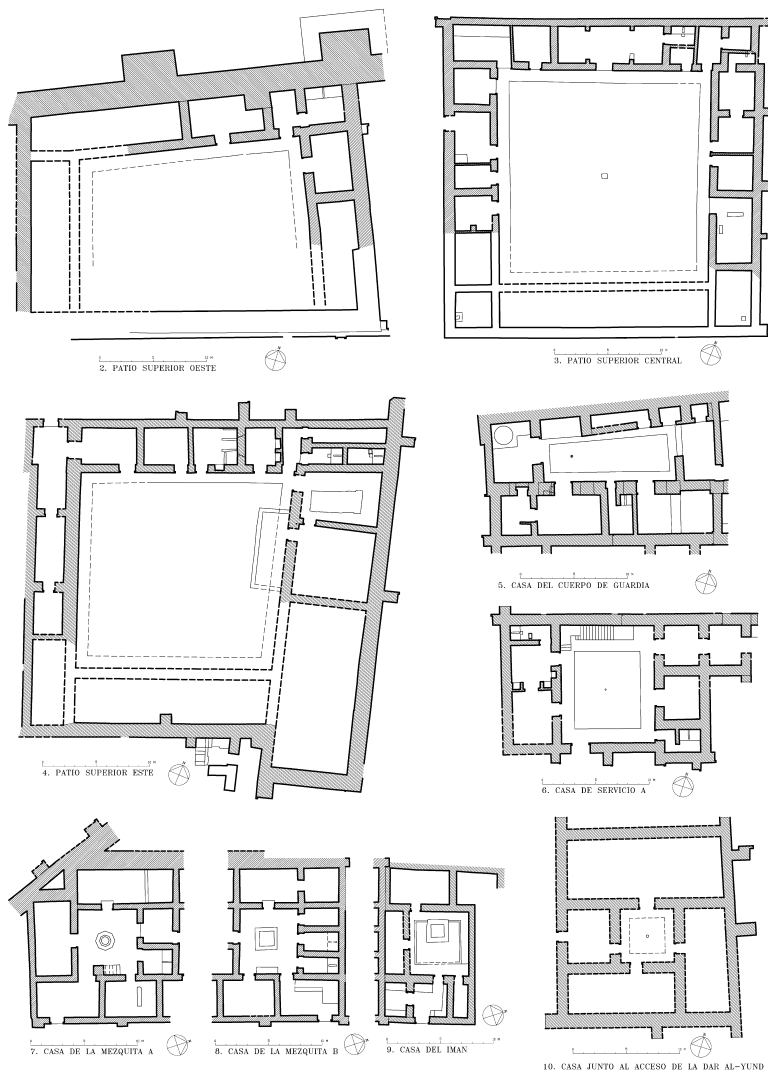


Fig. 4. Houses with courtyards but without porticos.

probably in the room at the corner. This dwelling also had latrines in the northeast corner, representative of a clear tendency which may have been motivated by the predominance of the local winds. In later modifications, a room was constructed within the courtyard. In the south side, at a lower level, there are the remains of a staircase that could connect this courtyard with that situated at its foot.

5. *House in the zone of the bodyguard (Fig. 4, no. 5)*

This dwelling was constructed through the reconfiguration of what must have been a large courtyard with a porch, and which must have served as a façade and entrance to the group of houses which constituted the private residential zone at the foot of the central and eastern upper courtyards. In the far west of this courtyard is a house whose principal rooms occupy part of the pre-existing portico. At the far west is a room with a circular oven similar to that described in service quarter B. This room blocks access to the street which descends further to the west and includes a large door which opens onto the new courtyard. The courtyard is provided with walkways corresponding to a long trapezoidal plan. On its eastern side, two parallel walls form a vestibule with a bent entrance. On the south side there are two main halls, undoubtedly the principal ones of the residence, separated by a latrine. The westernmost hall has a lateral bedroom at its far west side. This house has been interpreted as the residence of the commander of the guard, although the presence of the oven in the westernmost room, the result of a rebuilding, leads us to think that this was a service residence destined for the preparation of food and to house those responsible for this duty.

6. *Service quarter A (Fig. 4, no. 6)*

This structure which we identify as a possible dwelling actually functions as a zone for passing between the public area of the palace, and the residential structures which are integrated among other houses such as the Court of the Pillars and the so-called House of Ja'far are located. The courtyard of this structure is square with walkways, but with halls on only the east and west sides. On the west side it has two connected rooms, one with a latrine at the far north, provided with a water basin. In the front bay, there is a latrine with a bent entrance passage, a simple room, and another which may have been a vestibule possibly accessed

from that of Service Quarter B (see cat. no. 12, below). On the north side of the courtyard is a connected stair, which must have led to an upper floor of the eastern bay.

All of the dwellings described, along with those which we call Service Quarters B and C, must have accommodated servants of the palace. Some could be used as kitchens which would have provided food to other parts of the palace and other dependencies could have functioned as storage; officers of the court would have had their residences here as well. Their placement in an intermediate zone between the private residences of the palace—the houses of important officials, for whom the so-called House of the Small Pool (Casa de la Alberca), and the House of Ja'far were destined—and the public zone confirms their use as residences for servants of the caliph and his court.

In the vicinity of the mosque, outside the palace enclosure proper, are three dwellings which must have accommodated people or activities related to the mosque. All of these correspond to the model of courtyard without porticos, and in their dimensions and forms constitute true archetypes of the Andalusí house at its simplest.

7. *Mosque Service Dwelling A (Fig. 4, no. 7)*

Situated in front of the mosque, this building follows the model of the simple Andalusí house. It possesses a square courtyard with a well in the centre. Access was through the south side, via a bent entrance passage. The main room is situated on the north side and has a bedroom at its east end. On the west side there is another hall of regular size while in the south bay there is a room next to the vestibule which must have been the kitchen. The east bay has two rooms: the southernmost was a latrine, and the second communicated with the adjacent dwelling. This house had an upper floor, probably above the bay of the entrance passage and the kitchen, judging by the presence of a stair located at the south side of the courtyard.

8. *Mosque Service Dwelling B (Fig. 4, no. 8)*

The function of this house is not completely clear, due to the presence of three narrow connected rooms, of which two can be interpreted as latrines. Nevertheless, we include the structure within the catalogue of dwellings because its structure is in every way identical to that of a house. Together with the previously described service dwelling, with which this one communicated, the two form a unified symmetrical arrangement. The dwelling was accessed through a bent entrance

passage, with a bench, and had a main room on the north side with a bedroom communicating with it through a doorway. In the centre of the courtyard there is a small pool. The aforementioned latrines are located on the east side, while a room which may have been the kitchen, and which is similar to the kitchen of the previously described dwelling, is located next to the vestibule. It is possible that this building was planned as a house and modified afterwards in order to serve the mosque, though this is not necessarily the case, given the independence between architectural form and function to which we alluded above.

9. *House of the Imām (Casa del Imán) (Fig. 4, no. 9)*

We have given this name to a small dwelling situated next to those described above, and therefore located opposite the main entrance of the mosque. It is an even simpler variant of residential architecture than the previous example, but is in every way characteristic of the Andalusí house. The dwelling is accessed via a bent entrance passage centred on the south side, with an adjacent small storage room and a latrine in the southeast corner. The main hall on the north side has neither a bedroom nor a sleeping alcove, while a room on the west side may have been the kitchen. The courtyard is organized with walkways around the entire perimeter, with a sunken central area for a garden, a small pool displaced to the north, and a canal separating the walkway from the sunken garden.

10. *Dwelling next to the entrance of the Dār al-Jund (Fig. 4, no. 10)*

Another possible house can be identified next to the entrance courtyard to the Dār al-Jund. The walls of this dwelling have completely disappeared, but the existence of a courtyard drain and the pavement of a room permit the reconstruction of its layout, which may have been organized around a square courtyard, with one main hall on the north side and others on the remaining sides. The dwelling was accessed via the large courtyard of the Dār al-Jund.

4.3. *Houses with courtyards and one portico*

This type seems to be that most clearly influenced by eastern architecture. It consists of a courtyard, more or less square, with a portico or ante-room/portico on one of its sides, in three cases oriented to the west. The halls are of the triple longitudinal type, although in two cases they were partially interrupted by later construction.



11. *Dwelling of the Dār al-Ĵund (Fig. 5, no. 11)*

This dwelling is located next to the reception hall of the Dār al-Ĵund and was accessed from its northwest corner, from the alley which separates the aforementioned hall from the city wall. It was also possible to access the dwelling via the spiral ramp situated next to the large eastern entrance portal, which provided access to the palace, and which we believe included the slope to the terrace of the aforementioned portico. The dwelling has a slightly rectangular courtyard with a portico composed of four square pillars on its north side. The main hall has a large gateway which appears similar to an *iwān*, and which could have been closed off from the exterior with leaves attached to its exterior façade. This dwelling is undoubtedly one of the most clearly eastern in flavour, due to its arrangement of three interconnected halls organized with their long sides conforming to the direction of the courtyard axis, recalling the Syrian *buyūt* and the Fatimid houses of Fustat.<sup>16</sup> The dwelling includes a latrine between the lateral west hall and the entrance room, which could be accessed from both. It had one or two rooms on the east side. Later, an additional portico was added to the west side of the courtyard.

12. *Service Quarter B (Fig. 5, no. 12)*

This structure is situated in the residential nucleus of the palace and has two entrances, one at the north from the portico and courtyard (which was closed and divided much later) situated at the foot of the large upper courtyard, and another at the south through the general entrance to the service quarters. Both entrances have double bent vestibules with benches. The dwelling is organized around a square courtyard measuring seven metres a side, with walkways and with rooms on all four sides. The principal ones have a front portico with two openings separated by a central pillar (Fig. 6). The main hall has a double entrance doorway, which prefigures the usual solution in twelfth-century houses. It is organized longitudinally and has another room parallel on its north side, communicating with the first via a doorway. Originally it must have had another bedroom on the south side which

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<sup>16</sup> See previous footnotes 6 and 7.

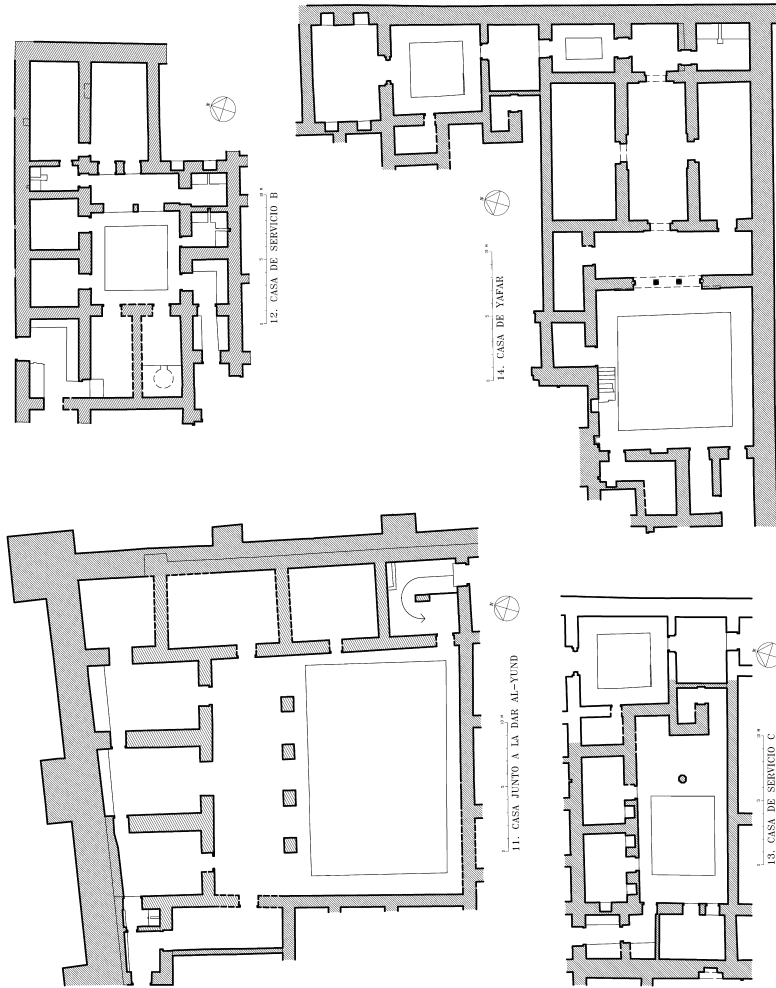


Fig. 5. Houses with courtyards and one portico.

later became the main bedroom of the so-called House of Ja'far when this sector underwent an important change.<sup>17</sup>

Two latrines are located at both far sides of the portico. The north side has two rooms with a doorway to the courtyard. Adjacent is the north bent entrance to the house, with benches at its sides. From this entrance passage and down two steps one arrives at another room of the western side, from which the courtyard was accessed. An adjacent room holds an oven, circular in plan and covered by a dome, indicating that the room must have functioned as a kitchen, not only for serving this dwelling, but for the palace as well. The south side also contains the aforementioned latrine of the far end of the portico, with another latrine with double seats (unique among those which we know at the palace). The presence of three latrines indicates that this was a building intended to serve the palace and used by a considerable number of people.<sup>18</sup> The rest of the bay was occupied by the two southern vestibules provided with benches, and by another vestibule or outer passage shared with Service Quarter C.

### 13. *Service Quarter C (Figs. 5, no. 13)*

Service Quarter C has a slightly elongated courtyard provided with corresponding pavements, and surrounded by bays on three sides. To the south it borders directly on the so-called House of Ja'far, whose later construction supposes the occupation of part of the space of this dwelling. The eastern side, which had, as did the previous dwelling, a portico consisting of two openings supported by an octagonal pillar which must have led to the main halls of the residence, was enclosed by the construction of the private rooms of the House of Ja'far. The latrine which had been on the north side communicated with the next courtyard in order to incorporate itself to the new house. A new latrine with a bent entrance was probably located within the portico, but it was not likely that a direct communication between this dwelling and that of Ja'far existed. During later changes, the principal rooms remained on the north side with an opening directly to the courtyard and various niches in its walls. A room with a double door opening onto the

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<sup>17</sup> On the transformations to the palace at Madīnat al-Zahrā', see Vallejo's contribution in this volume.

<sup>18</sup> Vallejo Triano, "La vivienda de servicios", p. 131 [check].

courtyard was located on the west side, along with two consecutive bent entrance passages with benches.

14. *House of Ja'far (Fig. 5, n. 14)*

The so-called House of Ja'far is one of the richest and most interesting of al-Zahrā's dwellings. Judging by the decoration of its courtyard façade and by some of its organizational features, it was an important residence. It corresponds to an eastern tradition which did not influence the later Andalusí types. The residence was the result of an important rebuilding which affected a substantial part of the residential zone and which was accomplished by demolishing several rooms of other dwellings in order to create its singular organization. Access to the residence was through the south, an area whose destruction hinders any conjectures about its original arrangement. However, it appears that the entrance was not directly related to those of other dwellings in this part of the palace, nor with the adjacent bath. One entered the residence through a small corridor at the southwest corner of the courtyard. On one side is a small room, probably for a porter. Continuing on to the north, another larger room was segregated in order to construct one of the latrines of the nearby bath.

The square courtyard measures twelve metres per side. It was provided with walkways on each side, and paved with violet marble. The north side was occupied by a small room and by the wall of the bath, with a stair to an upper level located over the entrance bay. The façade of the reception hall (Fig. 7), with a triple-arched entrance, is located on the eastern side of the courtyard. The entire façade arrangement, along with the door jambs, is distinguished by its fine carved geometric and floral stone ornament. Moving through the triple arch, one enters a hall/portico with a room located at its far northern end. In front of the entrance, but somewhat off-centre towards the north, an arched doorway provides access to the longitudinally-oriented main hall. On both sides two sleeping chambers of similar size and form are located at either end, connected to the hall through arched doorways. As previously noted, this model was not widely adopted in al-Andalus, and only at Madīnat al-Zahrā' do we find dwellings which adopted this plan (the other being the Dār al-Jund). Instead, the long hall, transversally arranged in relation to the courtyard, is the plan which later became widespread.

In the far end of the central hall an arched doorway gives access to the private zone of the dwelling. One nearly-square room serves

circulation. Access to a latrine exists from the south while the north side communicates with a small courtyard with walkways.

From this courtyard one passes to a vestibule paved in red clay tiles with ornamental borders and thus arrives at a square courtyard provided with walkways, which opens onto what was no doubt the main bedroom of this residence (Fig. 8). This room has four storage niches, two on each side and its arched doorway has two engaged columns. On the west side of the courtyard there must have been a door to a latrine. This entire section of the residence was built around various rooms and spaces to other houses. In addition, the main bedroom was constructed within the space that corresponds to the structure which we have termed Service Quarter B, while the courtyard, the latrine, and the interior vestibule were made at the cost of the so-called dwelling of Service Quarter C.

#### 4.4. *Dwellings with courtyard and two porticos*

##### 15. *House of the Pool (Casa de la Alberca) (Fig. 9, nos. 16, 10–12)*

The so-called House of the Pool is located south of the Court of the Pillars and is one of the most notable residences of the palace. This dwelling is the clearest precedent for the architectural type which we consider characteristic of the Andalusí house. With its rooms arranged around a courtyard garden with walkways, planting beds, and water channels, the residence consists of two front porticos preceding transverse halls, a courtyard with a central walkway, and a pool centred in front of the west portico (Fig. 10). Situated at a much lower level than the Court of the Pillars and the street or corridor which separates them, it could be accessed via two joined stairs which descended from the street to the courtyard in a highly original arrangement, or from a passage which linked it with the adjacent bath and service quarters.

The north façade of the courtyard must have had a composition based on a set of blind arches in whose openings were arranged other doors covered with lintels, like the doorway of the aforementioned stairs, the doorway of some rooms situated under the stairs, and other doorways at the ends (Fig. 11). The doorway on the right side opens onto a corridor which serves as another entrance to the courtyard from the passage which links the service quarters, and which also provides access to the adjacent bath.

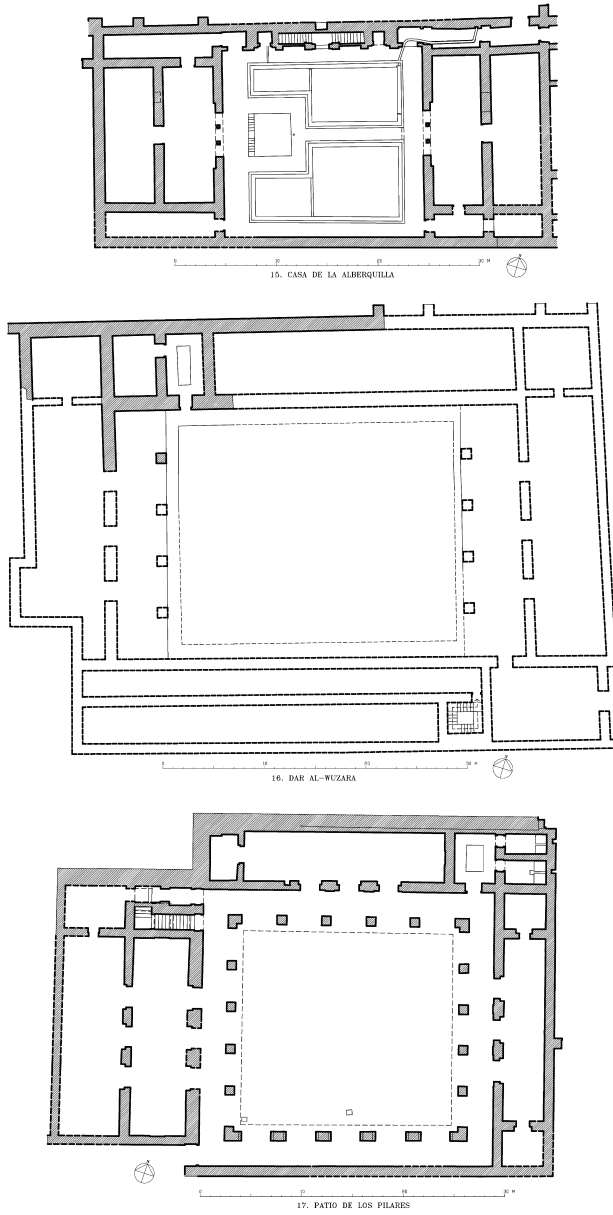


Fig. 9. Houses with courtyards and several porticos.

The main axis of the courtyard runs east-west; the triple-arched courtyard façades are richly decorated with carved stone panels. These arches have exterior leaves for closing the hall, judging from the remaining pivot holes. The arches are supported by two central columns but engaged columns are absent at its ends, a solution which seems more archaic than the use of engaged columns. These arches provide access to a hall-portico (Fig. 12) from which there is access to another parallel hall of similar dimensions through a simple doorway. These halls do not have bedrooms, strictly speaking, although small rooms or spaces exist at their ends, not always connected with the main halls. Some of the spaces might be latrines, like that of the south side of the east hall, under whose floor passes a sewer. On the exterior of the north side of this same hall is the access to the adjacent bath. On the west side thereof the dwelling is a small elongated room which occupies the north ends of the hall-portico and the main hall, and which was accessed from the former as well as from the courtyard. The extreme south of this side is much destroyed.

The arrangement of this courtyard is also an important model used in the domestic architecture of al-Andalus. The open space is slightly rectangular, although in an earlier design was possibly square before the construction of the double stair that communicates with the upper street and the Court of the Pillars. It has, as we have indicated, a square pool in front of the west façade, encircled by a walkway which connects to another running along the axis of the courtyard (Fig. 11). Other similar walkways border the entire perimeter delimiting two large planting beds which differ in size, due to the construction of the stairs in the north side of the courtyard. As in other dwellings, an irrigation channel surrounds the planting beds. These channels are fed by one which enters via the communicating corridor with the bath and which emerges from the principal entrance of the city's aqueduct, which descends near the nearby street.

The richness of its ornamentation and its direct relationship to the adjacent bath indicates that this was an important residence within the palace zone. The relationship between this residence and the adjacent bath calls into question the identification of the nearby residence as the House of Ja'far—an attribution based on epigraphic evidence found within the bath, and linked with textual evidence which cites the freedman Fā'iq's transfer to the residence in 971, at the order of

al-Hakam and following the death of his *ḥājib* Ja‘far.<sup>19</sup> However, this dwelling has a much more direct relationship to the bath than does the so-called House of Ja‘far, which does not seem to have been directly connected to the bath.

16. *House of the Ministers (Dār al-Wuzarā’)* or the *Court of the Clocks (Patio de los Relojes)* (Fig. 9, no. 17)

The so-called Court of the Clocks is located south of, and at the same level as, the Dār al-Jund. Although nearly totally destroyed, it appears to have had an arrangement based on two transverse halls (on the east and west sides) fronted by pillared porticos. Access to the courtyard was from the east side, via a ramp which connected the eastern portico to the palace zone. The conserved pavements indicate the presence of a slightly higher eastern zone, which could correspond to the portico, and a large zone which occupied the area of the hall, but whose original extent can not now be distinguished. On the west side a pillar is conserved which allows us to imagine the form of the porticos. The hall that we think must have been located on this side of the building had to be partly resting on structures of the lower terrace corresponding to the reception hall of ‘Abd al-Raḥmān III (“Salon Rico”). A ramp starting at the vestibule of the large east portico provided access to the courtyard and palace, and can be identified as the Bāb al-Sudda. A small courtyard at the north side is similar in form and arrangement to those preceding the latrines, suggesting the same function for the room on the court’s northwest corner.

Due to its location between the Dār al-Jund and the great reception hall of ‘Abd al-Raḥmān III, with which it communicated easily via the rooms adjacent to the bath located next to the reception hall, via the stair situated in the south side of the courtyard, we believe it could be the House of the Ministers (*Dār al-Wuzarā’*) mentioned in the Arabic chronicles.

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<sup>19</sup> Félix Hernández Giménez, *Madinat al-Zahra. Arquitectura y decoración* (Granada 1985), p. 71.



#### 4.5. *Dwellings with courtyard and four porticos*

##### 17. *Court of the Pillars (Patio de los Pilares) (Fig. 9, no. 18)*

Another important residential palace complex, organized around a large square, porticoed courtyard of twenty-four by twenty metres, is found southeast of the Residence of the Caliph (Dār al-Mulk) structures. These porticos are supported by large square pillars of one by one metre each, with five openings, and paved with large stones of violet marble laid on a previous underlying pavement of limestone. The four porticoes have walkways at a higher level with respect to the open space of the courtyard (Fig. 13).

The courtyard is surrounded by halls on three of its sides. The south side seems to have been next to a street or general thoroughfare through which one could enter the building, though the degree of destruction does not allow us to see how. Regarding the singular arrangement of the courtyard, which constitutes a type not imitated in Andalusí residential architecture although it was used for other functions like storehouses (*funduqs*) or hospitals (*maristāns*),<sup>20</sup> the most significant aspect of this building is its halls, which fix the archetype of the hall of the dwellings and palaces of al-Andalus. They consist of reception halls with very elongated proportions, arranged transversally in relation to the axis of the courtyard, and with one or two alcoves at their ends. In this case, the halls open through three doorways communicating with the courtyard, marking the beginning of the path which leads first to two doors and then to the single arch. The bedrooms in this case were independent rooms, with a door to the hall. The north bay has a hall with only one bedroom at its far west. Hall and bedroom were paved with the same violet stone as the courtyard. At the east end there is a false door meant to give the appearance of an entrance to another bedroom. This space is occupied by a courtyard with walkways, accessed in reality from the main courtyard, which provides access to two latrines. On the east side of the building the hall had two symmetrical bedrooms which ultimately constituted the archetype of the main hall of Andalusí dwellings. This hall was paved with alabaster.

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<sup>20</sup> Leopoldo Torres Balbás, "Las alhóndigas hispanomusulmanas y el Corral del Carbón de Granada", *Al-Andalus* 11 (1946) pp. 447–580; Antonio Almagro Gorbea and Antonio Orihuela Uzal, "El Maristán de Granada", *Boletín de la Real Academia de Bellas Artes de Nuestra Señora de las Angustias* 10 (2003), pp. 80–109.

The main halls of the building are located on the west side of the courtyard, which present a structure similar in part to the residence of the Caliph (Dār al-Mulk), with two parallel halls with a triple doorway providing access from the portico, as well as between the halls (Fig. 14). The doors of this hall do not coincide with the axes of the openings of the courtyard portico. In the first hall false doors at either end simulate access to nonexistent bedrooms. In the inner hall a door on the north side communicates with a second room, which in turn is accessed from the courtyard through a passage which starts from the northeast corner. The destruction in this zone makes it impossible to say if a bedroom existed on the south side.

A stair near the northwest corner of the courtyard ascends around a central wall with supporting arches. It is unclear whether this stair provided access to a second floor occupying all or part of the building, or if it only communicated with the zone situated at the foot of the Dār al-Mulk. Significantly, two vertical channels in the wall near the northeast latrines indicate the existence of two other latrines on the upper floor. This suggests that at least the northern side of the building may have had an upper floor. This dwelling is the largest residential structure of those excavated at Madīnat al-Zahrā' and the most original, due to its four-portico arrangement. This is a type which does not appear again in al-Andalus, except at the Palace of the Lions.<sup>21</sup> Its residential-type halls with bedrooms suggest that it functioned as accommodation for important visitors, or as a setting for celebrations which took place outside the receptions held in other large reception halls, notably the Eastern Hall of the Upper Terrace (Salon Rico).

#### CONCLUSION

The dwellings discussed in this article offer a complete inventory of residential architecture which illuminates the later development of the Andalusī house. It seems that the types which we consider to be of Eastern origin (dwellings with a series of adjacent halls, all oriented longitudinally), and of elaborate and complex spatial arrangement, were not developed further in al-Andalus. Instead, Andalusis opted

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<sup>21</sup> Antonio Orihuela, *Casas y Palacios Nazaríes*, pp. 103–116. On this residence, see also Vallejo's contribution in this volume.

for the simplest architectural solution, the house with transverse halls. In any case, while the archaeological evidence does not provide new residential types dating before 936, the distinctive houses of the palace of Madīnat al-Zahrāʾ are fundamental to understanding the origin and development of Andalusī residential architecture.<sup>22</sup>

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<sup>22</sup> This project was carried out with the assistance of research project PB87-0225 granted from the Ministry of Science. The proposed reconstructions were created by Miguel González according to the hypothesis of the author.



Colour Plate 2A. Interior room of the Dar al-Mulk.



Colour Plate 2B. Courtyard of Service Quarter B.



Colour Plate 3A. Main courtyard of the House of Ja'far.



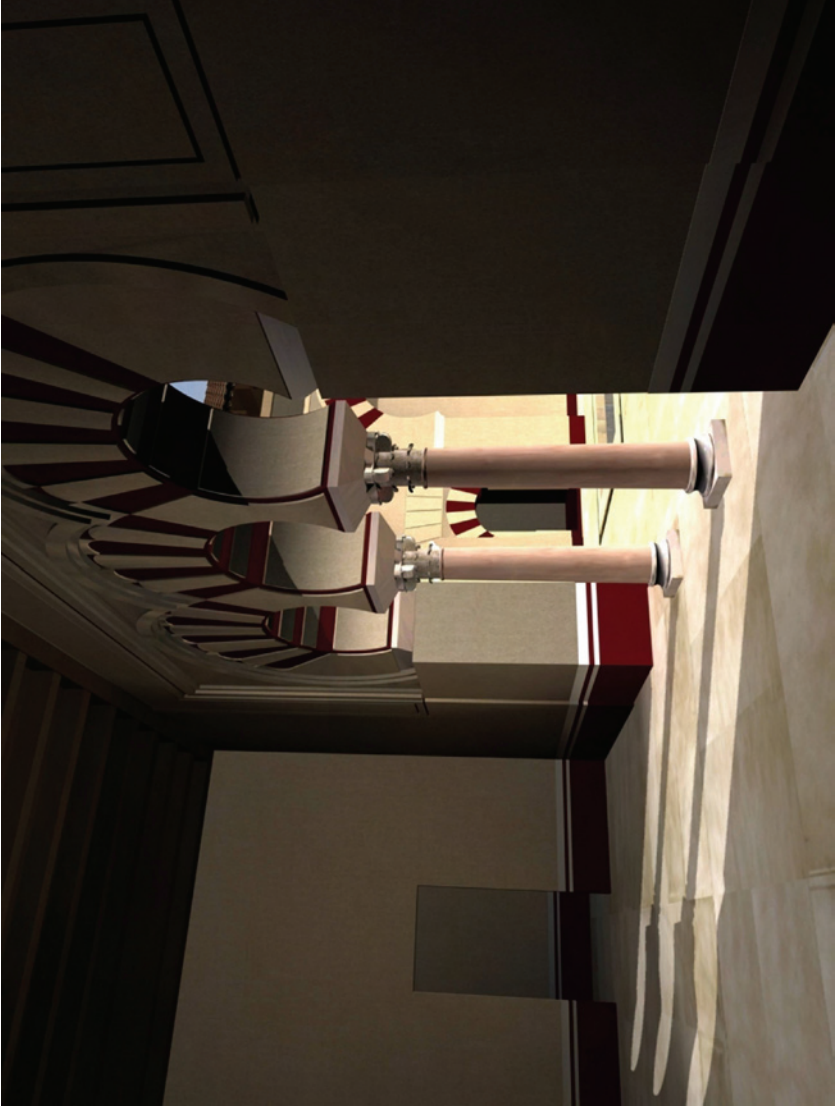
Colour Plate 3B. Interior courtyard at the House of Ja'far.



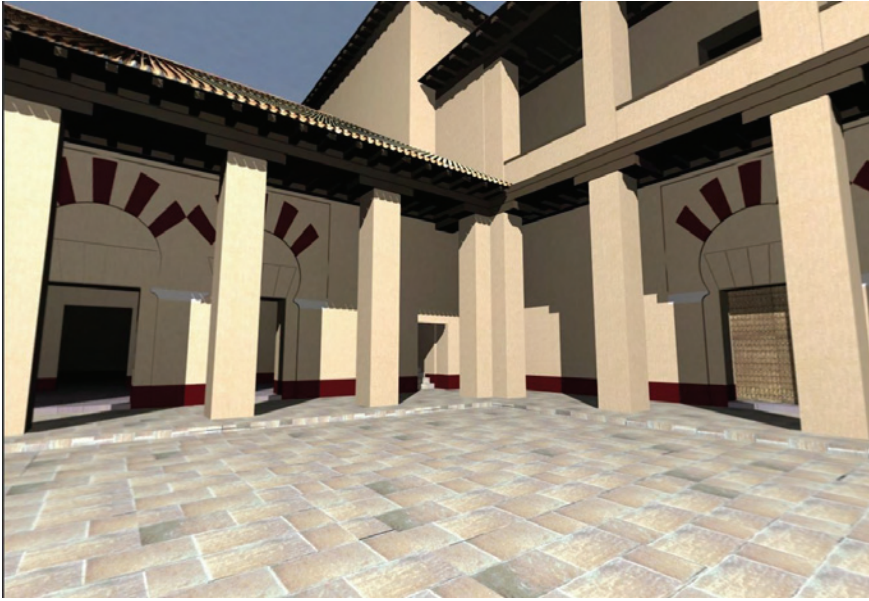
Colour Plate 4A. Courtyard of the House of the Small Pool from the eastern portico.



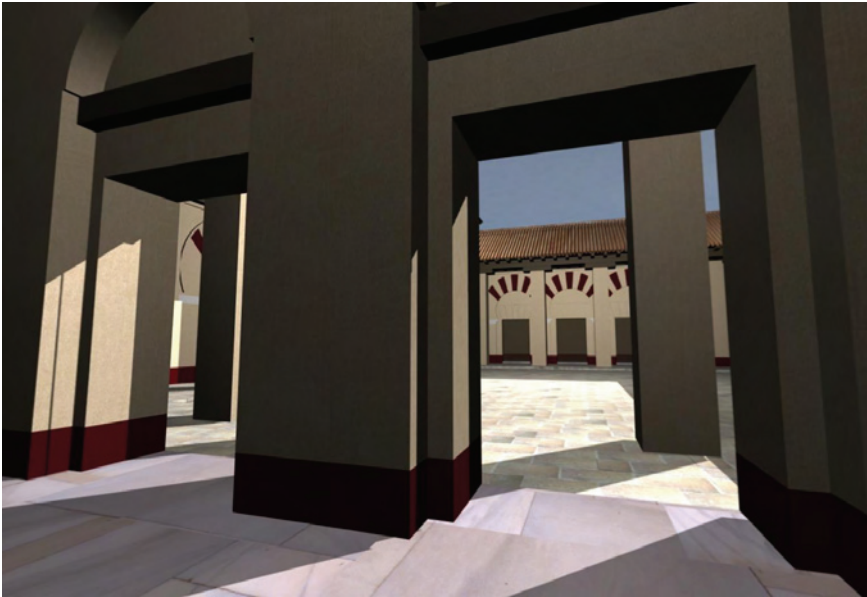
Colour Plate 4B. North-east corner of the House of the Small Pool.



Colour Plate 5. Interior of the western portico-room of the House of the Small Pool.



Colour Plate 6A. Court of the Pillars.



Colour Plate 6B. First hall on the west side of the Court of the Pillars.