# THE QUBBA. THE ORIGIN OF BUILDING COMPLEXES IN NASRID ARCHITECTURE. TYPOLOGICAL CONCEPTS

### LA QUBBA. EL GERMEN DE LOS CONJUNTOS EDIFICADOS EN LA ARQUITECTURA NAZARÍ. CONCEPTOS TIPOLÓGICOS

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**RESUMEN** En la arquitectura nazarí hay un espacio destacado en la configuración de las distintas construcciones independientemente del carácter o destino de cada una de ellas. Es un tipo de espacio, de planta cuadrada, de posición predominante y de cubrición no plana que puede resolverse mediante cúpula, bóveda o artesa invertida con distintas formas. La *qubba* es un espacio interior, cuya fuerza compositiva y cuyo carácter simbólico, facilitan su incorporación como germen de la organización espacial en muy diversas posiciones.

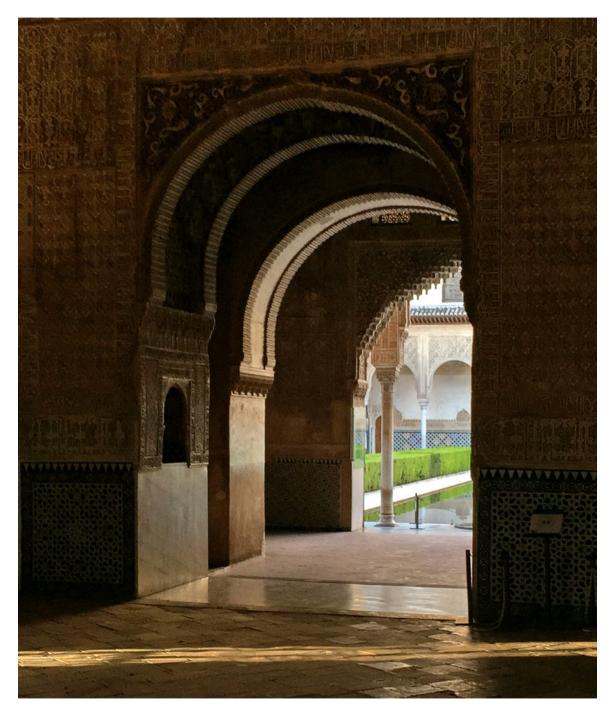
La indeterminación funcional de la arquitectura islámica, permite dar relevancia y protagonismo a una estancia concreta, asumiendo su capacidad de incorporar muy diferentes programas de uso y habitación. La *qubba*, mediante el trazado de la sección se adapta a la secuencia vertical de espacios que conecta y cuyo trazado es estratificado por una luz filtrada, secuenciada y ventilada por aires transversales o ascendentes.

La *qubba*, como célula de origen, parte de una noción de trascendencia, participa de muchas formas de esa distribución arquitectónica, pudiendo ser una pieza unitaria y aislada, configurar el núcleo central o llegar a formar una secuencia de mayor relevancia.

PALABRAS CLAVE qubba; cúpula; nazaríes; filtro; secuencia; luz; sombra; aire

**ABSTRACT** There is a prominent space in Nasrid architecture that configures its different constructions regardless of their character or destination. It is a type of space with a square plan, it occupies a predominant position and its ceiling is never flat, it can be a dome, a vault or be shaped like an inverted trough with different designs. From a symbolic point of view, the cube represents the earth and the dome the celestial sphere, the sky. The *qubba* maintains these attributes regardless of its scale or proportion within a larger complex. It is an interior space the compositional strength and symbolic character of which enables it to become the original cell for the spatial organization of complexes, in many different positions. In contemporary terms, and through the perspective of a typological analysis it could be understood as an Islamic architectural typology that had a significant development into the Nasrid period. The functional indetermination of Islamic architecture allows providing a specific space with unique relevance, and it enables the accommodation of very different uses and residential programs. In section, the *qubba* is able to adapt to the vertical sequence of spaces that it connects, stratifying the light that filters through different openings. Its preponderance allows it to emerge above the rest of the volumes to capture that light and to create different atmospheres depending on the exterior climatic conditions and the use it is given.

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IL. 1. Entry sequence to Salón de Comares. (photography: © Antonio Cayuelas)

The qubba, as an original cell, is rooted in transcendental notions, and it appears in many shapes within architectural layouts, acting as an unitary and freestanding element, configuring the central nucleus of a building or appearing as part of a sequence.

As a result of the process cultural exchanges between Christian territories and the Islamic kingdom of Granada, which grew in importance and marked the last Nasrid constructions, qubbas were transformed and evolved, especially in inhabited interiors.

**KEYWORDS** *qubba*; cupola; Alhambra; nasrid; sequence; light; shadow; air

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n this article, we propose looking at existing Islamic spaces in the Alhambra through the lens of architecture as a discipline, concentrating on their built reality without foregoing history. When we attempt to recognize and organize the concepts that serve as the tools that configure Nasrid architecture, we can observe that certain constituting elements stand out, rooting each successive intervention in tradition. Within the layout of each complex, common denominators can be easily detected, such as compositions along simple or double axes of symmetry or the use of the traditional T diagram, with a main square hall and an elongated transversal portico. In general, these complexes are organized on the same level, and when they have several floors, the connection between them is often hidden, even though the continuity of the main central spaces is still perceived. In Islamic architecture the unassuming role of vertical connections is surprising, except for those that solve slight changes in level.

Having pointed out some of the geometrical and compositional rules in the layout of these complexes, let us now identify the units or components used in the additive process that gives them shape. This involves an analysis based on the premise that their spatial organization is the result of a design process using certain invariants that are organized and characterized depending on the intention of each intervention and influences at the time of their construction. In this sense we must highlight three elements which, through different configurations, are the basic components of Nasrid architecture.

Let us begin with the patio, the importance of which lies both in the intimate and reclusive character with which Islam conceived its built environment, and its suitability in the Mediterranean climate. The patio is the space that best responds to the need to create interior realms independent from the outer world in an open space, and it is deeply rooted in the Mediterranean tradition. The second basic element are the different water storage and distribution systems, fountains, pools or reservoirs<sup>1</sup> which are inseparable parts of the patio. Their logic resides in the context of Granada itself, given the abundance of water and its importance to a civilization that originated in territories where it was lacking. Islamic culture has always been known for making the most of the sensual and dynamic character of water to acclimatize its living and recreational spaces.

Once inside, after passing through elaborate patios and gardens, the most habitual sequence is the addition of spaces, where a transversal hall precedes or appears after a square room, the *qubba*, the third basic element of the process architectural genesis we have described. Transition or filter spaces, such as porticoes and archways, are part of the dual disposition of the *qubba* and transversal hall. Among other functions, *qubbas* have the mission of representing the most noble spaces on the exterior of buildings, giving them their necessary transcendence as the starting point of an itinerary, the reception space that gives access to a superior and more sublime realm.

These three elements might seem few, but they are the precise tools behind an architectural design process and through their combination we can recognize most of architecture that makes up the Nasrid complex of the Alhambra. It is important to point out that the basic, symmetrical and central composition of these elements can be surrounded by a set of oth-

1. Elements that have been perfectly detailed by Jesús Bermúdez López. *Guía Oficial de la Alhambra*. Tf Editores, Granada,2010, p. 275.

er rooms and quarters of lesser size and importance, thus diversifying the existing models. In this sense it is important to underline that, in general, when these layouts are analyzed in plan, they are generated by geometrical processes in which squares and rectangles are aggregated to others of larger sizes following organized and precise rules<sup>2</sup>. As in all Islamic architecture, everything from the layout of the different rooms to the composition of ornamentation, geometry and "the proportional system"<sup>3</sup> was based on a profound knowledge of mathematics and the operations needed to carry them out.

This compositional system, used to organize spaces and based on the linear sequence of rooms set on an axis, is combined with other axes using the principle of centrality, the orthogonal hinge function that the patio takes on as the articulator of ensembles. This functional autonomy has to do with the programmatic indetermination, flexibility and versatility of use of Islamic spaces, which are activated in diverse ways by means of the configuration of furniture, including rugs and tapestries, or the use of light depending on the activity. All in all, this gives spaces a certain ceremonial and logistical dimension, depending on the events that are to be carried out, to use contemporary terms. In the Alhambra these sequences acquire a special meaning due the uniqueness of its setting, involving a certain connection that expands these axes visually and perceptively towards the surrounding landscape. It seems logical to think that some of the uniqueness of the Alhambra comes from the potential of its setting, a context that includes a territory and a landscape of outstanding character and beauty.

#### THE QUBBA. TYPOLOGICAL NOTIONS

Of the three elements we have mentioned, we will focus our studies on the *qubba* as a central space that characterizes and generates Nasrid buildings and is the original cell from which this architecture springs forth. It can be understood as a unitary feature, as the element that configurates a group or appear as part of a sequence. In the second case, its representational nature enriches the rhythmic quality of the sequence. Let us begin by seeing how the term *qubba* is defined in different sources.

Rafael Manzano<sup>4</sup> describes the composition of the architectural space known as the *qubba* in the following terms: It is a cubic space at its base, covered by a dome the shape of which ranges from the half sphere to the trunk of a pyramid or vaulted sections. Its name derives from the Arabization of the Latin term *cupula*. Since Plato's Timaeus, the cube has symbolized the earth, while the cupola, both in the work of the great Greek philosopher and in the Middle East, is identified with the celestial sphere, with the sky.

Basilio Pavón Maldonado, the historian who has carried out the most thorough studies on the variety and uniqueness of this architectural typology and the evolution of the meaning of the term, places the origin of the word in the differentiation between the binomials qubba=cupola and qubba=building or pavilion with a square plan and with or without a dome. Pavón Maldonado quotes Lévi-Provenzal in his commentary of a fourteenth century Arab text about a Maranid palace that should have four halls or *qubbas*, while Dozy defines this space as a "pavilion, kiosk, cupola, tent, place that serves as the center of other spaces exercising sovereignty or supremacy". With all of this in mind, Pavón Maldonado defines this space as a "regal space with a square plan and a great height located within a metropolitan mosque or a palace, beginning in the period of the Caliphate of Corboba". In his text Entorno a la Qubba Real in la arquitectura hispano musulmana, he identifies the many *qubbas* that exist within the Alhambra and points out how they acquire a main representative role as the central feature and focal point of each complex. In later texts, Pavón Maldonado<sup>5</sup> describes popular qubbas, funerary qubbas, fountain qubbas, hermatige qubbas, religious *qubbas*, the *qubba* as a resting space, the *qubba* with four columns (the Mexuar, the baths of Comares and Peinador de la Reina) illustrating this with the many examples in with the *qubba* appears as a space that stands out and that is unique. With regards to the royal *qubba*, in that same text he adds: "The *qubba* is an architectural concept and symbol that the word of Islam inherited from Antiquity, serving as the seat of

GRABAR, OLEG explains this in La Alhambra: iconografía, formas y valores, Madrid: Alianza Forma, 1980. p. 164.
 BERMÚDEZ LÓPEZ, Op. cit., p. 260.

MANZANO MARTOS, Rafael. La Alhambra, El universo mágico de la Granada islámica, Madrid: Anaya, 1992. p. 82

<sup>5.</sup> PAVÓN MALDONADO, B. El Palacio Real de los Leones de la Alhambra. Funciones e iconografía de la arquitectura en la ciudad palatina, November 2012, article that appears in www.basiliopavonmaldonado.es

royalty and the capital reference point in the layout and program of the palaces."

In the acceptance speech Antonio Almagro Gorbea<sup>6</sup> gave when he became a member of the Royal Academy of Fine Arts of San Fernando, he described the *qubba* in the following terms:

Square-plan hall with a vaulted or pitched inner ceiling in the form of a sphere or simple timber collar and tie beam truss roof.

He then adds that:

*[Q]ubbas* can be free standing, or be preceded by a simple portico like at the Cuarto Real de Santo Domingo, the Partal or Alcázar Genil, or be attached to other structures taking the shape of lookout towers, such as the one on the western side of the Generalife, the tower of Machuca, the tower of the Captain in the palace of Abencerrajes, or be part to the main hall of a palace, like the one at the northern end of the Generalife and, above all, at the Palace of Comares, where this type of space, given its sheer size, plays an unprecedented main role. In almost all of the cases mentioned above, *qubbas* occupy the inner spaces of towers along the walls of the fortress and they have many openings, turning them into lookout points enabling visual control over the territory that surrounds them.

Perhaps it is better to express all of this in other terms, not with the goal of finding the most precise definition of *qubba*, but because all of them are of interest to us. In this sense, we understand it as an expression that identifies a type of space, or a typology, as it is commonly known in architecture. Of the different definitions we have compiled, we shall delve into the more generic meaning that identifies it with a central space with a square plan and a vertical proportion covered by a dome, vault or other non-planar structures<sup>7</sup>. This formal description highlights its importance as a centripetal space within Nasrid architecture in the Alhambra, enabling us to focus our studies.

It is surprising to notice the intrinsic quality of this space in the way it constitutes, on its own like in the Hall of Comares or in aggregated form like in the Hall of the Kings of the Palace of the Lions, the germinal space in the articulation of the layout of the rooms of each and every one of the complexes of Islamic origin within the Alhambra. With this in mind, we formulate the hypothesis that a certain formal accord lies beneath the expressiveness of Hispano-Muslim architecture regarding the nuclear and representational nature of the *qubba*, making it a primordial cell with a diversity of layouts and forms of aggregation and therefore part of the DNA<sup>8</sup> of Nasrid architectural biology. This accord, or approach, may have its origin in the refinement or synthesis of its multiple predecessors, therefore placing its origin in Islamic architectural language, or as the result of the decantation of other central-square, circular or polygonal planarchitectures present in all civilizations with different uses, but mainly used for religious purposes9. It is difficult to trace the path of the evolution of this spatial concept to the point in which it acquired its role as the basic cell in the genesis of the Nasrid palaces, but of what there is no doubt is that it is a main tool in the conceptualization of the composition of these spaces, as a reference for them or as the starting point of their layout. In this search for the origins of the qubba Rafael Manzano<sup>10</sup> points out that "in Medina Azahara, the prototype for the dome-covered hall comes from Abbasid art.... In Cordoba it became a novel and surprising alternative to the large basilica-plan halls with three naves and end alcoves preceded by a transversal portico that, following the Latin tradition, had been used as ceremonial halls in the reception areas of the palaces. There, possibly under the rule of Alhakem II, a qubba known as Yalussía was built, located within a set of gardens to the east of the Almuzara, at a distance from the official residence of the Alcazar, destined to be used as a ceremonial hall, if we give credit to what Ibn-Hayyán said". Further on, Rafael Manzano explains how Al-Mutamid visited it and almost literally copied what was left of this qubba in the Reales Alcazares in Seville. He also states that "Ibn Gabirol mentions that a similar *qubba* exists within the civil palace, from the same period as the one in Seville, built by Ibn Negrella in the first Alhambra". Lastly, Rafael Manzano, like other authors such as Antonio Orihuela and Basilio Pavón Maldonado, explains that "the closest precedent to the large hall of Comares is the Cuarto Real de Santo Domingo"11.

10. MANZANO MARTOS, Op. cit., p. 87

ALMAGRO GORBEA, A. Palacios medievales hispanos, Discurso de ingreso a la Real Academia de Bellas Artes de San Fernando, Madrid 2008
 BERMÚDEZ LÓPEZ, Op. cit., p. 366

DNA. Acronym for deoxyribonucleic acid, a complex protein that is found in the nucleus of cells and constitutes the main generic material of living beings.
 Basilio Pavón Maldonado places its origin in the Roman Pantheon.

**<sup>11.</sup>** A former Islamic palace from the Almohad period, therefore predating the Nazrid period, which has been recently restored. Its central space stands out, its qubba, a unique precedent of those that exist in the Alhambra.

Within Nasrid architecture, the *qubba*, as a representational space, is a generic room, one that accommodates a diversity of programs with different missions, therefore it is not bound by a specific use or function<sup>12</sup>. However, what is unquestionable is that it always occupies the most significant position within the architecture of a complex and its interior spatial layout.

This space takes on the main role. It is located centrally on the axis of that leads into the space. We will describe its form and character in an effort to analyze the wide range of possibilities it offers based on a unitary concept. Before doing so, and having adhered to the aforementioned definition of the qubba as *a central space with a square plan and a vertical proportion covered by a dome, vault or other non-planar structures*, let us point out that our analysis will focus on the spatial qualities that this typology acquires in each case within the Alhambra, to underline the unique contribution of the Nasrid palaces to Islamic architecture.

In general, its square plan can be autonomous or have entrance spaces of lesser importance attached to it on either of its sides and on one or several levels. These spaces can be placed within the width of the walls of the *qubba* or take on an independent shape. The space of the *qubba* has a square plan, and its vertical dimension is equal or higher than the side of the square of the plan in a varying proportion. Normally, the *qubba* is the highest space within a complex, therefore, and despite its nature as central space located within the building, it has windows along its perimeter on the upper sections of its walls. It is crowned by a vault, dome or timber structure, with an exterior lantern or roof that can be either flat or pitched.

A variation exists that can be called a *qubba*-lookout. In this case, the *qubba* is displaced to the end of the compositional axis of the complex and juts out of the building, attaching itself to the façade wall. In this way, the *qubba* becomes both a focal point and the end of ceremonial itineraries, a place where the spectator first perceives a concentration of intensity and then feels how space expands towards the surrounding landscape.

This quality as a lookout that is articulated with the surrounding territory is unique and a rare case within the introspective and intimate nature of Islamic architecture. It is important to highlight that *qubbas* were always placed a distance from the view of anonymous observes, set on elevated ground and far from possible external observation points, from which at the most the movement of figures could be appreciated. As a counterpoint to this, this perception is mitigated by the presence of openings on three of its sides, which in turn reduces considerably the feeling of darkness within when seen from the outside.

In our analysis of interior *qubbas* we will see that in section they follow a similar layout based on a central relational space and a vertical proportion that dominates the space, where light and air enter horizontally to then scatter vertically. The living space is located on the floor, while circulation and communication spaces are located at mid-level, establishing a visual and also sonorous relationship with the rest, creating diagonal visual relationships and therefore permitting the discreet lateral observation of events.

Within the context of western Mediterranean architecture, this space can be interpreted as a courtyard, one that is covered and is markedly vertical, which functions as the centripetal articulator of spaces. Initially, we could say that it is the negative of the conventional courtyard, but delving deeper it can be assimilated with a covered and ventilated courtyard, the origins of dwellings made of shade and air.

In order to tackle the study of the *qubba* within the spatial organization of the Alhambra from another point of view, let us recall Oleg Grabar's analysis of the issue<sup>13</sup>. In his text, under the section he calls composition, he states that "it has been well established that the central cell in the composition of the Alhambra is the rectangular patio". Further on he adds: "At the center of each major axis there exists a square room or, in the case of the shorter sides of the Courtyard of the Lions, a square pavilion". As Basilio Pavón Maldonado points out, Oleg Grabar does not use the term *qubba*, but he does refer to the compositional importance that certain square rooms have in the conception of the Nasrid palaces and the sequential layout of their spaces.

If we substitute the term "square room" for the word *qubba* in the aforementioned text, it reads in the following way: "At the center of each major axis there exists a *qubba* or, in the case of the shorter sides of the

<sup>12.</sup> In Islamic architecture not many forms exist that cannot be adapted to multiple purposes; and viceversa, an Islamic building that has one function can take on several forms. La arquitectura del mundo islámico MICHELL, GEORGE. Cáp. ¿Qué es la arquitectura islámica? GRUBE ERNST J. Alianza Editorial. Madrid. 1985 13. GRABAR, O. Op. cit., p.

Courtyard of the Lions, a square pavilion". Further on in the text he adds: "... the most important square room (the qubba) frequently projects outwards, beyond the walls of the building, turning the omnipresent defensive towers into lookouts". Regarding the Hall of the Dos Hermanas and after putting forward a hypothesis about the geometrical and mathematical principles that govern its composition Grabar indicates: "but there is little doubt regarding the transformation of the simple traditional square room (qubba) into the self-generating module. The final effect is that of a Chinese box, in which squares and rectangles create squares within other squares and the ensemble is completed by a small square that protrudes as an end in itself, completing the whole, but not with a blank wall but with a view to the outside world." He also insists on the success of these self-generative modular units, including the qubbas, in the composition of the Palace of the Lions, pointing out that "all of the units within the Alhambra are conceived to be seen from their center, not from the outside".

Leopoldo Torres Balbas<sup>14</sup> offers another perspective in a text where he compiles a set of spaces that coincide with those approached in this article, but from the point of view of how they are lit. This explains the way he calls them-halls with a central lantern, in reference to the upper lighting that identifies qubbas, which has to do with a notion of intimacy linked to a way of life. Torres Balbás accurately explains this at the beginning of his text, highlighting the major role played by the lighting of the upper windows under the lanterns or those above the doors, covered by latticework that protects the inner space from the extreme climatic conditions of Granada both in the summer and in the winter. In the specific case of the Hall of Las Camas), Torres Balbás describes how "the visitor who on a summer day, after crossing the sunny courtyards of the Alhambra, inundated with blinding light, enters the Hall of Las Camas, will always remember the delicious feeling produced by the fresh atmosphere and the soft filtering light that descends from the small windows of the lantern". Under this lighting concept he also includes the main halls of the Nasrid palaces, domestic spaces from Granada "where the courtyard is the only space that opens up to the air and light", and the *rawdas*. He also comments on the importance of the central fountain in these "halls with lanterns and lit from above", usually with a square plan, as a refreshing feature and the sole source of sound once one is isolated from the outer world within the thick existing walls. Referring to the Baths of Comares, calling them the Royal Baths, Leopoldo Torres Balbás<sup>15</sup> writes: "Four marble columns delimit a central square, around which narrow passages are laid out covered by horizontal latticework ceilings". He then adds, after detecting a set of similar spaces that follow the same pattern: "This curious layout of a hall with a lantern that lights and ventilates the space from above-in fact, a covered courtyard-appeared in Granada in the fourteenth century. It can be found, albeit mutilated, in the Mexuar, and it is repeated in the tower of the Peinador, and in the Baths on the Calle Real of the Alhambra; one also existed in the Rawda, or burial chapel, the ruins of which can be seen to south of the Hall of the Lions, and in the Palace of Dar al-Arusa, located above the Generalife".

After this brief overview of the notion of *qubba*, we will now proceed to study in detail a selection of examples presented in chronological order, which, in a certain sense, albeit not a literal one, has to do with their gradual increase of complexity.

#### GATE OF THE RAUDA. A QUBBA-PAVISION<sup>16</sup>

This first example is the most diagrammatic and its origin is a prismatic volume, which nowadays has a practically freestanding configuration. It has a square plan and one of the slimmest sections among all *qubbas,* highlighting its verticality, while its base is open on all four sides. Today it is set tangentially to the Courtyard of the Lions, although it is possible that at some point in the past it might have been part of an older palace. As Antonio Malpica<sup>17</sup> points out, it was Gomez Moreno who attributed this *qubba* to the palace of Ismail, serving as its entrance.

This case study presents a basic example of *qubba*, constituted solely by a vertical prism with a square plan, each side of which presents an opening in the

<sup>14.</sup> TORRES BALBÁS, L. Salas con linterna central en la arquitectura granadina, Al-Andalus, XXIV, 1959, pp. 197-220. 15. TORRES BALBÁS, L. «La Alhambra y el Generalife de Granada» Facsimile ed-

ited by the Universidad de Granada and the Patronato de la Alhambra y el Generalife. Granada. 2009. 16. End of the 13th century

<sup>17.</sup> MALPICA CUELLO, A. La Alhambra de Granada, un estudio arqueológico, Universidad de Granada, 2002, Pág, 241

shape of a horseshoe arch at its base and a sequence of three openings with semicircular arches located under the cornice that supports the lobbed dome that covers the space. Two axes of symmetry structure its original layout, in later years it was attached to the rest of the ensemble, the Palace of the Lions, by extending two of its lateral walls.

Located across the street from it—the Calle Real Baja— was the Rawda, the cemetery of the Sultans, a space amply documented by Jesús Bermúdez Lopez<sup>18</sup>. He mentions the existence of a *qubba* in the area, on the basis of the remains of some pilasters and elements that can be found in the museum of the Alhambra.

Pedro Salmerón gives a more precise description of this construction, one that connects with the definition of *qubba* that we are using in this paper: "... it is a cemetery that is in part in the open air and refreshing as if it were a garden and in part covered by an important construction that shares similarities with the mausoleum of the Saadian princes of Marrakesh from the sixteenth century. With the layout of this building in mind, it is quite possible to think that the central space of the Rawda was covered by either a pitched timber structure or a dome with mocarabes set on four pillars at the corners. The perimeter spaces were probably covered by either flat timber structures or small wood vaults." Further on he adds that "the architecture of the mausoleum is linked with the notion of *qubba*, since this covered space would be the focus of the complex. The model of an empty central space framed by circulation areas, which in this case would also be part of the burial space, is related with other examples from ancient architecture, but also with closer examples found in the Alhambra itself"<sup>19</sup>. This interpretation can be completed with what Antonio Malpica describes in his archeological study of the Alhambra: "The excavations that have been carried out have shown the existence of a *qubba* supported by four pillars, certifying the existence of a square hall where three graves appeared. There are three low walls that define a larger space within which the mentioned *qubba* was located". He then adds that the configuration of this second *aubba* is unknown, but that it must have been similar to the Gate of the Rawda considering that they are from the same period and part of the same design<sup>20</sup>.



IL. 2. Exterior of Puerta de la Rawda. (photography: © Antonio Cayuelas)



IL. 3. Puerta de la Rawda: Dome. (photography: © Antonio Cayuelas)

BERMÚDEZ LÓPEZ, Op. cit., p. 172.
 www.pedrosalmeron.com/proyectos/La Rauda
 MALPICA CUELLO, A. Op. cit., p. 239.



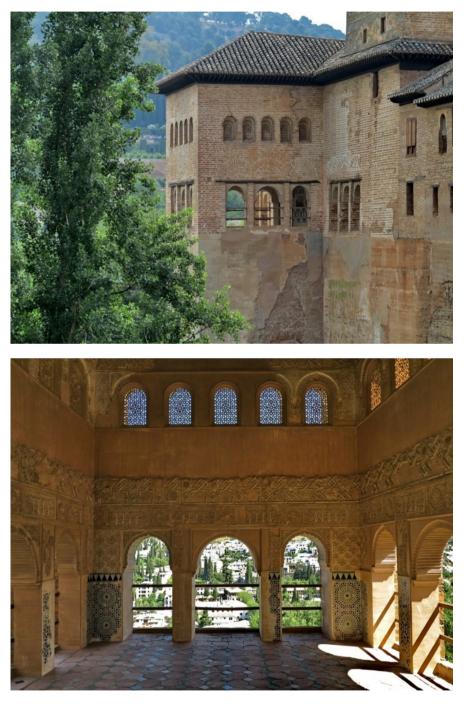
IL. 4. Puerta de la Rawda: Interior space. (photography: © Antonio Cayuelas)

#### TOWER OF THE DAMAS. LOOKOUT *QUBBA* OF THE PALACE OF THE PARTAL<sup>21</sup>

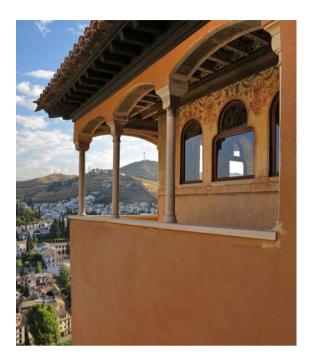
In Islamic architecture it is not easy to visualize domestic layouts given the lack of functional differences between spaces. The only aspect that can be discerned is the hierarchical relationship that exists between the different rooms. These difficulties are specially telling in the Palace of El Portico. From a current perspective, interpretations can be made by understanding the palace as the result of a continuous process of change. A complex network of reconstructions and restorations can be recognized which have either underlined or erased transformations aimed at its residential use. This process has been ongoing, beginning in the Nasrid period, continuing after the fall of the fortress into the hands of the Catholic Monarchs when this area became private property and even after the Alhambra became a monument in 1891<sup>22</sup> managed by the public administration. It is possible to imagine the form of life this building accommodated if we abandon preconceptions, understand the fragmentary nature of the exterior spaces, the evocative intervention carried out by Torres Balbás and the alterations carried out at later dates by Prieto Moreno substituting the pilasters of the portico with columns. This is an example of a lookout *qubba*, in which the transparency that we perceive nowadays would have been exceptional at the time it was conceived, unless the distance that exists with the hill opposite the building, the Albaicin neighborhood, had been considered a sufficient parameter to safeguard its defense. There is not enough information to allow us to know what the original construction might have been like, therefore our interpretation will be based on the existing space, resulting from the thoughtful scientific restoration carried out by Torres Balbás, a clean restitution that gives us a good starting point. The square plan, the ceiling and the rhythmic sequence of upper windows with latticework are typical features of a *qubba* that, in this case, adapt to the peculiarities of its setting. The notion of lookout does not fit in with the magnitude and corporeity of the existing space. From within, the room has an atmosphere and a scale that makes it a lot more than a lookout. In all *qubbas*, the absence of windows and doors and other original elements along with the bareness of the spaces, speak of the absence of a whole range of features such as tapestries, curtains, wood lattice work or shutters. This enhances the feeling of openness we perceive nowadays, in contrast with what would have been the intimate and closed-in nature of a medieval Islamic lifestyle.

The building has a T-shaped layout, a *qubba* with a transversal hall that can be typically seen in palaces, but in this case the hall opens onto the courtyard with the pool by means of a portico, merging the hall and the access portico together into one space. We will find this model in other examples in more complex forms.

 Built during the reign of Muhammad III (1302-1309). Restored by Torres Balbás (1923-24)
 BERMÚDEZ LÓPEZ. Op. cit., p. 166.



IL. 5. Interior and exterior of Torre de las Damas. El Partal. (photography: © Antonio Cayuelas)



IL. 6. Exterior of Peinador de la Reina. (photography: © Antonio Cayuelas)

#### THE PEINADOR DE LA REINA. A REINTERPRETED QUBBA<sup>23</sup>

Analyzed through the lens and characteristics that we have outlined in this study, in its original configuration this tower was a *qubba* supported by columns at its base, from which an ascending space emerged, a central communication void covered by a wooden ceiling in the shape of the trunk of a pyramid. Its current physiognomy, the result of multiple transformations during the Christian period and several restorations from different periods<sup>24</sup>, shows a suggestive inner layout that is a mix of manipulations and extensions of the original Nasrid space with the addition of annexes that have ended up occupying the entire area within the tower. Another possibility is that the tower was once much smaller and what we now see is the result of an extension<sup>25</sup>.

The reorganization within the tower has led to the creation of a domestic space that has a forceful relationship with the surrounding landscape, beyond its original function as a mere lookout. The new observatory has two levels, the lower of which is the original *qubba* which was broadened, adding in all probability new openings along its perimeter wall. The roof of the tower extends outwards creating a gallery space that is tangential to the *qubba*, the frescoes of which speaks of the preferential use the space was given by the Christian monarchs. At the lower level, the trans-

formation that can be seen is similar to the one carried out in the Mexuar: four columns were added to create a larger, more elongated space that, in this case, is open to the landscape on all sides. The overall result is the simultaneous existence of two atmospheres, one that is intimate and private in accordance with Islamic preferences, and another that is more extroverted, along the lines of Christian spatialities.

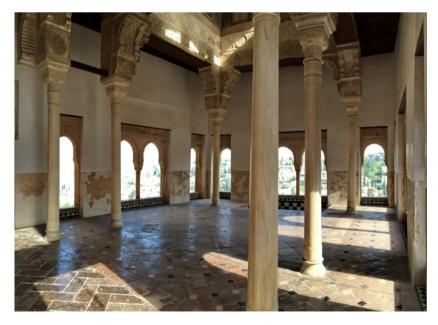
<sup>23.</sup> Tower of Nasr Ibn al-Yuyyus (1309-1314). Transformed by Yusuf I (1333-1354). Christian transformation (1537). Restoration of the interior by Torres Balbás (1929)

<sup>24.</sup> Torre Balbás' restoration stands out, the plans of which enable us to clearly identify the two operations he carried out. First he eliminated the floor slab that divided the central void into two levels. Secondly he opened and recovered several sealed windows in the lower level, creating a space that is quite connected with the outside, a very interesting perception from a contemporary perspective, but the existence of which is questionable during the Nasrid period.

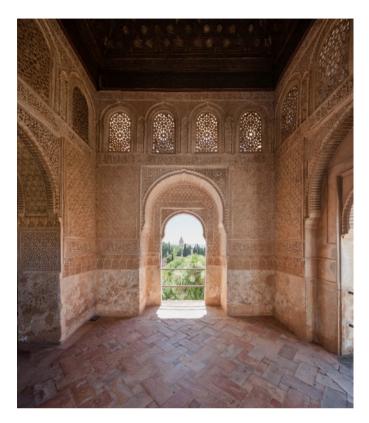
<sup>25.</sup> From the outside, the distribution of openings on all sides of the tower, transmits the idea that, at first, the tower grew inwards, and the existence of putlog holes indicates that it was possibly connected with the rooms of Emperor Charles V that surround the Courtyard of Lindaraja.







IL. 7. Peinador de la Reina. Interiors. (photography: © Antonio Cayuelas)



IL. 8. Interior of the qubba at the north pavilion of Generalife. (photography: © Fernando Alda)

## GENERALIFE. LOOKOUT QUBBA OF THE NORTHERN PAVILION<sup>26</sup>

On the northern side of the Generalife a lookout *qubba* appears. It has a single opening on each of its sides, a configuration that can also be seen in the Tower of La Cautiva. As Rafael Manzano points out27, the construction technique required to build marble columns and, therefore, the construction of double openings or geminated windows had not yet flourished in Granada when this space was built. This lookout qubba belongs to the group of T-shaped spaces that can often be found in the Alhambra, a type with a wide range of proportions as Jesús Bermúdez López details in the Official Guide of the monument. This layout can often be seen accompanying *qubbas*, and without doubt it is part of the compositional DNA we mentioned at the beginning of this article. In this case in the Generalife, like in the Partal, this mechanism enables the generation of a dual perspective towards the landscape from two parallel planes, one of which is set back from the other.

It is important to point out another unique aspect of this case study, that of the markedly vertical proportion of the opening with respect to the elevation in which it is placed. This proportion is enhanced outwards due to the double lining of the opening and its superimposition, or the jamb that is duplicated on two planes, producing a transition of scales that reduces the size of the actual window and its presence on the facade but maximizes the framing of the view from the inside. This compositional tool produces a second effect, it adds distance to the perception of the outer world, reducing the size of the framed landscape and enhancing the size of the inner space. This way of sculpting the wall from the inside towards the outside may be the origin of what would later be the small alcoves that appear within the greater width of the walls of some of the defensive towers of the fortress, as occurs in the Tower of Comares. This mechanism, of medieval origin, will establish a tradition of creating small living spaces to either look out or rest, within wide stone or brick walls, constituting sequential transitions between intimate spaces and natures.

Built during the reign of Ismail I (1314-1325)
 MANZANO MARTOS, Op. cit., p. 70.

#### HALL OF THE MEXUAR. A ROYAL QUBBA TRANSFORMED<sup>28</sup>

This hall was the central space of the palace of sultan Ismail I. There is "a central space with a square plan marked by four marble columns which, originally supported a very high dome decorated with a sea of unbroken glass" 29. These elements recall the existence of a royal *qubba* or hall of the throne that was transformed during the Christian period with the demolition of the dome and the addition of a second storey. In this case, it is interesting to point out how the transformation of the space was produced, with the generation of an alternative solution that consisted in the integration of the *qubba* into a square hall to become a Christian chapel. This led to a change in the axiality of the space, the centrality of the Islamic square plan was turned into a directional longitudinal Christian nave. The replacement of the dome with a flat timber structure made the space lose its depth.

#### TOWER OF LA CAUTIVA<sup>30</sup>

This tower is known by practically all of the authors that study and refer to it as a palace-tower, and it is considered "a milestone that highlights the moment of greatest purity in Nasrid art"<sup>31</sup>. The sequence of spaces on the main floor, the access level, is a splendid synthesis of domestic Nasrid architecture where the two features that constitute the basis of this inhabitational model, the *gubba* and the courtyard, are blended with admirable precision at an orderly and contained scale.

Over the entrance, between both spaces, a set of threepart openings with latticework repeats the ventilation and filtered lighting system that often appears in the antechambers of Nasrid qubbas. From within the courtyard, one can observe how the unique brick pilasters of Almohad tradition with their epigraphic inscriptions are lit by the calibrated light they receive. As we continue the entrance sequence, after the courtyard we enter the qubba, which in this case occupies most of the lower level of the tower. Another aspect that calls our attention is the feeling of looking out that we have. The first impression is that this *qubba* follows the gradual composition we have seen in the lookouts of the Partal and the northern pavilion of the Generalife. In this case, the presence of a central opening on each side gives this qubba a double function, that of a lookout and that of a main domestic space. The novelty in this *qubba* is the presence of alcoves set in the thresholds of the geminated windows, with their *taqas* <sup>32</sup> in the jambs of the arches confirming their use as such. In any case we need to point out how, in this example of *qubba* that looks onto the landscape, the proportion between the size of the opening and the blank wall of the perimeter wall is reduced, favoring the compactly of the interior space. This relationship is quite different from the one we have seen in the Partal, where the openings are larger than the stretches of blank walls, hence accentuating the lookout feeling.

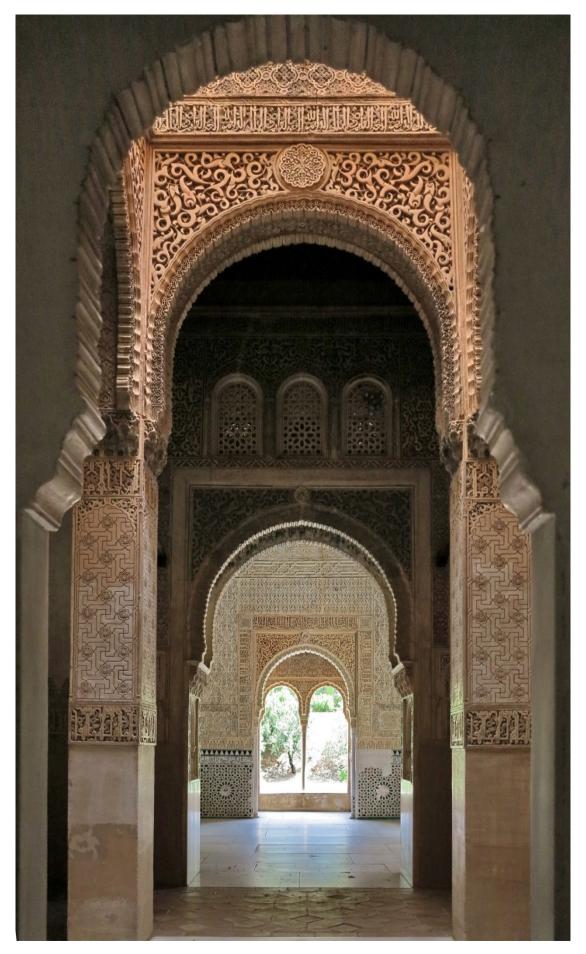
Studying the plan of the tower and standing at the center of it, it is surprising to perceive the difference between the interior space and the courtyard despite their equal size. The structural system of the courtvard fragments the space to differentiate between the void and the gallery that surrounds it, in contrast with the formal unity of the *qubba* itself.

This itinerary is completed by bringing the surrounding landscape into the space. The terraced gardens and orchards of the Generalife, the rammed earth retaining walls, the rows of cypresses and fruit trees of different sizes are all part of the landscape to the north of the walled fortress of the Alhambra. A panorama that has been in the process of recovery ever since the first interventions carried out by Torres Balbás, who understood the cultural value of this agricultural space and its importance to the sultans.

33. Built by Yusuf I (1333-1354). Finished by Muhammad V

Built during the reign of Ismail I (1314-1325)
 BERMÚDEZ LÓPEZ, Op. cit., p. 103.

Built during the reign of Yusuf I (1333-1354)
 BERMÚDEZ LÓPEZ, Op. cit., p. 195
 Small niches placed within the jambs of openings



IL. 9. Entry sequence to Torre de la Cautiva. (photography:  $\textcircled{\sc opt}$  Antonio Cayuelas)



IL. 10. Qubba of the Torre de la Cautiva. (photography: © Fernando Alda)



IL. 11. Interior of the Salón de Comares. (photography: © Fernando Alda)

#### PALACE OF COMARES. THE ROYAL QUBBA<sup>33</sup>

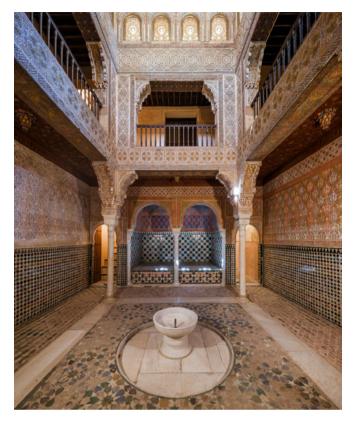
Without a doubt, this is the canonical *qubba* par excellence and the one that has been imitated the most in domestic architecture ever since. Its volume adheres to the proportion of a cube, its three dimensions are practically the same size, even though its height is incremented by fifty percent due to the elevation of the inner space of the wood ceiling, which is shaped like the trunk of a pyramid with different sloping planes, decorated with the *ataurejado* technique and crowned by a small central dome.

On the basis of the typological concept of *qubba* we have established, there are two different positions from which, from a generic perspective, the relationship is established with the rest of the rooms within each part of a complex. In the first, the *qubba* occupies a central space, articulating the combination of different rooms, such as in the Hall of Las Dos Hermanas. In the second, the *qubba* is located at the end of the central axis, and in this case it may also establish a relationship with the surrounding landscape. The Hall of the Throne in Comares follows this second disposition, with the added unique trait of being a royal *qubba*.

Our interpretation of the *qubba* as the nuclear compositional space of the interiors of the Nasrid palaces leads us to establish their complementary compositional quality with regards to the rectangular courtyard that Oleg Grabar identifies. As mentioned, we think that the different palaces of the Alhambra, spring from the articulated combination of these two cells, a rectangular, exterior and concave space, the courtyard, and a square, interior and convex space<sup>34</sup>, the *qubba*. Two spatial units the combination of which enables us to establish an analysis tool to discern the geometric concepts behind the Nasrid palaces.

The formal forcefulness of this *qubba* leads to a second analysis of two fundamental aspects of its spatial organization, the elaborate entrance sequence and the set of alcoves that, making the most of the width of the outer wall, establish transitions between the interior and exterior space. Even though the spatial solution provided by these alcoves is widely used in medieval architecture, to give the spaces carved into the wide walls of towers the character of rooms is crucial in the case the Hall of Comares, despite the contrast of scale that exists between them and the main space. This set of alcoves along the perimeter are awarded the same finishing as the main space, with the marked intention of giving them equal importance. But perhaps, the most interesting aspect is the ambiguous relationship that exists between the alcoves and their window openings, or between the source of light and the resting space. The subtle change in the level of the floor highlights the independence of these alcoves and accentuates their nature as transition spaces, making them autonomous spaces each with their own identity. To such an extent that Rafael Manzano<sup>35</sup> suggests that that the small central alcove on the northern facade has the traits of qubba in itself despite its reduced size. In an independent analysis of this space, we can see that it has all the canonical features of a *qubba* we have identified in this study.

 34. The notions of concavity and convexity have been extracted from the text FORMAS (p. 69) of the aforementioned edition of the Manifiesto de la Alhambra.
 35. MANZANO MARTOS, Op. cit., p 86



IL. 12. Sala de las Camas. (photography: © Fernando Alda)

#### HALL OF LAS CAMAS. BATHS OF COMARES<sup>36</sup>

The royal baths are from the same period as the Palace of Comares, and they were built by Abu-l Hayyay, Yusuf I as a "natural complement [to the palace] following the Hellenistic Roman tradition" in the words of Rafael Manzano.

The bath can be understood as the sum of two clearly differentiated volumes, the set of vaulted rooms and the pavilion that accommodates the Hall of Las Camas. In other words, the baths in themselves and a vertical volume that is an intermediate space that connects the baths and the Palace of Comares. This hall absorbs the 4.20-meter level difference that exists between the Courtyard of the Myrtels and the lower level of the bath. The vertical relationship unfolds visually by means of the central space, since the staircase, as is the norm in Islamic architecture, is hidden, set within walls and out of plain sight. Therefore, the relationship between levels is carried out by the central void, a covered courtyard stripped of visible vertical communication features. From our point of view, this space, which vertebrated the royal baths and had multiple functions—dressing room, relaxation room, meeting area, resting place and leisure area after the bath-can be interpreted in several ways. According

to Rafael Manzano<sup>37</sup>: "this room is the first of a prototype of halls with central lantern supported by four central columns, ..., above which an upper floor is set with four L-shaped pillars on the corners with large openings between them."

He then adds: "The archetype of hall with lantern thus formed has immediate consequences in the civil architecture of the Alhambra. Its layout, with origins in eastern Mesopotamia or Iran, reached the West through Fatamid Egypt, the domestic architecture of which included halls with elevated lanterns known as *qa'a* that served as reception and ceremonial halls and were the result of covering up the courtyards... Under the lantern, known as *mamraq*, a fountain and basin was usually placed. Two alcoves or deep niches always opened onto the qa'a, with wide resting benches known as *liwans*, a term that derives from the Persian *iwan*".

Main hall, hall with lantern, covered courtyard, resting room, etc... many are the names used for the Hall of Las Camas in an attempt to identify it by its form or its use. Its character as a central void that functions like an intermediate space with living areas on the lower level has led it to be generically known as a covered courtyard with a lantern, as seen from a Western perspective. However, through the lens of Nasrid architecture, it should be understood as a *qubba* or as a variation of such. This interpretation was already made by Basilio Pavón in the chapter he dedicates to the Palace of Comares<sup>38</sup>: "Yusuf refurbished this building introducing the *qubba* of the resting room ...", a statement we will delve upon further on. In the lower level, the layout of the square space with its four columns on each corner coincides with that of the amputated *qubba* of the Mexuar we have already described. The side alcoves, despite their reduced size, are equivalent to the ones that can be found in the Hall of Abencerrajes, a royal *qubba*. The lantern and the way the space is crowned is similar to the solution we have seen in the Gate of the Rawda, a building that, as we have mentioned, precedes the construction of these baths according to several authors. Lastly, the qubba, understood not only as a central hall, but also as a space that connects rooms

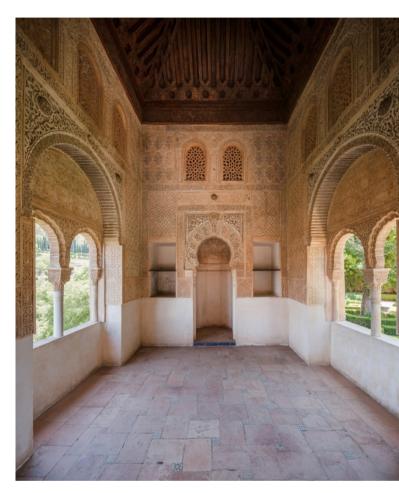
36. Built during the reign of Yusuf I (1333-1354)
37. MANZANO MARTOS, Op. cit., p. 91/92
38. PAVÓN MALDONADO, B. El Palacio de Comares, in Estudios sobre la Alhambra I, Granada, 1975. p. 73. Quoted by MALPICA CUELLO, A, La Alhambra de Granada, un estudio arqueológico, Universidad de Granada, 2002, pp. 218-220

on several levels by means of a void with a double height, has precedents in other *qubbas* in the city, such as in the one at the Cuarto Real de Santo Domingo, or in the major *qubba* of the Hall of Las Dos Hermanas. Therefore, and in accordance with our hypothesis, we consider the Hall of the Baths a kind of evolved *qubba* that enriches the typology by articulating several superimposed levels, and by establishing diagonal visual and lighting relationships from different points in the space.

#### QUBBA-ORATORY OF THE PARTAL<sup>39</sup>

This is definitely a unique building, an Islamic oratory built following the shape of a small qubba, the mandatory canonical orientation of which towards Mecca coincides with the direction of the northern wall of the fortress of the Alhambra, as Jesús Bermúdez López points out<sup>40</sup>. This small pavilion has some additional characteristics. Due to its use as a prayer space, the most evident is the presence of a *mihrab* in the form of a small niche within the southeastern wall of the building. The second is the layout of its plan, in which the original square is extended by means of an entrance space separated from the main space by an arch supported by two columns, thus creating a transition between the *qubba* and the exterior that is reduced to the scale of a threshold. Nevertheless, the rectangular ceramic tile floor is continuous in the two, and the columns embedded in the side walls supporting the arch that delimits the space of the qubba do not reach the floor, accentuating the feeling of a unitary space that is fragmented solely in its vertical composition. Coinciding with this spatial directionality, two cupboard spaces carved into the wall on either side of the *mihrab* enhance the longitudinal perception of the room.

All of the attributes of the *qubba* we have described appear in this small building, adapted to its small size, much in the same way the small alcove Rafael Manzano described as a small *qubba* and that we have mentioned at the center on the northern facade of the Tower of Comares where the sultan sat does. We can also observe how the space under the arches on the side walls is compressed towards the geminated windows, creating a double superimposed plane, a version of the deeper recesses we have seen in other cases. Also present are the sets of windows with latticework along the upper perimeter of the walls to light the structure of the ceiling.



IL. 13. Oratorio del Partal. (photography: © Fernando Alda)

#### PALACE OF THE LIONS. A COMPOSITION OF ROYAL QUBBAS<sup>41</sup>

This palace is an example of extraordinary accord, the result of mutual influences between two cultures, as Antonio Orihuela describes<sup>42</sup>: "The Palace of the Lions is a unique case within Nasrid domestic architecture, given the existence of porticoes on all four of the sides of its courtyard. It is a fortunate synthesis between the usual cross-shaped layout of traditional

- Built during the reign of Yusuf I (1333-1354)
   BERMÚDEZ LÓPEZ, Op. cit., p. 168. BERMÚDEZ LÓPEZ, Op. cit., p. 155.
   Built during the reign of Muhammad V (1362-1391)
   ORIHUELA UZAL, A. Casas y Palacios Nazaríes SXIII-XV, Lunwerg, Barcelona. Legado Andalusí, Granada. 1996

Islamic gardens and Mediterranean courtyards with peristyles."Another invaluable research on this matter is the one carried out by Antonio Almagro<sup>43</sup> regarding the exchange of concepts and compositional ideas between Christian monarchs and the Arab sultanate that took place during the reigns of Pedro I and Muhammad V.

Regardless of the many hypotheses that exist regarding the influences and origins of the Palace of the Lions, there are sources that confirm the many voyages of the sultan and his court, thus pointing to an awareness and knowledge of the existence other architectures, both Christian and Islamic.



IL. 14. Sala de las Dos Hermanas. (photography: © Fernando Alda)

The Palace of the Lions is located tangentially to the Palace of Comares, contrasting with it while fitting in with precision between it, the Baths of Comares and the Rawda. It recovers the typology of the crossshaped courtyard instead of using the well-established Nasrid scheme of a courtvard with a pool. Despite maintaining a north-south axis, parallel to that of its predecessors, a second transversal eastwest axis is added to the layout. Both are unified by the perimeter galleries that Antonio Orihuela, as we have seen, describes as connected porticoes. These galleries are grouped into pairs, and each pair is different. Those that run from north to south, due to their width, have the function of being covered communication corridors, while the ones that run perpendicularly, given their greater width, acquire the role of rooms in themselves. Moreover, the halls that are set parallel to these galleries are open and interconnected, suggesting that their use was simultaneous. Therefore, to the inhabitational nature they have in the Hall of Comares, we must add their parallel connectivity, something that is non-existent in the aforementioned palace. This continuous element along the perimeter of the courtyard evidences the influence of Christian cloisters in the layout of this space.

In the spaces set along the north-south axis we can see certain similarities between the Palace of the Lions and the Palace of Comares, with subtle differences. The first is the duplicity of *qubbas* on either end of the axis. The second is the change of the position of the transversal hall next to the *qubba*, that is, the way in which the usual T-shaped plan of the *qubba* and ante-chamber is laid out. If we observe the sequence of spaces towards the north, the main difference lies in the relationship each palace has with the surrounding landscape. In the case of the Palace of the Lions, the hall that is transversal to the axis, the Hall of the Ajimeces, is placed after the *qubba*, as a transitional space between it and the unique lookout

43. These ideas have been exquisitely laid out and developed by ALMAGRO GOR-BEA, A. Palacios medievales hispanos, Discurso de ingreso a la Real Academia de Bellas Artes de San Fernando, Madrid 2008

44. BERMUDEZ LÓPEZ, Op. cit., p. 130.
45. In the book Casas y Palacios nazaries, S XIII-S XV he suggests that "these pavilions seem to have their origins in similar structures which Christian cloisters across from the refectory, albeit their placement unaligned with the axes and the presence of just one such pavilion"

46. ALMAGRO GORBEA, A. Palacios medievales hispanos, Discurso de ingreso a la Real Academia de Bellas Artes de San Fernando, Madrid 2008. P. 99 of Lindaraja, which, as Jesús Bermúdez López point out<sup>44</sup> originally looked onto the Albaicin neighborhood. In the case of Comares, the transversal hall, the Hall of La Barca is placed before the *gubba*, taking on the role of ante-chamber to the Hall of the Throne. In short, in Comares, the transversal chamber precedes the qubba and in the palace of the Lions it succeeds the qubba, two different ways of understanding domestic space. Another characteristic that appears in these *qubbas* is the position of the upper rooms placed to the sides, from which to observe the space unseen. This is perhaps another step in the evolution of the gubba, the nearest precedents of which can be found in the Palace of Comares, both in its own *qubba* and in the baths, in the latter at a rather reduced scale. In the Palace of the Lions we can observe that the entrance sequence into the *qubba* is repeated again on the southern side, into the Hall of Abencerrajes. The uniqueness of the layout of the Palace of the Lions lies in the second east-west axis, as we have mentioned. This axis is longer than its perpendicular and it is enhanced by the presence of two pavilions, which also have square plans. In an unprejudiced interpretation of the compositional features that make up the palace we could say that these qubbas become outdoor spaces, turning into leisure pavilions in the courtyard and acquiring a new role, one that has to do with the origin of the qubba as a funerary pavilion, or , in Antonio Orihuela's interpretation<sup>45</sup>, a feature that can be traced back to Christian influences. Almagro<sup>46</sup> refers to them as pavilions in the form of *qubbas*, and points out that the exchange of formal ideas also occurred between different Islamic kingdoms.

As for the Hall of the Kings, let us begin our analysis by stating that its name is misleading, since it is hard to identify this space as a single hall due to its layout as a succession of three qubbas connected by short passages with rooms that include divans, as Rafael Manzano points out<sup>47</sup>, along with deep cupboard-like niches. All in all this 'hall' is comprised of ten consecutive spaces and two cupboard spaces. As such, this ensemble can be perceived as a grand longitudinal nave clearly marked by the chiaroscuros produced by the sequence of *qubbas* and the transitional spaces between them.

Looking at the Palace of the Lions as a whole, we can conclude that the *qubba* has endless spatial possibilities, that it can be shaped and built into different architectural forms, providing ample possibilities for the germination of architectural compositions. This

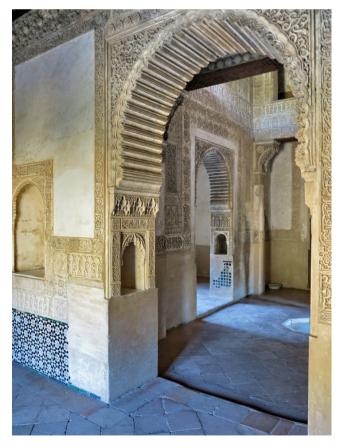
palace can be understood as the orderly sum of different types of *qubbas* which have very different and specific functions. It is an extraordinary synthesis of Islamic and Christian architectural concepts built and embellished by the refined language of the Nasrids.

#### TOWER OF THE INFANTAS. A DOMESTIC OUBBA<sup>48</sup>

This tower-palace presents a variation of the *qubba* we have presented in our analysis. Its height is similar to the Gate of the Rawda, but in this case, as in the baths of Comares, the *qubba* expands vertically to articulate two levels plus the lantern that covers the space. Therefore, to its nature as a central space with a square plan we must add its capability of articulating the cross section, where the transversal and diagonal relationship between the spaces occurs in what we could call, in architectural terms, a covered courtyard. Here, the original concept of *qubba* is enhanced by new spatial qualities that add architectural complexity to the composition. If, as we have already seen in the Hall of Las Dos Hermanas, the accent is placed in the visual perception of the stratification of light, in the Tower of the Infantas, what is articulated vertically is space in itself. The complexity of the composition of the space of the tower on the two Cartesian axes is such that in this case the *qubba* transcends its habitual symbolic role. It is not only covered by a mystical interpretation of the celestial sphere, it is also the place around which all of the rooms in the palace revolve, making the entire ensemble resemble a Mediterranean courtyard house. The lantern that covers the central space is what still makes it a *qubba*. Regardless of the transformations it underwent when it was turned into a private home and during later restoration processes, we believe it is an important contribution to understanding the evolution of the gubba. On the basis of Antonio Orihuela's hypothesis expressed in his text Houses and Nasrid Palaces. 13th-15th Centuries that this is one of the last exam-

 ${\bf 47}.$  MANZANO MARTOS. Op. Cit., p.119/120  ${\bf 48}.$  Built during the reign of Muhammad VII (1392-1408). The chronology has been extracted from the texts written by Jesús Bermúdez López in the Official Guide of the Alhambra





IL. 15. Interior of the Torre de las Infantas. (photography: © Antonio Cayuelas)

ples of such spaces built during the Islamic period that remains standing within the Alhambra, and in our understanding of this *qubba* as a compendium of different precedents, we think that this space is an intermediate example of a traditional *qubba* with all of the features and traits we have been describing, with the addition of a covered courtyard.

#### CONCLUSIONS. SOME IDEAS THAT DERIVE FROM THIS ANALYSIS

The *qubba* is a type of space that, during the Nasrid period, renewed its symbolic and representational role, serving as the basic cell in the generation and development of different Islamic buildings. It had a transcendental role in the production of a diversity of spaces, from the house to the cemetery, including baths, royal halls and lookouts... Its position can be central and centripetal, off centered at the end of spatial sequences, or grouped as part of larger compositions, but it never relinquishes its importance and presence. The atmosphere within is unique, making it stand out within architectural configurations. This is independent of its size, from the Oratory of the Partal to the Hall of Comares shared aspects are perceived that are intrinsic to this typology. Qubbas are recognizable features, and they can be efficiently diversified, functionally accommodating multiple activities because the use of space in Islamic architecture, as we have seen, is open, flexible and versatile. Nasrid architecture is based on a cell that is the origin of it all, the qubba. This cell is scaled or set within a sequence in order for spaces to serve their purpose.

This not only occurs in plan, but also in section, giving each room the importance it needs. The inner elevations articulate the superimposition of levels, the stratification of atmospheres and upper floors, enhancing the verticality of the space. The *qubba* is always identifiable within a composition of architectural spaces due to its formal and spatial attributes. It has a square plan and two organizational axes, light and ventilation are stratified by means of different kinds and sizes of openings, but they always present two different scales, they are larger at floor level, and higher up, they appear as sequences of small windows. The configuration of these elevations is completed by the graphical quality of their finished surfaces and the incorporation of epigraphic inscriptions.

As Oleg Grabar indicates in his text "form in the Alhambra are not specially original", what makes spaces stand out is that "their layout and quality is unique"<sup>49</sup>. This fits in with our approach. Originality does not characterize the forms and spaces of the Alhambra, however the refinement of models, the implicit quality seen in the subtle variations of a type— the *qubba*—and the technological advancements of its construction do. The identification of some of the most controversial spaces as *qubbas* is not determining. We have identified a spatial type that appears in multiple forms which is the centerpiece of most complexes. This space and the courtyard are the two helixes that constitute the DNA of the architecture of the Nasrid palaces.





IL. 16. Comparative Study of qubbas. Drawing: estudio Antonio Cayuelas