Gardens & Landscapes
The Fourfold Water Garden, a Renaissance Invention
Carmen Toribio Marin
DOI 10.1515/glp-2016-0001
Reference: Gardens and Landscapes, De Gruyter Open, nr 4 (2016), pp. 1-15. URL: https://www.degruyter.com/view/j/glp

ABSTRACT

The different combinations between the "classic" fourfold pattern and water in the garden have produced a high number of varied solutions since the distant past. However, during the Renaissance a new model emerges: a cross-axial garden with four basins arranged symmetrically around its center. The composite analysis of the related examples is addressed in this paper, which attempts to find an explanation for the different models as for the appearance of the contrasting solution at the same time in two different locations: the Villa Lante (Bagnaia, Italy) and the Royal Monastery of San Lorenzo in El Escorial (Madrid, Spain).

Keywords: Fourfold garden, water garden, cloister garden, Renaissance, Villa Lante, El Escorial.

ARTICLE

Introduction

In this research and as a result of a formal analysis of the different examples, the emergence of a completely new structure, which arises at this time and not before, can be traced to the Renaissance: a garden with cross paths and four water basins off axis arranged symmetrically around the center of the space. Its development can be considered as one of the great Renaissance contributions to the composition with water surfaces. Surprisingly, this layout developed almost simultaneously in two different and exceptional cases. Both in the gardens of the Villa Lante and in the Cloister of the Evangelists in the Royal Monastery of San Lorenzo de El Escorial, a kind of distinct solution to the multiple combinations between water and fourfold schemes time-tested from remote times was achieved.

From this approach, focusing on the spatial conception and the general layout of the model, is possible make significant contributions to a so thoroughly studied issue. It is not the aim of this paper to reveal the deeper meaning of each of the solutions, neither to delve profoundly into its possible symbolism; but rather to open an inquiry about the different combinations of water and fourfold schemes frequently associated with gardens, its potential relationship with basic hydraulic structures of the territory and thus the role of gardens as utopian water landscapes. The comparison between the two models raises suggestive relationships between garden structures, fountain design and urban layout, which are addressed in an attempt to clarify the reason for the emergence of the exceptional type at that precise moment.

Carmen Toribio Marín is Associate professor in the School of Architecture of Madrid (ETSAM) and in the landscape degree of the Camilo José Cela University (UCJC)

Two case studies and a new water layout

During Renaissance period, experimentation about the relation between quadripartite layout, architecture and water brought forth a new composite model. This happened almost simultaneously in two different locations: the Villa Lante and the Cloister of the Evangelists in the Royal Monastery of San Lorenzo at El Escorial.

Located in Bagnaia, summer retreat of the bishops of Viterbo at least since the thirteenth century, the Villa Lante was an initiative of Cardinal Giovanni Francesco Gambara (1533- 1587), which began its construction in 1568. The project is attributed to Jacopo Barozzi, known as Vignola (1507-1573), while construction management was entrusted to Tommaso Ghinucci (? - 1587), architect of Sienese origin, specialized in hydraulics, who certainly participated in the design of the fountains. The works were completed by Cardinal Alessandro Peretti Montalto (1571- 1623). Following the usual layout of Italian Renaissance gardens located on slopes, the architectonic ensemble stands in a series of plain terraces and slanting surfaces linked by stairs and water features with a strong axial arrangement. In the lower terrace, this axial composition develops into a cross- shaped square garden of 75 metres each side, known as the Quadratto, were the new water feature appears: four plain basins are arranged around a fountain, which was modified (only in its central element, not in the basic layout) in time of cardinal Montalto. The original fountain (which is portrayed in early engravings and drawings by authors like Ligustri, Lauro or Guerra and described by travelers as a pyramid or a "metta sudans"), was then replaced by the current "Fontana dei Mori" by Giambologna: carved in black stone of Viterbo, in its center four life-sized moors hold high the heraldic mountain surmounted by a star, the Montalto coat of arms (ANIBARRO 2002: 197-213).[1] The basins are separated by parapet walks, decorated with stone pineapples and urns that, like bridges, cross the water towards the central fountain (fig. 1).

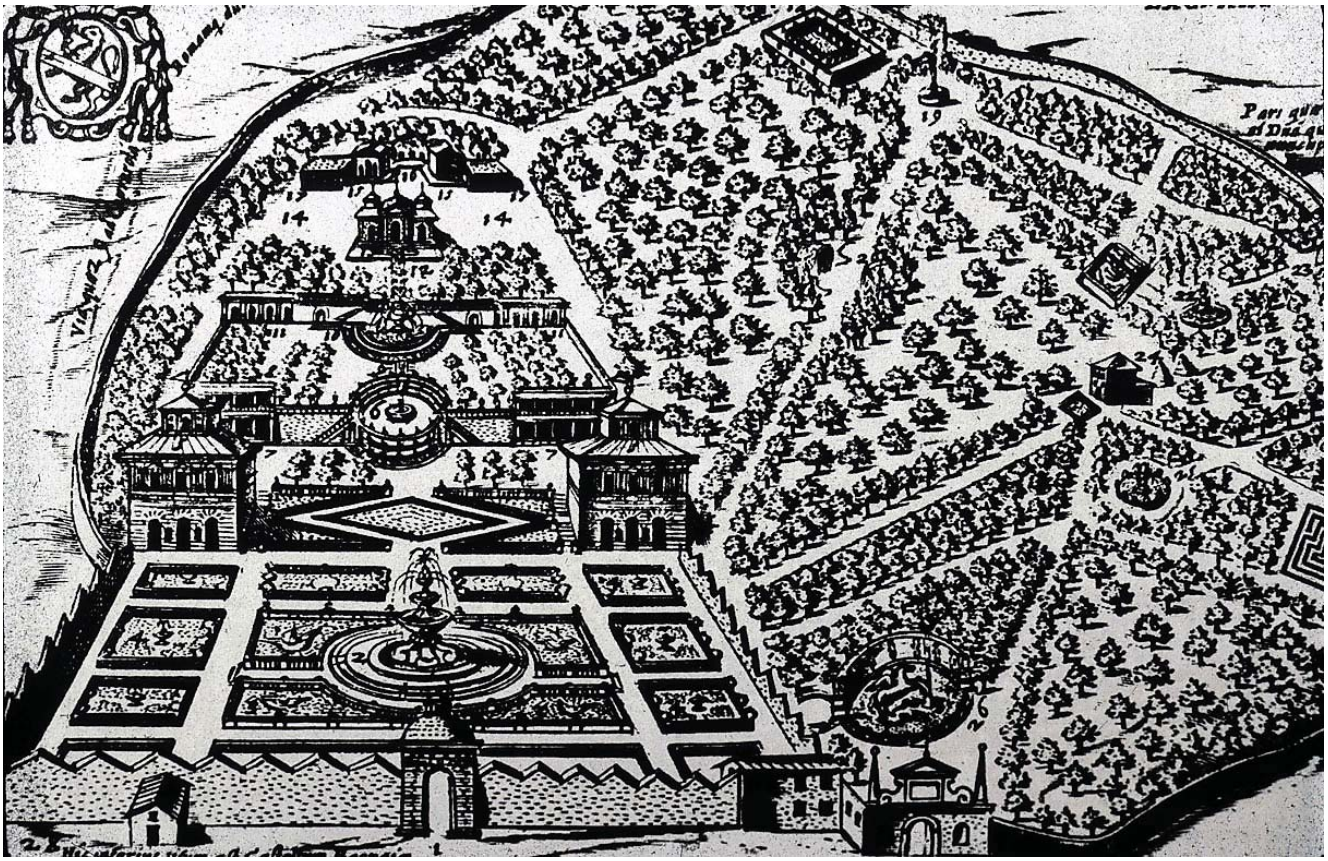

Figure 1. The Villa Lante. Engraving by Ligustri. 1596.

1 Miguel Ángel Aníbarro (2002: 197- 2013) gives an extensive relation of the documentary sources and significant bibliography of villa Lante and makes insightful description of the Villa and its components. More recently, Benocci (2010) and Girot (2015) have made interesting contributions to this theme.

In turn, the Cloister of the Evangelists of the Royal Monastery of San Lorenzo in El Escorial, commissioned by Philip II (1527-1598) and masterpiece of Juan Bautista de Toledo (1515- 1567), was the center of the Hieronymite community that inhabited the southern part of the Monastery.[2] Began in 1567 and completed in 1579, the cloister, measuring 46 meters each side, is enclosed by façades in two stories, Doric the lower one and Ionian the upper. Following a traditional layout, it has a cross- shaped form, with a central octagonal pavilion; a piece of rich Italianate architecture devised by Juan de Herrera (1530- 1597) that is somewhat later, dating from 1586-1593 (SANZ 2009: 124). It is not usual, however, the water layout, placed in four raised reservoirs that form a unitary structure with the pavilion. Juan Bautista Monegro (c.1545- 1621) was the author of the statues of the Evangelists, source of the water that fill the pools, finally placed on the chamfers on May 15, 1593 (KUBLER 1972: 10). They have at their feet the images of the animals that identify them. In contrast to the flat sheets of the Villa Lante, water is stored in El Escorial in four raised reservoirs with parapets of granite that are part of the pavilion; in this way, the octagonal building, centripetal and introverted, is linked with the garden through the four basins, integral elements of the two areas (fig. 2).

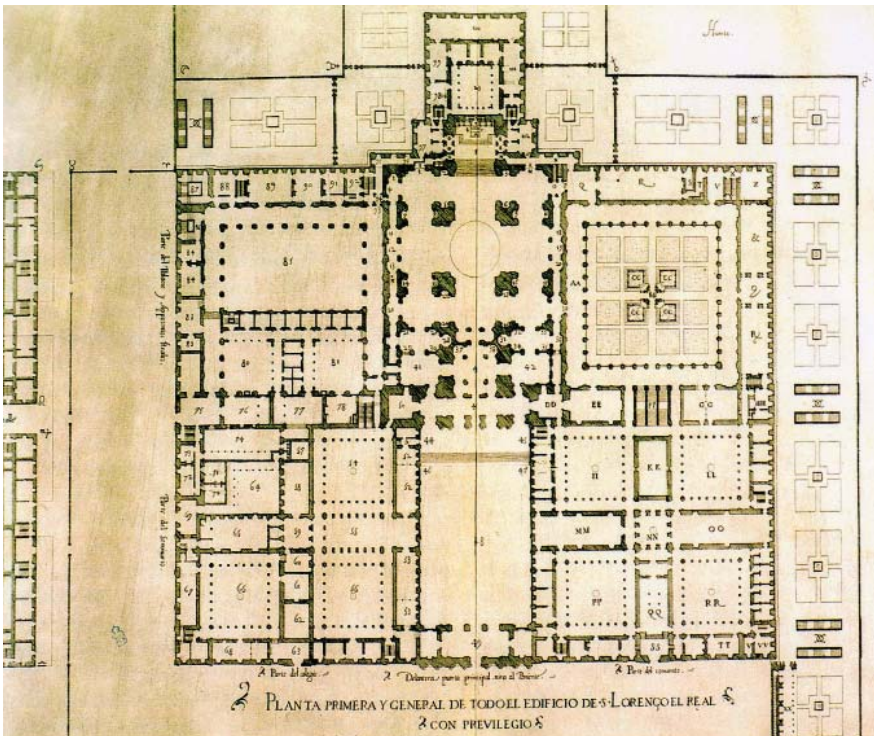

Figure 2. The Royal Monastery of San Lorenzo. Drawing by Juan de Herrera engraved by Perret (1589). Detail of the Cloister of the Evangelists.

Both in the Quadratto of Villa Lante and in the Cloister of the Evangelists we find the same geometrical pattern. Based on a quadripartite layout, with two perpendicular paths that intersect in the center, a new subdivision of the area produces in both cases 16 quadrants; in Lante in the lower terrace and arranged axially with the rest of the garden structures; while in El Escorial hidden in a central cloister. 12 of the quadrants were planting beds, the remaining four were filled with water. In both cases, the traditional relation between land and water is reversed, and for the first time in the history of garden art, water occupies the quadrants instead of the axis of the fourfold model. As discussed below, symbolism might have had an important role in the invention of the new type: on the one hand, there seems to be an attempt to represent an ideal place (Heavenly Jerusalem, the Garden of Eden or even the Temple of Solomon)[3] while on the other, an analogy with city construction (utopian or real) is evoked. But also, as we will see later on, it can be discerned an experimentation over the idea of the fountain as an aquatic and hydraulic composition, fact that could determine the differences between the final layouts of the two cases referred (fig 3).

2 Studies about El Escorial are overwhelming in number. In this paper we will concentrate in the Court of the Evangelists and its garden features, and so we will refer, among other, mainly to the classic works of Kubler (1972), Navascués (1987) and the contributions of Martínez – Correcher (1984) and Sanz Hernando (2009).

3 The analogy between Salomon's Temple and El Escorial has been very much discussed. Authors as Juan Rafael de la Cuadra (2005) or Moya Blanco (1963) insist in the relation between Jerusalem's Temple and the layout of El Escorial, while other authors as Kamen (2009) or Kubler (1983) reject this idea. Many other have pointed out other influences in the conception of the overall design, specially Chueca Goitia (1966), Íñiguez Almech (1986) or Barbeito (1986), who emphasizes that the project was determined by the Italian Renaissance.

Figure 3. Left: Cloister of the Evangelists. Engraving by Antonio Herbert (La Ilustración Española y Americana, nº XXXV, 1885). Right: Il Quadratto. Villa Lante. By Ljuba brank - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=35981291

Water and fourfold structures

The use of water in the Cloister of the Evangelists and the Quadratto of Villa Lante exemplify an archetype of garden as new as infrequent; a layout that in the seventeenth century was definitely not widespread; the same model is found in few if any examples, such as Saint Germain-en-Laye (in the lower terrace) and also in the Italian Villa Gamberaia (where water quadrants were adapted to the elongated proportion of the enclosure). Although not constructed, an almost identical theme, strongly associated to the Cloister of the Evangelists, is portrayed in an anonymous painting dated about 1600. Belonging to the Prado Museum it is now kept in the School of Architecture of Madrid, and completes the rare examples of this particular water pattern (fig. 4). Navascués sustains that the inspiration of the picture is undoubtedly Flemish, and as such appeared in the former inventory (NAVASCUÉS 1987: 69). However, in the last one by Espinós, Orihuela and Royo-Villanova, it has been classified as an anonymous Spanish picture of the seventeenth century (ESPINÓS; ROYO-VILLANOVA; ORIHUELA 1981: 72).[4] The painting depicts a garden panorama with an architectural gallery built on one side and a green octagonal pavilion topped by a dome at the back, on the vanishing point of the central perspective. The trunk of the tree used for trimming can be discerned inside the pavilion. The scene reproduces the moment in which Eurydice is bitten by the snake, in allusion to the myth of Orpheus; subject that although very common during the seventeenth, is still present here in a surprising way, as the nymph is not, as usual, wondering through the natural landscape of the fields of Thrace, but is found within an artful garden. Indeed, the inspiration in the model of El Escorial seems unquestionable, considering that the painting is subsequent to the construction of the pavilion. Four basins fed by spouts that depart from four statues placed in the chamfers repeat almost mimetically the model of El Escorial.

The emergence of this new water layout in the Renaissance can be considered a peculiar fact, as it has never been recorded before, even though the idea of combining the fourfold scheme and water is linked to the most primitive

4 The type of perspective and some details of the tunnels of greenery are similar to those of another anonymous picture of the first half of the seventeenth century, kept in the Burgos Museum, and until recently erroneously considered as a view of the garden of the Pardo Palace. This can reinforce the hypothesis of the Spanish origin of both pictures. However, for Navascués the engravings and Flemish drawings on gardens known by Herrera, might have been the common source of both compositions (NAVASCUÉS 1987: 69-70).

Figure 4. Anonymous picture (detail). Seventeenth century. Photo by Carmen Toribio

art forms. Cross axial structures with water where common in Persia and influenced the Achaemenid garden, widely portrayed in later centuries in the so-called garden carpets, with variations and mixed arrangements of channels and pathways. The fourfold garden had a great subsequent impact: it became a model for the Islamic garden; from Spain to the Mughal India (where it is profusely depicted not only in its gardens but also in its literature). This highly structured geometrical scheme was named Chahar Bagh in the Islamic world. Water was always present, and repeatedly placed in the axes; on many occasions, especially in Mughal India, the four parts of the Chahar Bagh where defined by channels of water. Before reaching the Middle Ages, the roman garden shows a remarkable break from this tradition as the archetype seems to have no continuity, and the "classic" quadripartite cross-axial form is almost absent of the garden. However, although uncommon, the fourfold pattern was not entirely unknown in Roman gardens, a fact that cannot be considered strange at a time in which the layout of peristyles accounted for a turning point in the development of aquatic compositional schemes. In this reduced enclosed space the relationship between water and site is reworked repeatedly, resulting in renewed and interesting designs. In this context the fourfold pattern comes forth in two different configuration, both linked to water features. The first of them is the cruciform pool, a rare type that is found in Ercolano in two examples: the small central basin of the House of Galba and the great swimming pool of the Palestra.[5] The second model comes forth in examples of the Lusitania, in compositions that develop a new and interesting variant, where the layout of a peristyle island (bounded by a narrow perimeter channel, a Roman common theme) converge with the cruciform scheme. This is the uniqueness of both the peristyles of the House of Cantaber and the House of the Repuxos, with a double cross-axial layout) in Conimbriga, absolutely singular examples that show the creative richness of that historical moment. However, despite all this experimentation, the compositional analysis shows that in the fourfold scheme, water remains on the axis, and thus takes the shape of a channel; sometimes, as in the Portuguese examples appointed, with recesses. Despite the usual game of interchange between the areas of land and water (which can be seen in the same peristyles of Conímbriga), basins never form part of cross-axial roman garden design.

The outbreak of water and cross-axial layouts in the West. Iberian gardens

Undoubtedly, all this experimentation influenced ulterior layouts, particularly those of the Iberian Peninsula, where Islamic influences blended with the Roman substrate and resulted in new and unique projects. Particularly, the crescent-shaped pools characteristic of North Africa, shifted from the center to the perimeter of the peristyle, maybe originated the recurring arrangement characteristic of Hispano-Islamic examples, such as the Casa de la Alberca at Medina Azahara. This is the layout of the pools of the courtyards of Castillejo de Monteagudo (Mur-

5 For details of this solution, see JASHEMSKI 1979: 162-163.

cia), of the Aljafería (Saragossa); but also of the Alcazar of the Christian Kings (Cordoba) and of the Claustro del Vergel in the Palace of Pedro I (Tordesillas). The roman plan only in medieval epoch and indistinctly in Islamic or Christian territory, was adapted to a cross-axial form, with unique examples in the West in which water in conjunction with cross-axial schemes resulted in multiple and interesting variations.[6] Original and early examples such as the terrace of the Salon Rico (or Hall of Abd-ar-Rahman III), where the space was generated by considering the relationship between architecture and the water stored in raised reservoirs in a fourfold organization with variants that made this garden a single type, were followed by models that further developed what is perhaps the greatest contribution of the Hispano-Islamic garden to the quadripartite scheme: the transformation of a plane geometry into a definitely three-dimensional model. The idea was possibly inspired by the Egyptian sunken gardens and the Romans crypto portals, already noted in Medina Azahara. A mixed structure of channel and path (as in the Patio del Crucero of the Alcazar of Seville or in the Generalife) seem to prevail, although organizations with central fountain and cruciform channels, less frequent, have also relevant examples, as the garden of the House of Trade in Seville.[7] So in the Iberian Peninsula, basins and not only channels, formed part of crucero layouts, but they were, as this examples show, always placed on the axis.

Nevertheless, again in the Hispano-Islamic domain, we can find an hypothetical precedent to the solution achieved in the Renaissance that moreover includes suggestive developments in the repeated cruciform scheme: it is the Lion´s Court in the Alhambra, the latest innovation of the Hispano-Islamic garden on how to deal with water on a cross-axial plan; in an imbricated type that meets the quadripartite Persian Sassanid garden, the Greco-Roman peristyle and Christian cloister (fig.5).[8] The space, totally determined by the presence of several water features, rotates around the fountain of twelve lions that gives the Palace its name, source of the water that from here is conveyed to the compass points by four channels that divide the garden in four equal quadrants. The channel prolongs to the interior of the confronted Halls of the Abencerrajes and of the Two Sisters, were other two fountains are located in the center of each room, breaking the enclosure limits and visually extending the short axis, promote an overall interplay between exterior and interior. This complex ensemble, as happens with other examples, can be understood as a perfect metaphor for the prosperous cultivated landscape, enriched by the inclusion of water, where perhaps even the central fountain was a reference to the clepsydras that routinely controlled the intricate turns of irrigation of agricultural land. But again, in this case, and despite the suggestive compositional innovations, water remains, as usual, on the axes. Still, in the Lion´s Courtyard the solution that clearly developed during the Renaissance, could have been pointed out. It is well known the great controversy that has aroused over the existence of planting on the four quadrants of the Lion´s Court. Authors like Dickie (1976: 100), Ruggles (2000: 193- 195) or Martínez de Andosilla (2005: 16) defend the existence of four sunken planting areas, which could be irrigated by overflowing the channels. However others, like Pavon Maldonado (2004: 502- 508), citing functional reasons, believe the Court was laid over an older fourfold prenazari garden with pools at the ends of the large axis, transformed subsequently in a quadripartite layout with the channels we see today dividing the plane into four quadrants completely paved. Therefore, references to Solomon (Sulaymān for the Islamic) would derive not only from the famous fountain; but also from the shiny marble surfaces that could act as a metaphor of water. Maybe this addressed

6 The different typologies have been explored in TITO ROJO and CASARES PORCEL (2011).

7 The garden of the House of Trade is the result of the Christian reforms carried out possibly in the mid-fourteenth century. Instead of an axial water channel, the elongated pools are here arranged in a cross. The result was, for Almagro Gorbea (ALMAGRO GORBEA 2007: 195) an original layout unprecedented and with no similarities in any contemporary or later Nazari work. For more information about the fourfold Hispano-Islamic garden, see TORRES BALBÁS (1958) and PAVÓN MALDONADO (2004). PERLA DE LAS PARRAS and SOTO CABA (2015) have recently investigated about the cross axial gardens of Islamic Toledo, with interesting contributions.

8 Constructed between 1370 and 1390 by Muhammad V (1338- 1391), it probably replaced an older garden from Yusuf I (1318- 1354) reign (RUGGLES 2000: 191).

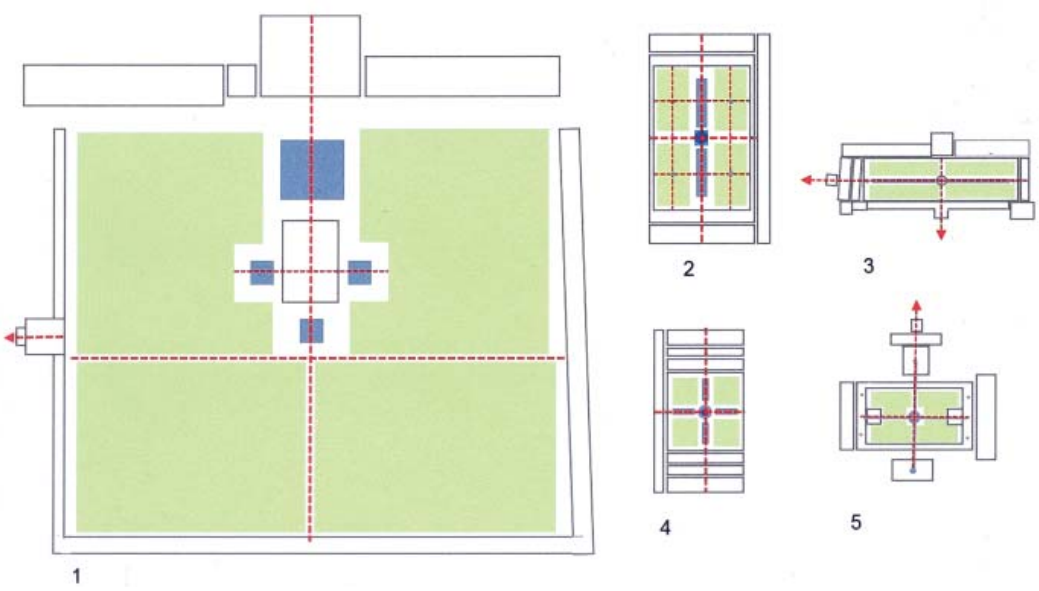

Figure 5. Combinations between water and cross-axial patterns (1. Medina Azahara, 2. Patio del Crucero, 3. Generalife, 4. Trade House, 5. Lion´s Court). Drawing by Carmen Toribio.

to the mythical *sarh* of Solomon, the archetype of palace or pavilion with brilliant surfaces polished as glass, which, as Arab texts show, seemed to be made of water (RUBIERA 1988: 50).[9] The layout would have then similarities with the two cases studied in this paper, with shiny marble replacing the water surfaces.

A symbolic water pattern

The examples hitherto mentioned show how water and cross-axial plan interwoven throughout time in multiple combinations: water emanating from the center is distributed by long straight channels, mixed schemes of channels and paths, cross-shaped pools... If the sunken beds of the Lion's Court were really paved as we see today in the recent restoration, this would have only been an hypothetical water metaphor, but not a constructed model. Despite all the precedent experimentation around water and fourfold gardens, only in the sixteenth century and for the first time in the two examples considered in this paper, Villa Lante and the Cloister of the Evangelists, the pools are out of the axis of a fourfold garden. The conception of this novel design in two distant locations at the same time suggests some kind of relationship between both models, or at least a common referent for the two of them. This relation finds a plausible, but not the only, justification in a very specific symbolic program common to both examples, as well as, as we will see now, in a sought analogy with the city understood as an abstract construction.

A ground plan analysis reveals that really, rather than through a cross-axial scheme, space organizes in the two cases here considered through the grid, the system used to modulate the urban fabric, also applied to the layout of Renaissance flat gardens. [10] A similar scheme can be found in the images of ideal regular cities, which as the one Fra Giocondo imagines in his interpretation of the Vitruvius, had its formal materialization in the structure of some new European settlements or American colonial foundations.[11] Moreover, this idea could have influenced later accomplishments: a similar composition can be found in the Villa Medici Garden at Rome, as depicted by Falda in 1683 (fig. 6). In the engraving, a grid plan orders the northern garden in 16 quadrants; four of them, around the center, have a distinct plantation.

These ideas, closely related, seem to converge with the descriptions of Heavenly Jerusalem that can be found in the Apocalypse of St John (21:2-22:5): an ideal city conceived from the volumetric perfection of the cube "… et platea civitatis aurum mundum, tamquam vitrum perlucidum"; that is, with a central square transparent as glass,

9 The use of shiny coatings was common in Muslim palaces. The justification for its repeated use has been sought in the narrative that is made in the Quran of the legendary visit of the Queen of Sheba to Solomon's court, where it is reported how the sovereign, mistaking the bright pavement with a water surface, lifted her skirt to get through (Quran: XXVII, 44)

10 About flat garden and urban analogy, consult Aníbarro (2002: 243-297).

11 Anibarro (2002: 277) quotes, among others, an example with obvious formal similarities with the cases before us: Vitry- le François, an initiative of the French king Francis I (1494- 1547) designed in 1545 by the Bolognese engineer Girolamo Marini (? - 1553).

effect that, as in the Temple of Solomon, could be achieved using water, and that recalls once more the Alhambra's Lion's Court.[12] Indeed, Heavenly Jerusalem was usually depicted in the iconography of the period as a walled city laid on a grid pattern, as some Flemish engravings show. The work done by Adriaen Collaert (c. 1560- 1618), Martin de Vos (1532-1603) and Johan Sadeler (1550- 1600), shows the city crossed by a cruciform pool that widens to accommodate a circular central island shaped as a mound; that is, with the usual and already mentioned solution in which the water is placed on the axes (fig. 7). This layout can also refer to Earthly Paradise, frequently portrayed

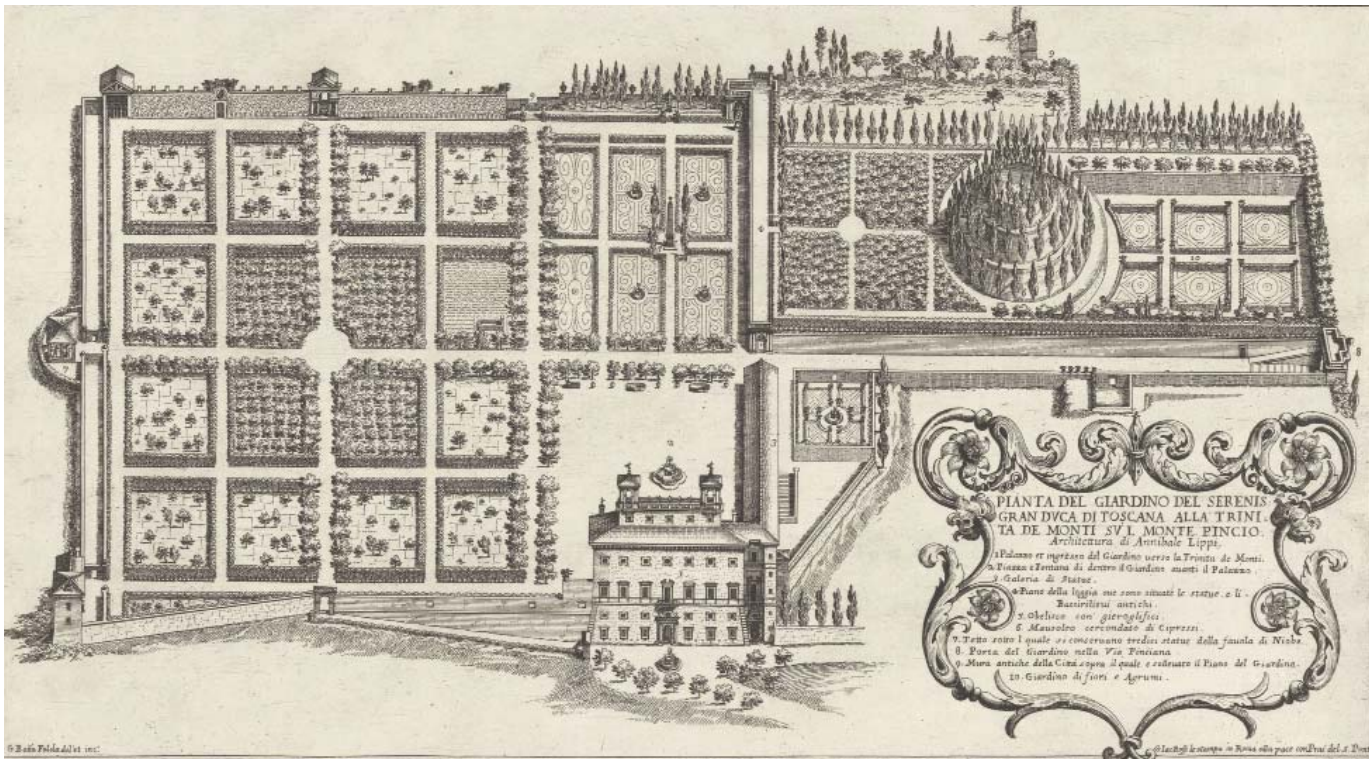

Figure 6. The Villa Medici at Rome. Giovanni Battista Falda (1683).

as an enclosed garden, with a spring or fountain at its center, from which irrigation channels convey water to the compass points, dividing the garden into four, this is, to a cross axial garden.

Undoubtedly, these symbolic representations had their influence on built models, particularly those linked to monasteries. But in compositional terms, none of them deviate too much from examples already referred to, as the garden in the courtyard of the House of Trade in Seville, where the same cross-shaped pool is found. Therefore, it should not seem strange to see the same structure in the Cloister of Manga of the monastery of Santa Cruz in Coimbra, a town near the Roman Conimbriga.[13] In this example, attributed to the French Jean de Rouen, a high domed central pavilion that seems a floating island, raises over a cruciform pool.[14] Four pathways that ascend above steps from the perimeter link with the center.[15] The program, commissioned by John III (1502- 1557) in 1527 to

12 I thank José Muñoz Dominguez for making me aware of this idea. The compositional similarities between the terrace Quadratto of the Villa Lante and the Cloister of the Evangelists, the relationship of both models with the Laurentian grill, as well as with the Heavenly Jerusalem, have been demonstrated by Fagiolo (1989), Adorni (1990), Barth (2001) and Benocci (2010). However, so far it has not been pointed out the novelty involving the formal solution of having four ponds off-axis.

13 This example could bear some resemblance with others Portuguese gardens now disappeared, such as the cloister of the Monastery Jeronimo de Belem in Lisbon, where a fountain in the northwest was the center of an island connected by bridges to other four, set within a star shaped pond with walls covered by tiles (GOTHEIN 1979: 381). Commissioned by King Manuel I of Portugal (1469- 1521) to the architect Juan de Castillo (1470-1552), it was founded in 1501, being remodeled and expanded in subsequent centuries.

14 In 1562 Jean de Rouen came to Coimbra from Rouen, city famous for its elaborate system of water supply and numerous ornamental fountains. About the works of Coimbra, consult Correia (1946).

15 The plan was completed with the inclusion in the inner corners of the reservoir of four cylindrical chapels dedicated to saints who had lived in solitude (John the Baptist, Saint Hieronymus, Saint Paul and Saint Anthony), accessible only from the central pavilion by drawbridges that in the original design could close and form the doors of the chapels. (KUBLER 1972: 9).

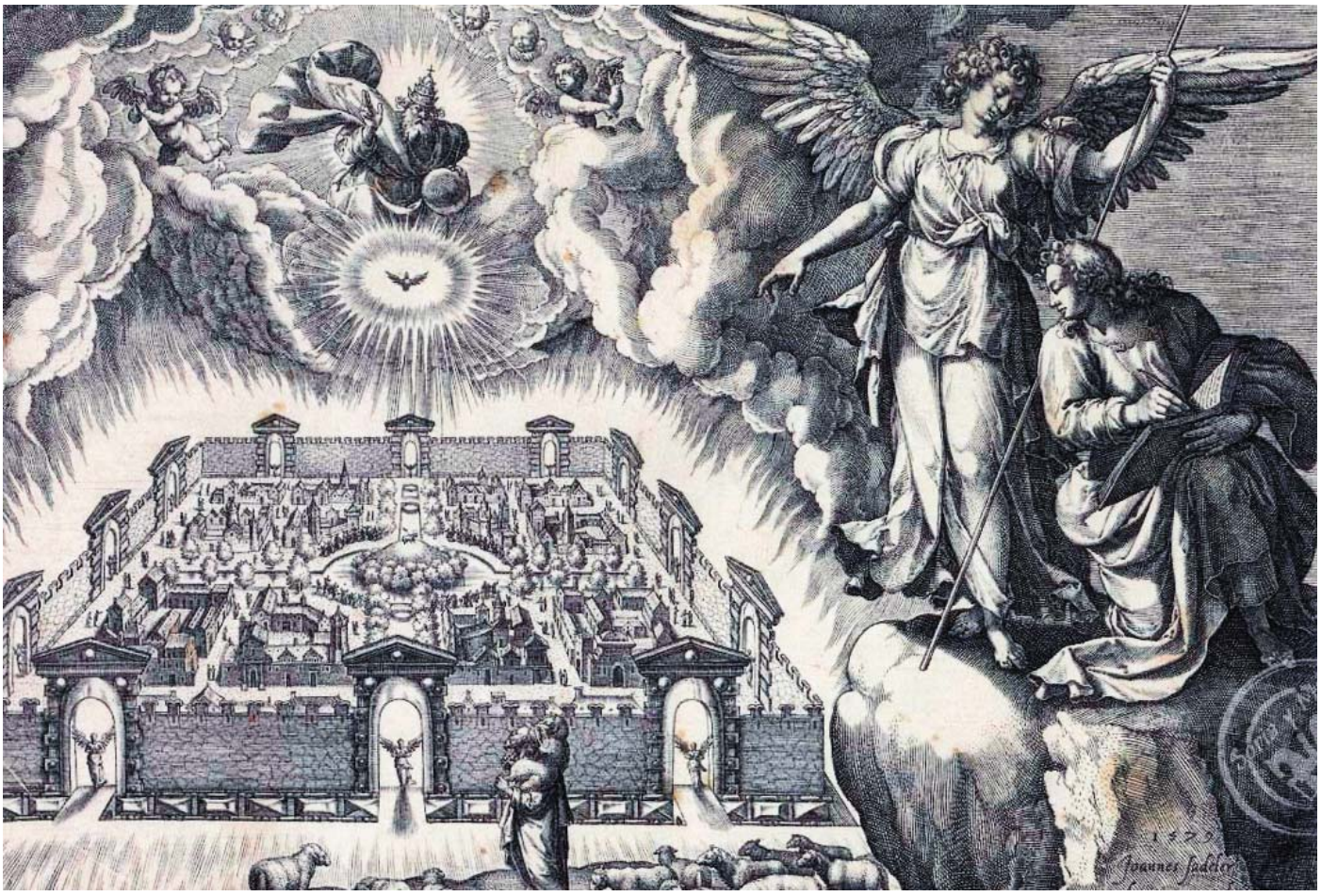

Figure 7. The Apocalypse of St. John. Martin de Vos and Johan Sadeler (1559).

reform the dissolute life of the monks and probably developed by Friar Brás Barros, had a strong symbolic content: the cloister, should be a plastic materialization of the monastic virtues (SEBASTIÁN 2005: 31), and it is plausible that a reference to the Celestial Jerusalem was part of the project. Indeed, the inspiration in the Flemish engravings aforementioned seems clear.

It has been pointed out the impact of this model (arguably known by Juan de Herrera as he accompanied Philip II in 1581 on his trip to the General Courts in Tomar) in the Cloister of the Evangelists of the Monastery of San Lorenzo.[16] Even without an in-depth analysis of the architectural forms of both examples, the use of the water differs in essential aspects. In the first case the main water feature is a cruciform pool, that is to say, four channels of water that seem to spring from a central fountain, a classical theme, here enriched by significant compositional variations. But in El Escorial, as in the Villa Lante, the pattern is reversed in a novel layout that combines the urban grid and a cross-shaped structure to bind with an allegorical message. Father Sigüenza attributes to himself the symbolic program of the Cloister of the Evangelists, and indicates he conceived it as a garden of Eden, provided with the four rivers that watered Asia, Africa, Europe and America (this time singularly not represented as channels, but as reservoirs); also reminiscing of The Fountain of Life of the early medieval manuscripts.[17] In Lante, the basins represent the culmination of a suggestive course of water in which biblical and pagan references are mixed: from the upper terrace, seeping through the so-called Fountain of the Deluge, water finally gathers up in the quiet pool shaped in the geometric perfection of the square. The layout of the water features is here determined by

16 Kubler (1972) pointed out this analogy for the first time, seconded by Sebastián (2005). However, Navascués (1987) completely denies the relationship between both models, as well as the dependence of the Cloister of the Evangelists of Italian examples, such as the work of Bramante in San Pietro in Montorio (NAVASCUÉS 1987: 61).

17 He criticized however its execution considering that the pavilion was too large for the cloister and too noisy for a community that lived almost in silence (SIGÜENZA (1605) 2010: 45- 48).

a complex iconographical program that refers to the classical story of the Golden Age, subject that according to Coffin, could only recall the Garden of Eden to a Renaissance Christian (COFFIN 1991: 95).[18] But furthermore, number and shape combine to offer a glimpse of mystical meaning related to the Counter-Reformist way of thinking of their promoters, Cardinal Gambara and Philip II, and formulated through geometry. The symbolic grid merges with the cross axial plan and defines 16 separate areas, as in the ideal cities, with a defined center. As in the Fra Giocondo image, four of them differentiate, maybe to bind with the allegorical program: 12 therefore would be planting areas, alluding to the twelve apostles; and the remaining four, closer to the center, would materialize as water features, representing the Evangelists (MARTÍNEZ-CORRECHER 1984: 48).[19]

The hydraulic expertise

Along with the symbolic meaning, the water basins and fountains of both Villa Lante and the Cloister of the Evangelists are also essential elements of the hydraulic system: this is clearly recalled by Father Siguenza, that recounts its practical, besides aesthetic function, and adds that "the whole purpose of this factory was make an extraordinary fountain".[20] The goal, of course, was more than fulfilled, the fountain was not only extraordinary but also created a new garden archetype, in which the hydraulic expertise was probably fundamental. The new artistic, humanistic and literary meaning of the Renaissance runs alongside with the rediscovery of classical technology. Chapters dedicated to engineering and to machines in classic treatises like the one of Vitruvio were confronted in this period with the numerous remains of Roman civil construction, abundant not only in the Italic Peninsula, but also in Spain, that had moreover the advantage of an established and strong Arab hydraulic tradition. Italian engineering treatises, such as the written by Besson (1558), Isacchi (1579) or Ramelli (1588) show a great number of devices for fountains that reveal a keen interest in new and more complex water features. Also in Spain, numerous texts, like the written by Jerónimo Giraba (lost today but known to have been part of Juan de Herrera's library) or the outstanding *Los Veintiún Libros de los Ingenios y Máquinas*, a work of an Aragonese author of XVI century, possibily Pedro Juan de Lastanosa, contributed to the development of a science closely linked with gardens.[21]

From this point of view, focusing in the water feature as an hydraulic complex or "fons", but also including symbolic references, a Flemish author provides again an image very next the model here studied: the famous drawing of Lambert Sustris (c. 1515 to 1520 - c 1584), Noli Me Tangere, reproduces a similar organization of space, which certainly suggests the Italian formation of the author (fig. 8). It is in this image where it is possible to detect again the relation between the conformation of the city as an utopia (the background landscape portrayed by Sustris makes reference to Heavenly Jerusalem) but also as a real and tangible construction, furthermore, with a strong relation with garden layout; as the central fountain in its structure seems to refer to the numerous public fountains that from the Middle Ages had characterized the most advanced cities of the Italian peninsula. And it is precisely in the materialization of the center where we find the more significant differences between the Cloister of the Evangelists and the Villa Lante.

The Italian case compiles all the experimentation in the field of urban fountains that began in medieval times and was supported by examples such as those of the Garden of Don Luis Álvarez de Toledo (c.1520 - ?) in Flor-

18 But, as we have seen, the analogy could also be with Heavenly Jerusalem.

19 The same argument has been put forward by Barth (BARTH 2001: 132-133).

20 "Los otros cuatro sirven de estanques, que están siempre llenos de agua para el riego y para la hermosura"; "The other four are pools, always full of water for irrigation and beaty" (SIGUENZA (1605) 2010: 45).

21 More information about this subject can be found in the work of García-Tapia (1984 and 1989).

ence.[22] In its enclosure, the traditional urban grid was reduced to two cross-axial streets that ordered the plain site by linking only some selected points; layout that Aníbarro (2002: 282) points out as the first episode of change that foreshadows the abandonment of the orthogonal grid in the seventeenth-century. At the point of intersection between the two main streets stood a fountain, preceded by another perhaps similar in composition but larger.[23] The latter, by the Florentine sculptor Francesco Camiliani (1530 - 1586), was set on a circular pond, crossed by four access paths; with stairs that ascended towards the center. Its geometry is similar with one of the models of Book IV of Serlio, in which the architect gives examples of possible layouts for garden planting boxes.[24] Although Vasari suggests that in 1568 the fountain was not yet completed, this could be the first example of this type of composition, which seems to refer, in spite of the Flemish engravings, to Italian models (fig. 9).

Given the close contact between the Italian peninsula and the Spanish crown, the model was not foreign to the art of gardening in the Iberian Peninsula and the idea maybe took shape in another Spanish garden: Sotofermoso in Abadia (Caceres).[25] The so-called Place of Naples or of the Emperors, in the intermediate terrace between the high and low garden, was laid around a missing monumental fountain that could have a composition related to

Figure 8. Lambert Sustris. Noli me Tangere.

22 Don Luis de Toledo was cousin of the III Duke of Alba III, son of the Viceroy of Naples Don Pedro de Toledo and brother of Eleanor of Toledo (wife of Cosimo I de Medici). The garden, today disappeared, is pictured in the map of Florence by Buonsignori (1584).

23 Both can be distinguished in the Buonsignori map. The largest one of them was bought by the senate of Palermo in 1573 and adapted to the public space by Camilo, architect and sculptor son of Camiliani, who possibly added a fourth stair. It still remains today in the center of the Plaza Pretoria (NAVASCUÉS 1993: 84- 85).

24 Although in the patterns, all of them geometric and abstract, planting areas are never distinguished from others of water, it is possible that they could have been an inspiration for the new fourfold schemes that during Renaissance combined water and planting (SERLIO 1552: LXXVII).

25 Commissioned by the military and humanist Don Fernando Álvarez of Toledo (1507-1582), III duke of Alba, the garden, of author and unknown plan, was constructed in the middle of the sixteenth century, in the north slope of the river Ambroz. Probably one of the most famous and innovative gardens of his epoch, today only conserves structural and enclosure elements of a marked Renaissance character, as well as some of the splendid original sculptures that were set in the garden (some protected today inside the house). In spite of being designated National Monument in 1931, it is at present in a totally ruinous condition. There are known three extensive descriptions of the garden. The first one is of the Pelegrino Curi-

Fig 9. Left: Fountain Pretoria (Palermo). From the garden of Luis de Toledo. By Pava-Own work, CC BY-SA 2.5. Right: Serlio. Layout for gardens. Book IV.

the exposed type. Villalba called it Fountain of the Planets and Lope referred to it as Fountain of the Gods. Ponz's detailed description reveals the signature of its author: Francisco Camiliani. With tiered structure and profusion of statuary, the fountain is crowned with a figure of Bacchus, and was hypothetically similar in concept and style to the commissioned by Don Luis de Toledo to the same author for his Florentine garden.[26]

If the assimilation of the Italian model can only be inferred in Sotofermoso, in Aranjuez another example clearly incorporates a curious variation on the same idea.[27] Located in the access to the Garden Island by the Queen´s Bridge, the Fountain of Hercules (formerly Fountain of Diana) has a structure that relates to the strictly contemporary examples of El Escorial and the Villa Lante (fig 10). In Aranjuez, however, the fourfold pattern is adapted to an octagonal perimeter.[28] The basin is divided into four parts by two perpendicular intersecting paths; in the center, the sculpture grouping that depicts Hercules fighting against the Lernaean Hydra, by Martino Regio, replaced the earlier of Diana in the reforms made by José de Villarreal in 1661 (QUINDÓS 1982 (1804), 289). Curiously, according to a manuscript preserved in Simancas that might correspond to this fountain,[29] the original figure could be a

Fig 10. Fountain of Hercules and the Hydra. By isol, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=55033913

oso, which visited the still unfinished garden on 1575 (VILLALBA AND ESTAÑA 1889: volume I, 262 and ss). The following, written about 1592, is a long poetic composition in very metaphorical and difficult to interpret octaves, by Lope de Vega ("Descripción de la Abadía, jardín del Duque de Alba"). The last one, much more descriptive, is from Antonio Ponz (1777), when the garden was in decadence (PONZ 1972: Volume VIII, 18 -29).

26 Navascués even believes that this fountain could be the smaller of the two that are pictured in the Buonsignori´s map of Florence in the aforesaid garden of Don Luis de Toledo (NAVASCUÉS 1993: 86- 87). Given that the fountain has disappeared today and no document about its relocation has been discovered, this assumption is possible but difficult to confirm.

27 For other references to cross axial gardens in Aranjuez, see the contributions of Merlos Romero (1998 and 2015).

28 Although what we see today is the result of the transformations carried out in the seventeenth, the whole group was made between 1570 and 1574 by Jerome Carruba. The octagonal configuration of the basin disposed on a sunken surface is original (SANZ 2009: 153).

29 AGS. Casa Real - Obras y Bosques, Legajos, 00252, 81. Included in the letter from Alonso de Mesa to don Pedro de Hoyo, counselor and royal

kind of pyramid or rustic mountain, perhaps similar to the original of the Villa Lante (according to the description of Montaigne and its depiction in the fresco of the casino Gambara), feature that once again recalls Heavenly Jerusalem as pictured by Collaert and Martin des Vos.

Both in Villa Lante as in Aranjuez, the central ornamentation was modified: in the former, as befits a courtly garden, by a pagan god. In Lante, a tiered fountain crowned by the symbol of the Montalto that we only know by the Ligustri 1596 engraving, anteceded the final solution: the sculptural group of the Moors, that with its four figures, underscored the symbolism of number. The flat pools of Villa Lante, also a group of four, were designed as part of the composition of the fountain, a fact that was reinforced by its unification with parapets and balustrades and with the inclusion on its surface of little ships of stone, located in the diagonals, from which small harquebusiers shoot water to the central group. By contrast, in the Cloister of the Evangelists, the central architectural feature responds to a different tradition: the characteristic octagonal shaped pavilion located in the center of a quadripartite garden. The solution is the culmination of a long medieval tradition of strong Hispanic influences: in Spanish monasteries, and linked to the Hieronymite order, the outstanding examples of the cloister at Guadalupe, and the further development in other works such as the Gothic cloister in the Paular or even the referred cloister of Manga, can be considered clear precedents of the central pavilion, although not of the water layout, where, as in the Italian example, an experimentation over the idea of "fons" can be apprehended.[30]

Conclusions

The layout of four water basins around a central fountain is a major Renaissance achievement that develops in a new water feature. A symbolic approach to the subject reveals interesting relations with other models constructed or represented before, but does not explain the change in the spatial structure of the cases analyzed. The pattern in which water occupies the quadrants instead of the axis has to be traced perhaps not so much in the classic fourfold schemes that, developed from remote times, do not in any case show the solution that is found in Lante an in El Escorial, but rather in the analogies between garden and urban planning (both ideal and built), a common Renaissance theme. The grid, used to order the city and the plain garden layout, blend in the examples studied with the typical cross-axial plan, in a structure that does not exclude a highly symbolic component, and where also speculative experimentation around hydraulic devices merge, a fact that without doubt, likewise contributed to the development of the model. Hence, this new water feature had a limited impact, moreover when the grid for urban planning was abandoned in the seventeenth. In Lante and in El Escorial the novel water feature was a logic and clear result of the culture of its time, an aesthetic creation product of an in-deep reflection about urban design, symbolic landscapes and hydraulic investigation.

BIBLIOGRAPHY

ADORNI (2000), "Villa Lante a Bagnaia: storia e interpretazioni", in Monique Mosser and Georges Teyssot, *History of garden design: the western tradition from the Renaissance to the present day,* London: Thames & Hudson.

secretary, Aranjuez, August 2, 1568.

30 Navascués makes an extensive account of pavilions belonging to Spanish monasteries and their parallelism with that of El Escorial. The relationship is undoubtedly direct, since in 1561 Philip II requested the Hieronymus order surveys and sketches of their monasteries to consider them in his new work. Also, in 1564, the prior Juan Huete suggested that Juan Bautista of Toledo should visit some of the Hieronymus monasteries to understand the form of life of the religious order. Moreover, Navascués points out that the arrangement of an octagonal pavilion on the intersection of two paths was a common theme of the Renaissance garden (NAVASCUÉS 1987).

ALMAGRO GORBEA, Antonio (2007), "Una nueva interpretación del Patio de la Casa de la Contratación del Alcázar de Sevilla", *Al--Qanṭara* XXVIII 1, pp.181-228.

ALMAGRO GORBEA, Antonio (2005), "El Palacio de Pedro I en Tordesillas: realidad e hipótesis", *Reales Sitios*, nº 163, pp. 2-13.

ANÍBARRO, Miguel Ángel (2002), *La construcción del jardín clásico*, Madrid: Akal.

BARBEITO, José Manuel (march- april 1985), "El Escorial que no fue", in *Arquitectura*, nº 253, Madrid, pp. 111-137 and 148-155.

BARTH, Fritz (2001), *Die Villa Lante in Bagnaia*, Stuttgart: Edition Axel Menges.

BENOCCI, Carla (2010), *Villa Lante a Bagnaia: tra cinquecento e seicento la chiesa in forma di villa,* Vetralla: Davide Ghaleb Editore.

BESSON, Jacques (1558). *Theatrum Instrumentorum,* Lion.

CHUECA GOITIA, Fernando (1982 (1966)). *Casas reales en monasterios y conventos españoles*. Madrid: Xarait.

COFFIN, David (1991), *Gardens and Gardening in the Papal R*ome, Princeton (N.J.): Princeton University Press.

CORREIA, Vergílio (1946), *Obras*, Coimbra: Universidade de Coimbra.

DE LA CUADRA BLANCO, Juan Rafael (2013), *Arquitectura e historia sagrada: nuevas consideraciones sobre la idea de El Escorial y el templo de Jerusalén*. Madrid: Fundación Universitaria Española, Seminario de Arte e Iconografía "Marqués de Lozoya".

DICKIE, James (1976), "The Islamic Garden in Spain", in Mac Dougall, E. B; Ettinghausen, R, *The Islamic Gardens,* Washington D.C.: Dumbarton Oaks.

DUARTE RODRIGUES, Ana (ed) (2015), *Cloister Gardens, Courtyards and Monastic Enclosures.* Evora: CHAIA/CIUHCT.

ESPINÓS DÍAZ, Alicia; ROYO- VILLANOVA, Mercedes; ORIHUELA MAESO, Mercedes (1981), "El Prado disperso. Cuadros depositados en Madrid", *Boletín del Museo del Prado,* Vol. 2, Nº. 4, pp. 49-84.

FAGIOLO, Marcelo (1994), "Struttura e significato di Villa Lante a Bagnaia", in Alberta Campitelli, *Ville e parchi storici: storia, conservazione e tutela,* Roma: Àrgos, pp. 219-229.

GARCÍA TAPIA, Nicolás (1989), *Ingeniería y arquitectura en el Renacimiento español*. Valladolid: Universidad de Valladolid.

GARCÍA TAPIA, Nicolás (1984), "Los 21 libros de los ingenios y de las máquinas. Su atribución". In *Boletín del Seminario de Estudios de Arte y Arqueología: BSAA.* Nº 50: 434-439.

GIROT, Christophe (2016), *The course of landscape architecture: a history of our designs on the natural world, from prehistory to the present*, New York: Thames & Hudson.

GOTHEIN, Marie Luise (1979 (1914)), *A history of garden art*, New York: Hacker.

ÍÑIGUEZ ALMECH, Francisco (1986), "Invención y traza del Real Monasterio de San Lorenzo de El Escorial", in *El Escorial. La arquitectura del Monasterio*, Madrid: COAM, pp. 19-28.

ISACCHI, Giovanni Battista (1579), *Inventioni,* Parma.

JASHEMSKI, Wilhelmina F (1979), *The Gardens of Pompei, Herculanum and the Villas destroyed by Vesubius,* New Rochelle (N.Y): Caratzas Brothers.

JELLICOE, Geoffrey & Susan et al. (1986), *The Oxford Companion to Gardens,* Oxford: Oxford University Press.

KAMEN, Henry. (2009), *El enigma del Escorial: el sueño de un rey*. Madrid: Espasa Calpe.

KUBLER, George (1972), "The Claustral "Fons Vitae" In Spain And Portugal", *Traza Y Baza*, Nº 2, pp. 7- 14.

KUBLER, George (1983), *La obra de El Escorial*, Madrid: Alianza editorial.

MARTÍNEZ DE ANDOSILLA, Violante (2005), "Jardines medievales 3. Los jardines hispano islámicos. Córdoba, Zaragoza, Toledo, Vélez Benaudalla**",** *Parjap, nº 38*, pp.3-16.

MARTÍNEZ-CORRECHER, Consuelo (1984), "Jardines del Real Monasterio de San Lorenzo de El Escorial (II). El Patio de los Evangelistas. El Bosquecillo y la Huerta", *Reales Sitios* nº 80, pp. 45-64.

MERLOS ROMERO, Mª Magdalena (2015), "Variations around one constant: the cloister typology in the cultural landscape of Aranjuez". In *Cloister Gardens, Courtyards and Monastic Enclosures,* Evora: CHAIA/CIUHCT, pp. 97- 121.

MERLOS ROMERO, Mª Magdalena (1998), *Aranjuez y Felipe II: idea y forma de un real sitio*. Madrid: Dirección General de Patrimonio de la Consejería de Educación y Cultura, Comunidad de Madrid.

MOYA BLANCO, Luis (1963), "Caracteres peculiares de la composición arquitectónica de El Escorial", in *El Escorial, tomo I,* Madrid: Patrimonio Nacional, pp. 155- 180.

NAVASCUÉS PALACIO, Pedro (1987), "El Patio y Templete de los Evangelistas de el Escorial", in *Centro de Estudios Históricos, Real Monasterio-Palacio de El Escorial. Estudios inéditos en conmemoración del IV Centenario de la terminación de la obras,* Madrid: Consejo Superior de Investigaciones Científicas, Centro de Estudios Históricos, Departamento de Arte "Diego Velázquez", pp. 61- 74.

NAVASCUÉS PALACIO, Pedro (1993), "La Abadía de Cáceres: espejo literario de un jardín", in *Anuario del Departamento de Historia y Teoría del Arte,* UAM, vol V, pp. 71- 90.

PAVÓN MALDONADO, Basilio (2004), *Tratado de arquitectura hispanomusulmana, vol III Palacios,* Madrid: CSIC.

PERLA DE LAS PARRAS, Antonio and Victoria SOTO CABA (2015), "The Jardines de Crucero: a possible study scenario for the gardens of Toledo". In *Cloister Gardens, Courtyards and Monastic Enclosures,* Evora: CHAIA/CIUHCT, pp 77- 96.

PONZ, Antonio (1972), *Viage de España* (1772), Madrid: Ediciones Atlas, 1972.

RAMELLI, Agostino (1588), *Le diverse et artificiose machine,* París.

RUBIERA MATA, Mª Jesús (1988), *La arquitectura en la literatura árabe,* Madrid: Hiperión.

RUGGLES, D Fairchild (2000), *Gardens, landscape and vision in the Palaces of Islamic Spain*, Pennsylvania: The Pennsylvania State University Press.

SANZ HERNANDO, Alberto (2009), *El jardin clásico madrileño y los Reales Sitios,* Madrid: Ayuntamiento de Madrid, Área de las Artes.

SEBASTIÁN LÓPEZ, Santiago (2005), "Iconografía del claustro barroco en Portugal, España e Iberoamérica", *Tiempos de América: Revista de historia, cultura y territorio*, nº12, pp. 29-29.

SERLIO, Sebastiano. 1552. *Tercero y quarto libro de Architectura*. Toledo: Juan de Ayala. URL http://www.sedhc.es/biblioteca/tratado.php?ID_pubD=2

SIGÜENZA, Fray José (2010), *Historia de la Orden de San Jerónimo. Libro tercero y cuarto: La fundación del Monasterio de San Lorenzo el Real* (1605), Valencia: CMC Editor, 2010.

STRONACH, David (1990), "The garden as a political statement: some cases of studies from the near east in the first millennium B.C", *Bulletin of Asia Institute. New Series*, vol 4, pp. 171-180.

TITO ROJO, José, and Manuel CASARES PORCEL (2011). «Tipologías de los jardines de al-Andalus". *El Jardín Hispanomusulmán: Los Jardines De Al-Andalus y su Herencia / José Tito Rojo, Manuel Casares Porcel.*

VILLALBA Y ESTAÑA, Bartolomé (1889), *El pelegrino curioso y grandezas de España*, Madrid: Sociedad de Bibliófilos Españoles.