

# The Architecture of the Three Herodian Palaces of Jericho

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**Abstract:** The Herodian palaces in Jericho have been a source of research for many scholars for their size, construction, and preservation. Nevertheless, the architecture of these palaces has not yet been analyzed based on the modern knowledge of thermal comfort and design techniques. This paper thus analyzes the first century palaces of Herod the Great in Jericho with this modern knowledge in view.

**Keywords:** Ancient architecture; Herod the Great; Herodian; Jericho; Palaces; Thermal comfort; Design techniques

## A Arquitetura dos Três Palácios Herodianos de Jericó

**Resumo:** Os palácios herodianos em Jericó têm sido fonte de pesquisa para muitos estudiosos por seu tamanho, construção e preservação. No entanto, a arquitetura desses palácios ainda não foi analisada com base nos conhecimentos modernos de conforto térmico e técnicas de design. Este artigo analisa, portanto, os palácios do primeiro século de Herodes, o Grande, em Jericó, tendo em vista esse conhecimento moderno.

**Palavras-chave:** Arquitetura antiga; Herodes, o Grande; Herodiano; Jericó; Palácios; Conforto térmico; Técnicas de design.

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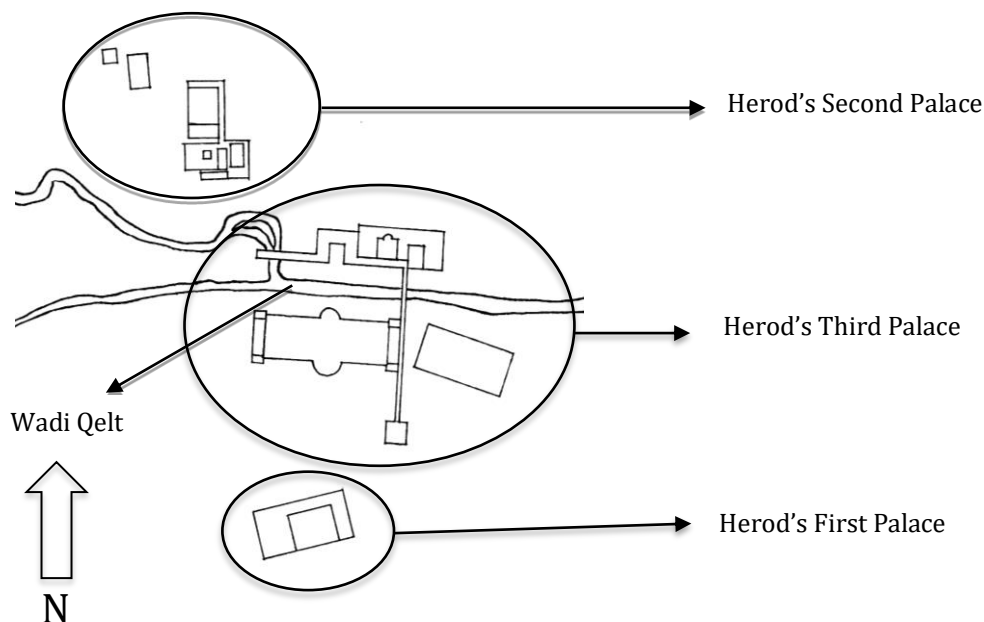
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## Introduction

Jericho was perceived as a winter resort in the first century BC. The Israelite aristocracy and royal court frequented the city. The plain of Jericho presented—and still does—mild winters, a bounteous supply of water, plenty of fertile land, and the conditions to grow more than one crop a year (NETZER, 2009, p. 42). In addition, its strategic location was very attractive for rulers. It was at the crossroads of Jerusalem, Judea, Decapolis, Galilee, Perea, Nabatea, and the sites along the Dead Sea shores. It was an almost inevitable stop for those traveling between Galilee and Jerusalem. It was the chief “refreshment point before making the ascent to Jerusalem” (WALKER, 2006, p. 101).

When Jericho was under Hasmonean domain, Hasmoean rulers built a water system that brought additional water from three different sources: the Wadi Qelt, Na’aran and Ein Auja. The water system irrigated their 50-hectare state, some neighboring areas, and supplied water to the winter palace (NETZER, 2009, p. 43). The abundant supply of water gave the area a blissful atmosphere.



**Figure 1.** Herod's three palaces. (Author's own illustration).

Herod built three palaces at Jericho during two decades: around 35, 25, and 15 BC (these are tentative dates according to Netzer). They are called the First, Second, and



Third Palaces. However, the Second and Third Palaces had more than one building. Thus, they may be called interchangeably palace and complex. Few cities in that period received such intense building activity.<sup>2</sup> Each new palace was larger, more elaborate and impressive than its predecessor. Apparently, they were all used simultaneously as a large complex. Such an intense and large building program has called the attention of many scholars in the last decades (TEASDALE, 1996, p. 84–98; GLEASON, 1993, p. 156–167; 2014, p. 76–97; KELSO, 1951, p. 34–43; YELLIN; GUNNEWEG, 1989, p. 85–90).

Much has been written about Herod's palaces in Jericho, but the design and composition of their architecture have not been analyzed. Thus, in this paper I will analyze the architecture of the palaces built by Herod the Great at Jericho. I will look at each palace separately, its history, design,<sup>3</sup> location on the plain, and similarities with or differences from other palaces.

The present study will consider the design of the palaces based on the ruins of the excavated walls, columns, passageways, windows, balconies, stairs, and walkways. I will analyze the above elements according to their arrangement, variation, form, composition, and connection. This study will not explore the decoration of the palaces or each room separately.

Then, I will compare the three palaces by pointing out their similarities and differences. This comparison will suggest some objectives of the architect when making certain choices. I will also seek to address questions such as: is it possible to see a development of the design of the palaces? Can these design questions bring more light on Herod in general? What can we learn from these questions? What are some possible answers?

## **Herod's First Palace – 35 BC**

This was a tumultuous period in Herod's reign. He had lost control over Jericho to the Egyptian queen, Cleopatra II in 36 BC. (RAINEY; NOTLEY, 2014, p. 342). Fearing

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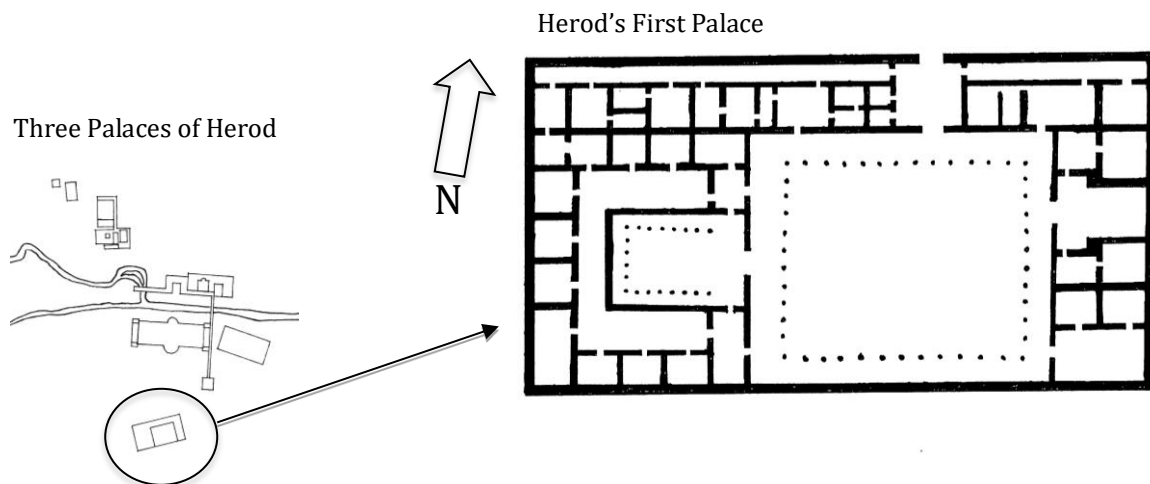
<sup>2</sup> Herod also actively built at Masada, which went through three building phases as well, apparently parallel to Jericho: 35, 25, and 15 BC.

<sup>3</sup> The basis for the analysis of the design was the book by Ching (2007).



further losses and ultimately the deposition from the throne,<sup>4</sup> Herod ordered an accident-like death for Aristobulus III<sup>5</sup> in the swimming pool of the Hasmonean palace in Jericho (MARSHAK, 2015, p. 114–116; JOSEPHUS, *Ant.* 15.55; *J.W.* 1.437). In addition, the Hasmoneans maintained a friendly relationship with the Egyptian queen. This allowed the Hasmoneans to use their palace in Jericho when it was under Cleopatra's domain. It was during these circumstances that Herod built his First Palace in Jericho. For a few years both palaces (Hasmonean and Herodian) were used at the same time (NETZER, 2009, p. 45).

Herod's First Palace was located across Wadi Qelt, neither close nor far from the Hasmonean one. Building across the wadi brought separation from the other palace and could have made statements of discontinuity and independence. While the Hasmonean palace was west of the Wadi and closer to Jerusalem (NETZER, 1993, v. 2, p. 682–691; esp. p. 683), Herod's First Palace was on the other side of the wadi from Jerusalem. However, it is not possible to know whether Herod had options choosing the location of his palace.



**Figure 2.** Herod's first palace. (Author's own illustration).

According to Netzer (2009, p. 49), Herod's First Palace was inferior to the Hasmonean palace, built on a lower elevation and with no view of the plain, reflecting

<sup>4</sup> In the last decades the Jewish population was used to recognizing their kings as the high priest. Since Herod could not be a high priest because he was not Jew, he made sure to eliminate the possible Jew candidates to the throne and high priesthood from the Hasmonean dynasty.

<sup>5</sup> Aristobulus III was a rightful Hasmonean heir to the throne and he was appointed high priest by Herod, his brother-in-law. This made Aristobolus even more suitable to the throne.

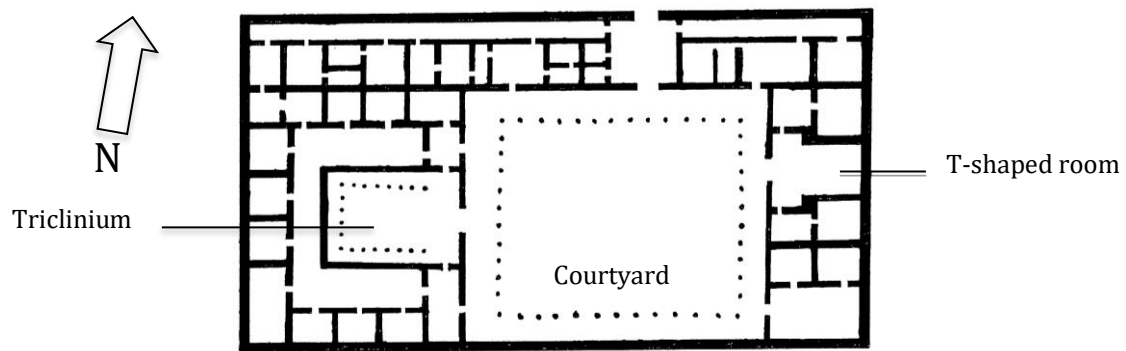


Herod's delicate political situation. Despite such assumptions, Herod's First Palace was built to be a winter resort. As such, a lower elevation would be more desirable due to the reduced winds and higher temperatures (CHING, 2007, p. 115).

Regarding its shape, the palace was a single rectangular building, a pure form, with no combination of different forms or shapes, measuring 78 x 46 meters. The choice of a simple and pure form, the rectangle, also points to the beginning of Herod's career as a constructor. This building followed the Hasmonean tradition, which was inspired by Greek architecture (NIELSEN, 1994, p. 194). Hence, it reflects Herod's early years and conformity with the status quo.

The entrance of the palace was on the north side, facing the Hasmonean complex. The entry led to a large 11.9 x 8.5 m room, which connected to the large 42 x 35 m courtyard. The courtyard was flanked with rooms on the three sides, around which a U-shape structure of rooms was formed. South of the courtyard there were no rooms. A single wall made the separation between the south side of the palace's courtyard and the outside. The palace entrance on the south allowed natural efficient thermal comfort—warm during winter and cool during summer. Thus, the choice of the orientation of the single wall towards the south was quite wise.

Furthermore, the view from the courtyard was the Jordan Valley. Since it was oriented towards the south, and not to the cliffs of the valley (east and west), it enjoyed a visual continuity, not blocked by the valley walls. In addition, the courtyard did not receive shade frontally in the morning or the afternoon, nor did it have the palace of the previous dynasty in view. The triclinium opened to the courtyard and faced east. The entire palace was turned toward its inside. Few rooms had straight access from the courtyard. Most of the rooms were accessed by corridors or other rooms. Such restricted access may indicate concerns with security. Furthermore, there was a single entrance to the palace.



**Figure 3.** First palace courtyard and surrounding rooms. (Author's own illustration).

There was a row of columns surrounding the courtyard marking the limits of the sidewalk (peristyle). Such columns formed an open plane. It established a visual barrier in which there were openings.<sup>6</sup> These openings enabled the spatial and visual connection of the sidewalk to the inner part of the courtyard (CHING, 2007, p. 131).

The triclinium presented a row of columns parallel to three of its walls, not four. However, the distance between the columns of the triclinium is much smaller than the distance between the columns in the courtyard. Hence, there was greater separation made by the columns in the triclinium than that of the columns in the courtyard. This setting corroborates the traditionally-described flow of the *triclinium* where the servants would circulate between the columns and the wall in order to serve the guests.

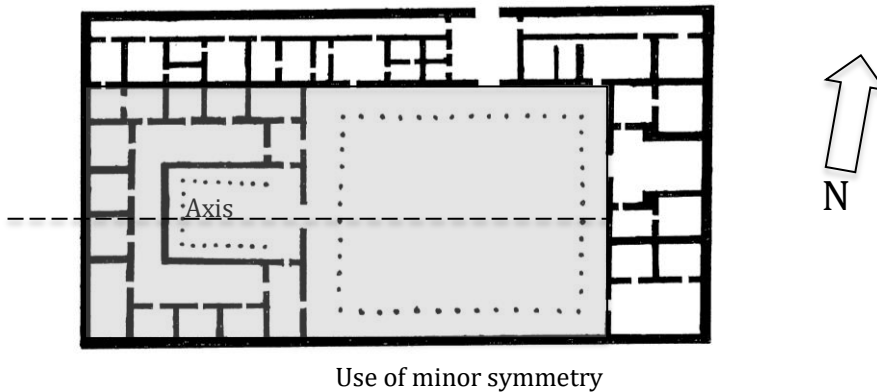
Another design tool to be mentioned in Herodian architecture is symmetry—where elements are mirrored on the other side of an imaginary line (axis).<sup>7</sup> Symmetry was largely used by Greeks and Romans. In Herod's First Palace there was the use of minor symmetry—where just a part of the whole is mirrored. This feature appears in most of Herod's buildings. Herod does not use major symmetry—where one half of the building entirely mirrors the other half—in any of the palaces at Jericho.

<sup>6</sup> The permeability of such a plane varies according to the size of the columns and the distance between them, emphasizing the separation or integration of the rooms. The longer the distance between the columns the more open space and integration of the two areas (CHING, 2007, p. 131).

<sup>7</sup> Symmetry contains in itself an axis, which organizes the distribution of the rooms of the palace. When there is major symmetry, the rooms are mirrored on both sides. But an axis can also simply be used as a parameter for the arrangement of the rooms (CHING, 2007, p. 340).



In addition, since symmetry has, in itself, an axis dividing the composition in two, it is possible to see the use of this design tool—the axis<sup>8</sup>— in this First Palace. Later, in the next palaces, the axis became a widely used design tool, not only for symmetry, but as an organizing element of composition.



**Figure 4.** First palace partial symmetry. (Author's own illustration).

### Herod's Second Palace - 25 BC

After the earthquake that destroyed the Hasmonean palace in 30 BC and the Battle of Actium in 31 BC, Herod became the ruler of Jericho again. Despite the destruction of the earthquake, Herod did not hesitate to invest in new construction to help restore the city's status. Being a shrewd politician, Herod built a new palace over the ruins of the Hasmonean one. Herod took advantage of the pools previously built by the Hasmoneans that were not destroyed by the earthquake and incorporated them to his new palace.<sup>9</sup> In this way, he demonstrated that he was again master over the plain of Jericho.

The Second Palace presented a more elaborate design with a composition of two rectangles (wings): north and south in a right angle to each other. The northern wing was oriented north-south and the southern wing oriented east-west. The walls of the two wings were parallel and orthogonal to each other. The floors of the two wings had a 5 m level difference between them and were connected by a stairway and a garden. The

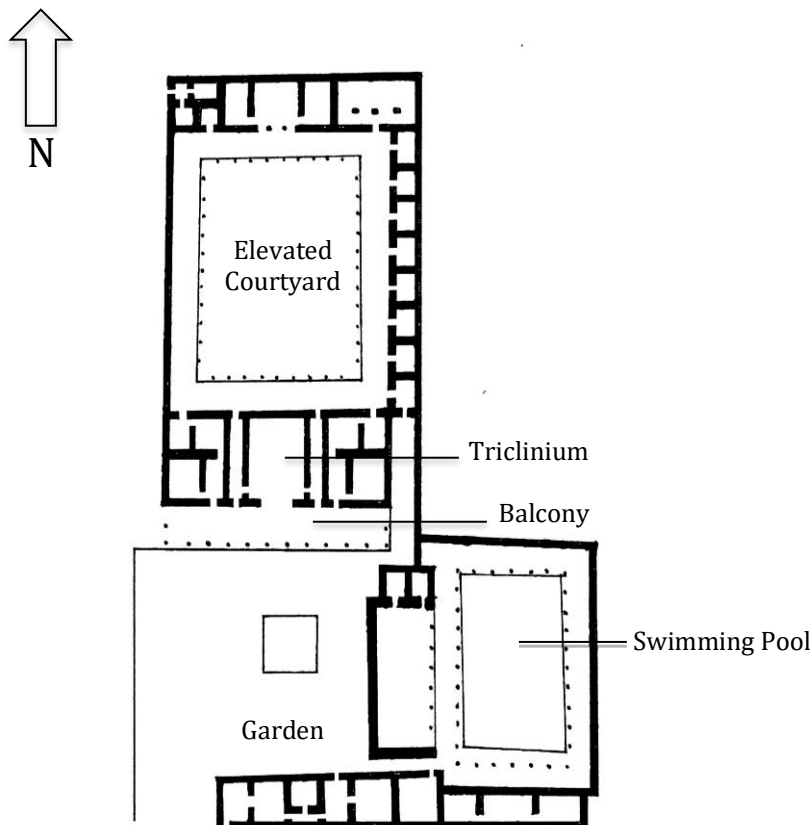
<sup>8</sup> An axis can be used without the presence of symmetry. According to Ching (CHING, 2007, p. 340), the axis is a line established by two points in space, about which forms and spaces can be arranged in a regular or irregular manner.

<sup>9</sup> Interestingly, the pools, where he drowned his brother-in-law and potential rival, were the only Hasmonean construction that remained in the new building.





southern wing housed a pool complex. The northern wing housed other functions. This separation of different functions of the palace in distinct buildings is one of several characteristics of absolute monarchy that began to appear in the Herodian palaces (NIELSEN, 1994, p. 11). It may have been the Roman influence, or it reflected Herod's change in his self-perception, from a client king to an absolute monarch.



**Figure 5.** Herod's second palace. (Author's own illustration).

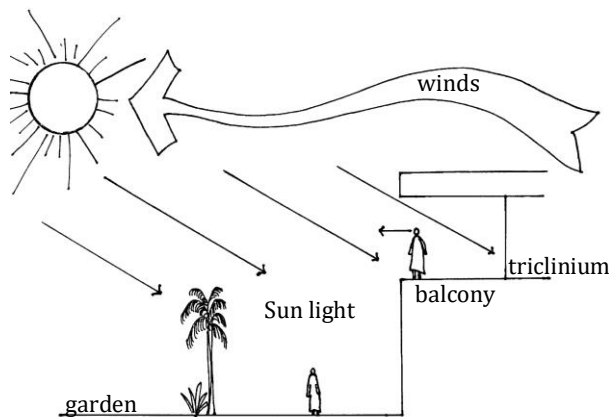
The Second Palace had two entrances, one on the northwest and one on the southeast. The southeast entrance was approached by a stairway. The demarcation of the entrance with a stairway is another characteristic that points to the transition in Herodian architecture of palaces to absolute-monarchy architecture (NIELSEN, 1994, p. 213).

This palace started to incorporate water and the outside in its design, which the previous palace did not. There were three swimming pools, a bathhouse, a visual connection with Wadi Qelt, and different spaces connecting the inside with the outside. This greater connection with the outside meant more openings and higher vulnerability.





The triclinium was in the north wing, situated between two open areas: the courtyard (north) and another garden with a pool in its center (south). The triclinium connected visually with both: with the courtyard through a window, and the garden through a wide passage that led to a balcony overlooking it, the Jericho plain, and Wadi Qelt. The two openings situated on opposite sides would favor a good air circulation in the room. The level of the floor of the triclinium balcony was 5 m higher than the level of the garden to its south. Hence, it offered a view of the garden and the plain.



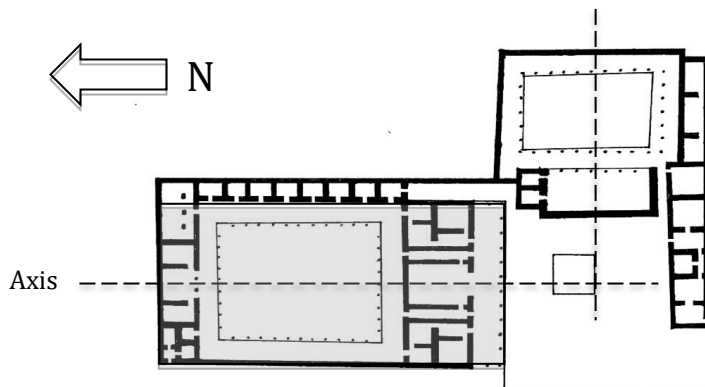
**Figure 6.** Second palace winds and sunlight. (Author's own illustration).

The triclinium of the Second Palace did not have the rows of columns parallel to three of the walls as in the First Palace. Columns were present only on the balcony. The south orientation of the balcony received the sunshine during winter and a breezy shade in the summer. The southern garden and the pool also enjoyed such features because of their location. This arrangement enabled both wings to make the best use of the sun's benefits (warmth and light). Furthermore, the altitude difference between the north and south wings helped to shelter the garden and pool from the winds.

The northern wing of the Second Palace presented a partial symmetry that generated an axis that crossed the courtyard and reached the northern end of the building. It was not total symmetry because of the lack of rooms on the west side of the courtyard. The courtyard was flanked with rooms on three sides. However, such arrangement was similar to the First Palace: the lack of rooms on one of the longest sides of the courtyard. Nevertheless, the orientation is different. This wall faced the western cliffs of the valley

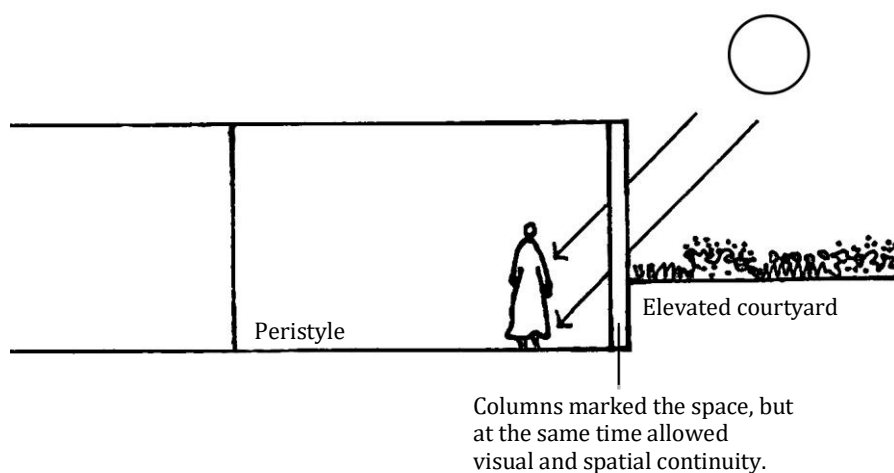


and the plateau garden (on top of the ruins of the Hasmonean Twin Palace). It received the afternoon light, but not for many hours, for the cliffs shaded the valley early.



**Figure 7.** Second palace design organization. (Author's own illustration).

The courtyard was 80-90 cm higher than the colonnade floor that surrounded it. Such a difference increased the separation between the two areas. The reason for such a height difference is unknown. Netzer (2018, p. 52) suggests that it was not the original plan, but during construction some unseen issues were faced that forced a modification. Netzer (2018, p. 52) also says that such an elevation brought the plants and flowers closer to the eyesight. Aside from these reasons, the colonnade divided the two spaces with vertical lines and the elevated garden added separation. Hence, there was a double division between the two areas. Furthermore, in this palace Herod started to play with level difference as a design tool.



**Figure 8.** Second palace peristyle sunlight. (Author's own illustration).



In the south wing there was a bathhouse, a garden, and a 20 x 12.5 m pool. Columns encircled the four sides of the pool. This colonnade was an addition to the Hasmonean pool which Herod the Great incorporated in to his Second Palace (NETZER, 2009, p. 53). The pool area was quite private. It was enclosed within walls, with no view of it from the outside. A large room opened to the pool area. This room was separated from the colonnaded walkway by a row of columns. Thus, there were two rows of columns between the pool and the side room. One colonnade emphasized the separation between the pool and the sidewalk and the other marked the limits between the sidewalk and the large room.

Not attached to the wings but as a part of the Second Palace complex, was another 32 x 18 m pool northwest of the north wing and a plateau garden built on top of the ruins of the Hasmonean Twin Palaces.

### **Herod's Third Palace – 15 BC**

In 15 BC Judea received the visit of a very important guest: Marcus Vespasianus Agrippa, Caesar Augustus's son-in-law. Agrippa was the great builder during the first half of Augustus's reign (WARD-PERKINS, 1994, p. 23). Josephus (*Ant.* 16.12–15) reports that Herod took him around and showed him not only Jerusalem, but five other cities as well. However, Jericho is not named.

Netzer (2009, p. 56) suggests that the Roman visitor, Marcus Agrippa, might have sent some architects to Judea to help with the Herodian enterprises due to the positive impression he had during his visit to the Judean constructions. There is no evidence of the above-mentioned collaboration between Herod and Agrippa. However, the Roman influence in the construction of buildings in Judea cannot be denied due to the existence of Roman concrete (*opus reticulatum* and *opus quadratum*) in Jericho and at some other sites. The Roman building techniques in the Third Palace mark a period in Herod's reign of Roman favor and close relations with Roman rulers.

The Third Palace was built later in Herod's rulership. He had visited the plain for twenty years and built two previous palaces until this point in time. Hence, he had two



decades to experience, reflect, and pick a location that would best fit the ideal he had for the new palace (NETZER, 2009, p. 54).

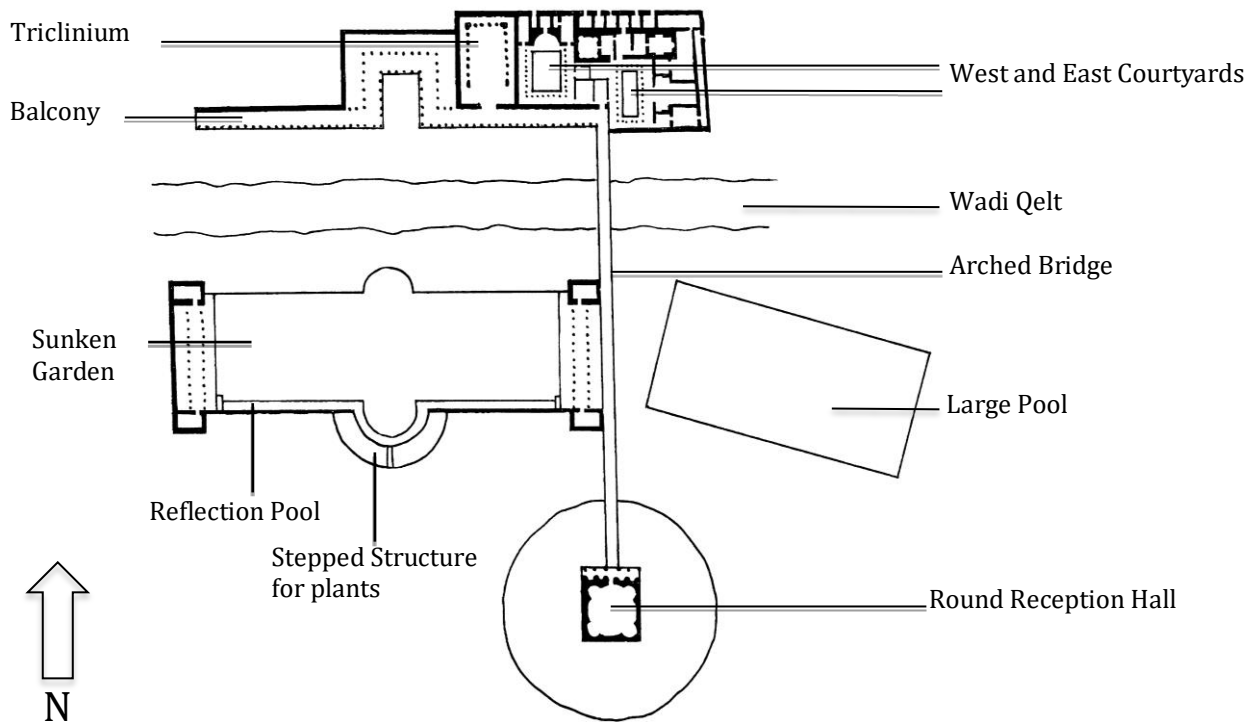
Moreover, in the first two palaces Herod probably was limited when choosing their locations. Herod freely selected a palace location only when building the Third Palace. Wadi Qelt<sup>10</sup> was the determining factor for the location and direction of the main wing of the complex.

The three palaces were not planned in a north-south and east-west grid with the buildings parallel or orthogonal to each other. Rather, they were laid out in an organic pattern, considering the terrain. Such a loosely-integrated layout was common for Roman seaside villas (WARD-PERKINS, 1994, p. 195), like Hadrian's villa (CHARLESWORTH, 2006, p. 43) and in Greek structures. The Athenian Agora is a good example of an organic layout that brought surprising perspectives as one strolled along the complex (MOFFET; FAZIO; WODEHOUSE, 2004, p. 60).

The Third Palace consisted of four different parts: the north wing, the sunken garden, the large pool, and the southern round reception hall. An arched bridge across the Wadi Qelt facilitated these constructions. This palace was the lowest in altitude of the three, with the reduced possibility of observation from the plain. Nevertheless, through creative design, the Third Palace became a remarkable complex. The architect created special views with the construction and their placement in the terrain.

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<sup>10</sup> Wadi Qelt is an intermittent river with water flowing in only a few weeks a year or when there is major rain fall in the west, at which time there is flowing water for some hours. Most of the year, it is dry.



**Figure 9.** Herod's third palace. (Author's own illustration).

Analyzing the design of this palace, it is possible to see that water became an important part in the conception of the plan of the palace complex. As Vitruvius puts it, water “is the chief requisite for life, for happiness, and for everyday use” (POLLIO, 1960, p. 226). This mindset can be seen in the integration of Wadi Qelt into the palace, the presence of water in the sunken garden, the two bathhouses (one in the north wing and another under the round reception hall), and the large 145 x 40 m pool. Wadi Qelt became a part of the palace composition, not just an outside element to be contemplated. The buildings of the complex were spread on both sides of the wadi with an arched bridge connecting them. This arrangement may suggest that the builder was not intimidated by natural elements, such as water. This boldness regarding natural elements is also seen at Caesarea Maritima<sup>11</sup> and Masada<sup>12</sup> at contemporary periods. The conscious choice of

<sup>11</sup> At Caesarea Maritima, Herod challenged the natural elements by building a concrete harbor and part of his palace inside the Mediterranean Sea.

<sup>12</sup> At Masada, Herod built his palace on the edge of the cliff.



building over difficult landscapes points to the ability of the builder to conquer nature (MARSHAK, 2015, p. 194).

The plan of this palace is made of multiple pure forms: rectangles, squares, circles, semi-circles, and lines. The buildings of the Third Palace complex were on the same grid, except the large pool. The north wing was an arrangement of rectangles; the sunken garden was made of rectangles and semi-circles; the pool, a rectangle, was the only simple form of the complex; the southern construction was a square on its outside and a circle mixed with four semi-circles on the inside.<sup>13</sup> This last Herodian palace at Jericho shows the evolution of Herod's architecture and design, through the use of a variety of forms. Such enclosed curvilinear forms in monumental expression would be seen later in Rome (AD 64) in buildings like the Golden House of Nero (WARD-PERKINS, 1994, p. 58).

The Third Palace's rooms were not all packed inside a rectangle as is the First Palace. In building this structure, Herod spread the different functions of the palace into four separate constructions, on two sides of Wadi Qelt. With such arrangement, there was more access (entrances and exits) to the buildings, making the complex more vulnerable. This might be an indication that security was no longer a major concern for Herod. Furthermore, the greater separation of functions in different buildings also brought a separation between the king's quarters and the other sections, between the king and his servants, a characteristic of absolute monarchy (NIELSEN, 1994, p. 207).

The bridge that physically connected the four parts of the palace may have been conceptualized to function as an axis that organized the different constructions (CHING, 2007, p. 341). On one end of the bridge was the northern wing and on the other end the southern hall. The location of the southern hall may suggest the intentionality of the architect to give it the connotation of a monument at the end of the axis, making it the focal point of the complex.<sup>14</sup> The bridge together with the stairway was approximately 140 m long and 5 m wide. As a person walked along the complex, his/her attention would be drawn to the southern hall due to its location, height, and monumental entrance. Wadi Qelt could be interpreted as another organizing axis, intersecting the bridge perpendicularly and distributing the constructions north and south of it.

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<sup>13</sup> A similar design is found at the Herodium palace.

<sup>14</sup> The axis leads the eye of the observer to its end where a monument can be found, which is the focal point of the axis. This arrangement is suggested because of its location, altitude, and form.

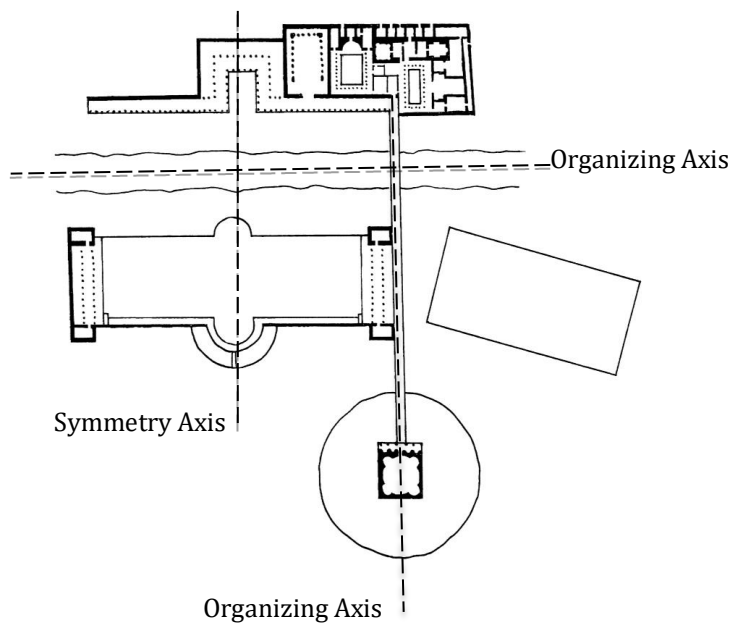


The northern wing was the largest-roofed construction of the complex. It had two courtyards, a western and an eastern one. The courtyards were flanked by rooms on three sides with a simple wall on the south side of both, as in the First Palace. The courtyards were peristyle, with surrounding columns. However, the western courtyard's northern limit was not marked by columns, but by a semi-circle. It had columns marking the outer limits only on the other three sides. This courtyard was beside the large triclinium. The other eastern courtyard had columns around all four sides. It gave access to a T-shaped room on its eastern side, similar to the one in the First Palace. The orientation of the larger side of the rectangle, of the two courtyards, followed the Second Palace one (north-south).

The big triclinium had only one opening to a large colonnaded balcony that overlooked the sunken garden and the wadi. Columns fringed three walls of the triclinium with a short distance between them, creating a greater division among guests and servants. The corner back columns were heart-shaped, like the ones found in the synagogues in Galilee (HACHLILI, 2013, p. 139). This may suggest a different function to this room than suggested by Netzer (2009, p. 63). It may have served as a synagogue rather than as a triclinium.

The colonnaded balcony of the triclinium extended westward, passing by an inverted U-shaped pergola, and continued to the west, by additional 60 m. (NETZER, 2009, p. 59). This pergola was conceptually associated to the structure south of it—across the wadi—the sunken garden. An axis connected the center of the pergola and the center of the sunken garden, pointing to an intentionality of the design, to make the two structures part of a whole.





**Figure 10.** Third palace design organization. (Author's own illustration).

The sunken garden was a large 145 x 40 m structure which housed a formal garden. Its southern wall was dug into the slope and built with *opus quadratum* and *opus reticulatum*. At the center of the south wall there was a semi-circular stepped structure (like benches of a theater) that was used to lay down plants. On the side walls of this semi-circular structure, there were 24 niches with alternating (semi-circular and rectangular) shapes separated by small half columns. Along the base of the wall there was a 1.5 m wide "reflection pool," which reflected the flowers and niches of the wall (NETZER, 2009, p. 65) creating a resort-like feel.

On the eastern and western ends of the garden there was a structure with double colonnades. The northern wall was not well preserved. Only a few segments of it were uncovered *in situ*. According to Netzer (2001, p. 57), the northern wall of the sunken garden was probably not very high in order not to obstruct the visual connection of the garden from the northern pergola.

The arrangement of a porticoed balcony overlooking a large garden with multi-layered flowerbeds combined with water can be traced back to Sennacherib's palace in



Nineveh (DALLEY, 2013, p. 176), and possibly to Hezekiah's palace gardens in Jerusalem, which received fresh water from the then-recently-hewn tunnel.<sup>15</sup>

East from the sunken garden there was a large 92 x 40 m pool, almost four times the size of a modern Olympic size pool at 50 x 25 m. The pool's design was a pure form, a rectangle, whereas the other constructions of the palace complex were compositions of multiple forms. In addition, it was the only edification from the Third Palace placed on a different grid.<sup>16</sup> The form was simpler, but it stood out by its angled placement and size.

It has been suggested (NETZER, 2009, p. 67) that the pool was on a different angle to make it parallel to the slope of the round reception hall, so spectators could sit on the slope to watch the activities performed in the pool. However, since the slope was built together with the pool as a complex, it could have been done in such a way that it would be parallel to the slope and thus parallel or orthogonal to the other constructions as well.

The bridged sidewalk passed between the sunken garden and the pool and led to the round reception hall in the south. The reception hall was placed on top of an artificial mound and was reached through an arched stairway. This path was "used to approach and enter functionally or symbolically important places" (CHING, 2007, p. 278). The building was made of two floors: the first floor housed a bathhouse and above it there was a round reception hall. Concrete debris suggests that this building was roofed by a cupola. Traces of elaborate stucco, fresco, and terra-cotta ornamentation were also found (NETZER, 2018, p. 330).

## Conclusions

At Jericho there is the rare combination of textual and archaeological evidence, which allows the reconstruction of a reasonably-clear picture of its first century BC layout. The three palaces of Jericho are a good example of Herodian architecture and its development through time. They also portray the contemporaneous architectural

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<sup>15</sup> The chronology of the events in the ANE has been greatly debated. If one believes that Sennacherib came first, then Hezekiah followed his example. On the other hand, if one believes that the hewing of the channel came first, then most likely Sennacherib followed the Judean example. Despite this chronological discussion, the use of water works is an ancient practice in the ANE, one that is usually connected with centralized monarchy.

<sup>16</sup> "A grid is created by two, usually perpendicular, sets of parallel lines that establish a regular pattern..." (CHING, 2007, p. 230).



developments of the Roman empire—*opus reticulatum*, *opus quadratum*. Other Herodian constructions cannot portray such development for their remains are not as well preserved.

Looking at the design and location of the palaces, it is possible to see that Herod made large use of axes and symmetry planning in his palaces. Axes were used to organize constructions around them, emphasize certain elements, and determine the symmetry of compositions.

Regarding style development, the First Palace represented the continuation of Hasmonean and Greek traditions. But the Second Palace can be seen as a transitional one. It began to depart from the Hellenistic and to adopt the Roman style. The Third Palace showed more withdrawal from the Greek architectural elements and an increase in the adoption of Roman imperial style. In addition, it also shows a blend of Roman and local architecture (MEYERS; CHANCEY, 2012, p. 71).

The First Palace had a pure form. The Second Palace had a combination of two rectangles (pure forms), and the Third Palace had a composition of different forms in two different orientation grids—the large pool being placed at an angle from the other constructions. The palaces also developed the complexity of the plan in the following aspects: the number of buildings and the use of different forms and elevations. In addition, there was an augmentation in the inclusion of water as an element of design and the interaction between the inside and the outside.

Another development in the design of Herodian architecture was the exploration of height variation in the complexes. It seems that Herod's architects started to see the possibility of designing in three dimensions in the Second Palace and further explored it in the Third Palace. In the First Palace, the entire plan was on the same level, whereas in the Second and Third Palaces, Herod used height differences between the different wings<sup>17</sup> and between different parts of the same building.<sup>18</sup>

The triclinium of the First Palace connected with the courtyard, but was closed to the outside. However, in the Second and Third Palaces there is no direct connection between the triclinium and the courtyard but the triclina of both palaces opened to the

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<sup>17</sup> There is a five-meter difference between the two wings of the Second Palace and the reception hall on top of an artificial mound in the Third Palace.

<sup>18</sup> Elevated courtyard in the Second Palace and an escalated flower bed in the sunken garden in the Third Palace.



outside by a colonnaded balcony. In addition, the triclinia of the First and Third Palaces had inside columns close to each other, and parallel to three of the walls. However, no columns were found in the triclinium of the Second Palace. Looking at the three triclinia and their connections, it is possible to see that Herod chose some characteristics from the previous two palaces and united them in the Third Palace.

The presence of heart-shaped columns in the Third Palace's "triclinium"—often present on the back corners of Galilean synagogues of the first century BC—raises a question about the function of the large room. The Third Palace's triclinium is considerably larger, larger than the courtyard, which is not the case in the two first palaces. In addition, it was it was in the building west of the wadi, meaning closer to Jerusalem.

In the three palaces there were rectangle courtyards, surrounded by rooms on three sides, with a single wall on the fourth side. In the First and Third Palaces the single wall was toward the south. The single wall of the courtyard of the Second Palace was toward the west. It seems that in the Second Palace the architect gave priority to the view and the solar orientation of the triclinium, rather than to the courtyard.

In the Third Palace both the triclinium and the courtyard opened to the south, a better solar orientation. This also shows the development of the Herodian architecture and its understanding of the inclination of the sun in the different seasons of the year and its influence on the thermal comfort of the building.

In conclusion, it is possible to see a clear development in Herod's architecture through his palaces at Jericho, the third complex displaying the best of Herodian architecture. The design of Herod's palaces in Jericho also reflects his political situation. The First Palace marked Herod's timid presence on the plain of Jericho. In the Second Palace he built on the ruins of the Hasmonean structure. In the Third Palace he built over nature itself, showing the expansion of Herod's conquering mindset. First Herod just marked his presence in the territory. Then, he controlled the previous dynasty. Finally, he attempted to have dominion over nature.

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