



A New Architecture at Dokki Gel/Kerma.

A Response to ‘A forest or a jungle of columns?’¹

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After a thorough study of the article that our colleague and friend wrote and submitted to me before publication, it seems necessary to bring a new reflection on the remains concerning Dokki Gel. Our research is ongoing and a significant part of the results is not yet available. The author was only able to consult the data presented over the past ten years, whereas each excavation season surprises us with the originality of the discoveries. It is not easy to analyse an unknown architecture without comparisons to facilitate interpretations. On the other hand, our knowledge of early Central Africa is very partial in the 3rd and 2nd millennium B.C. but we have the impression that an essential current of influence comes from these regions (For the stages of the excavations of the Swiss-French-Sudanese Archaeological Mission in Dokki Gel/Kerma, see Bonnet 2012-2019). It is clear that Egyptian architecture intervened mainly after the conquest of the territory by Thutmose I (Bonnet and Valbelle 2018), while the origins of African cultures remain to be understood.

The ancient metropolises of Kerma and Dokki Gel clearly differ, while the ceramic material shows that the two sites so close to each other (less than 700m) developed at the same time. However, these cities are differentiated by their architecture. In Kerma, the buildings are quadrangular (Figure 1), and hundreds of seal impressions prove that the city had contacts with the countries to the north, so the urban topography is similar to that of the Pharaonic Empire on which trade depended. Although local traditions were emerging, the organisation seems to be linked to institutions whose models are in Egypt. In Dokki Gel, in contrast, all the important buildings have a circular or oval plan (Figure 2). The architecture of great complexity is not comparable to the Egyptian models. It must therefore be concluded that two populations coexisted and met to form coalitions against the Egyptian invaders. Pharaonic power is almost always confronted with several sub-Saharan groups that probably met in the indigenous city associated with the Kingdom of Kerma.

Derek Welsby wants to reconstruct the plan and elevations of a type of building that we observed in Gism el-Arba during the excavations conducted by Brigitte Gratien (Gratien *et al.* 2003).² The beam negatives made it possible to restore a raised wooden floor with external stairs. These are certainly

silos where grain crops were stored. Extending this type of granary to the examples in the desert near Kawa seems correct and the raised floors on huge blocks of cut sandstone is the logical solution to the reconstructions (Welsby 2019). The alignments of these foundations justify the position of the in-line vertical supports. In the capital city of Kerma we did not find identical devices that, in the immediate vicinity of the cultivated land, made it possible to store large crops. In the city, food supplies were stored in smaller circular silos proportional to the size of the houses (Bonnet 2014, 29: KA, sector 3, M 6; 44: KM, sector 9; 114: sector 33, M 112; 131: KC, sector 39, M 289). There are also granaries in the courtyards, as *gusseba* are still found on farms today.

In Kerma, alignments of wooden supports were observed in several religious buildings. For ancient chapels such as E1,³ relatively close rows of posts were observed, the spans being doubled during reconstruction. The same is true in Chapels XVI and XVIII⁴ where the rows of post holes are well documented. In Chapel O, the addition of the western *deffufa*⁵ is worth noting, together with the resumption of the roof supports with four rows of wooden posts after the disappearance of the central columns. There was no raised floor in this case. These few examples show a system of supports without elevation by a floor for buildings with religious functions. The architecture represented is quadrangular like the silos of Gism el-Arba or Kawa; this is in the tradition of the Nubian achievements of the Kingdom of Kerma and, more broadly, in the traditions of the Nile Valley that are unrelated to the monuments of Dokki Gel.

The urban core of the latter city is in the form of a slightly rounded elongated space, accessible through a six-metre thick enclosure wall by gates with twin towers generally of irregular proportions.⁶ Around this religious and economic centre are large diameter buildings whose light roofs were supported by mud brick columns. There are two types of buildings: one with evenly spaced, large diameter columns that allowed activity inside, probably to welcome visitors along the axis of the main entrances to the city. These entrance vestibules were later crushed by Egyptian *menenu* outposts extending beyond the fortifications. The other buildings found in large numbers around the enclosure appear to belong to circular or oval monuments of enormous proportions; they could be ceremonial palaces used by warlords or kings preparing their coalitions with the King of Kerma to block the advance of the Egyptian armies.

We have excavated several of these palaces, characterised by small diameter columns made of mud bricks. They are

³ Originally the wooden chapels had a quadrangular plan with posts in close lines (Bonnet 2014, 199-200: sector 60, E 1).

⁴ At KM, the post holes restore a light roofing system in chapels. (Bonnet 2014, 192: sector 59, XVI and XVIII, M 313, M 315).

⁵ In the religious complex of the western *deffufa*, a restored chapel has line supports (Bonnet 2004, 114 - Chapel O).

⁶ The urban topography of Dokki Gel is beyond comparison and its architecture remains almost unknown to date: see Bonnet 2012-2019 for more information.

¹ See D. A. Welsby, this issue, 144-151.

² Gism el-Arba is located 10km south-east of Kerma.

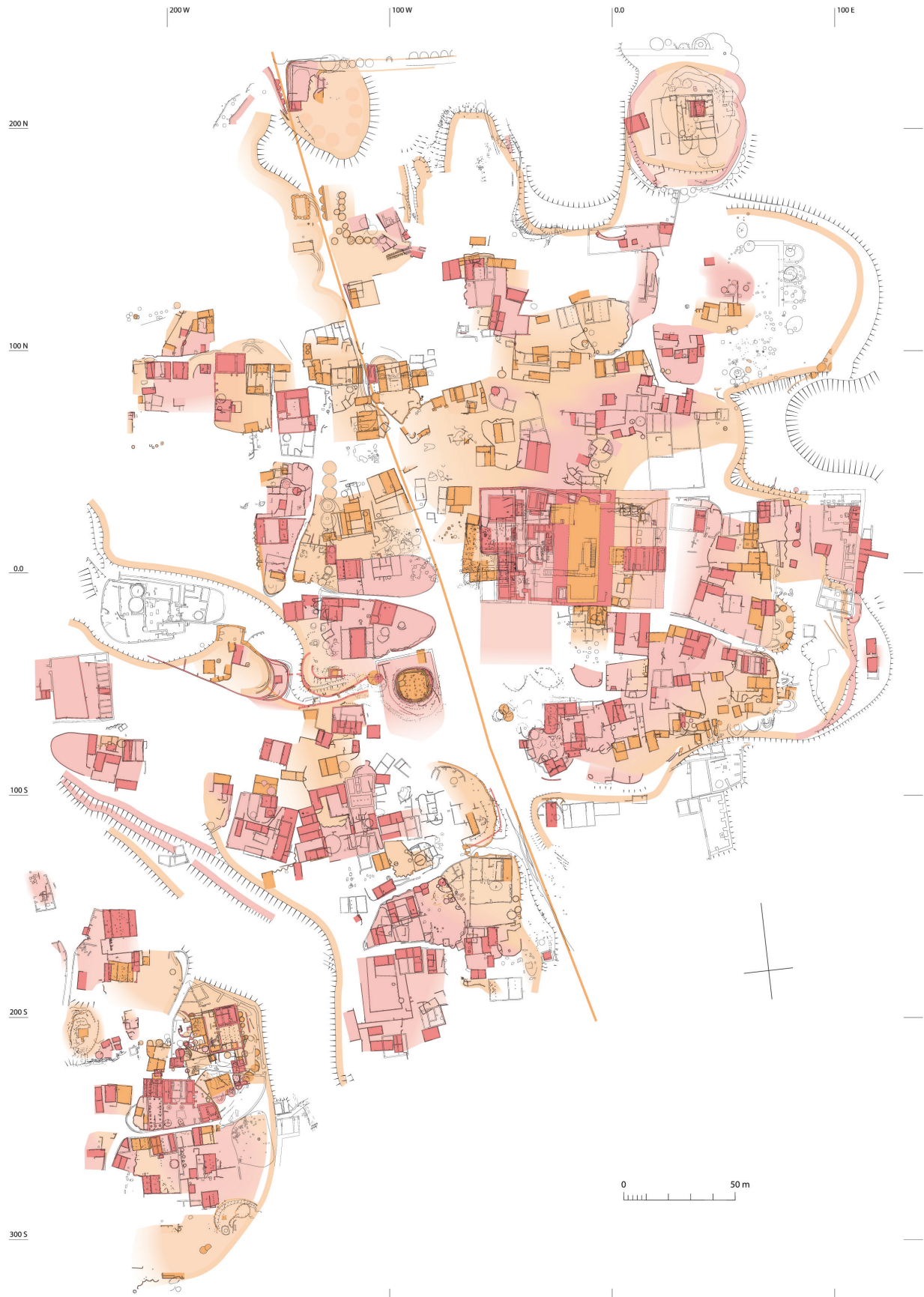


Figure 1. General map of the city of Kerma during the Kerma Moyen period.

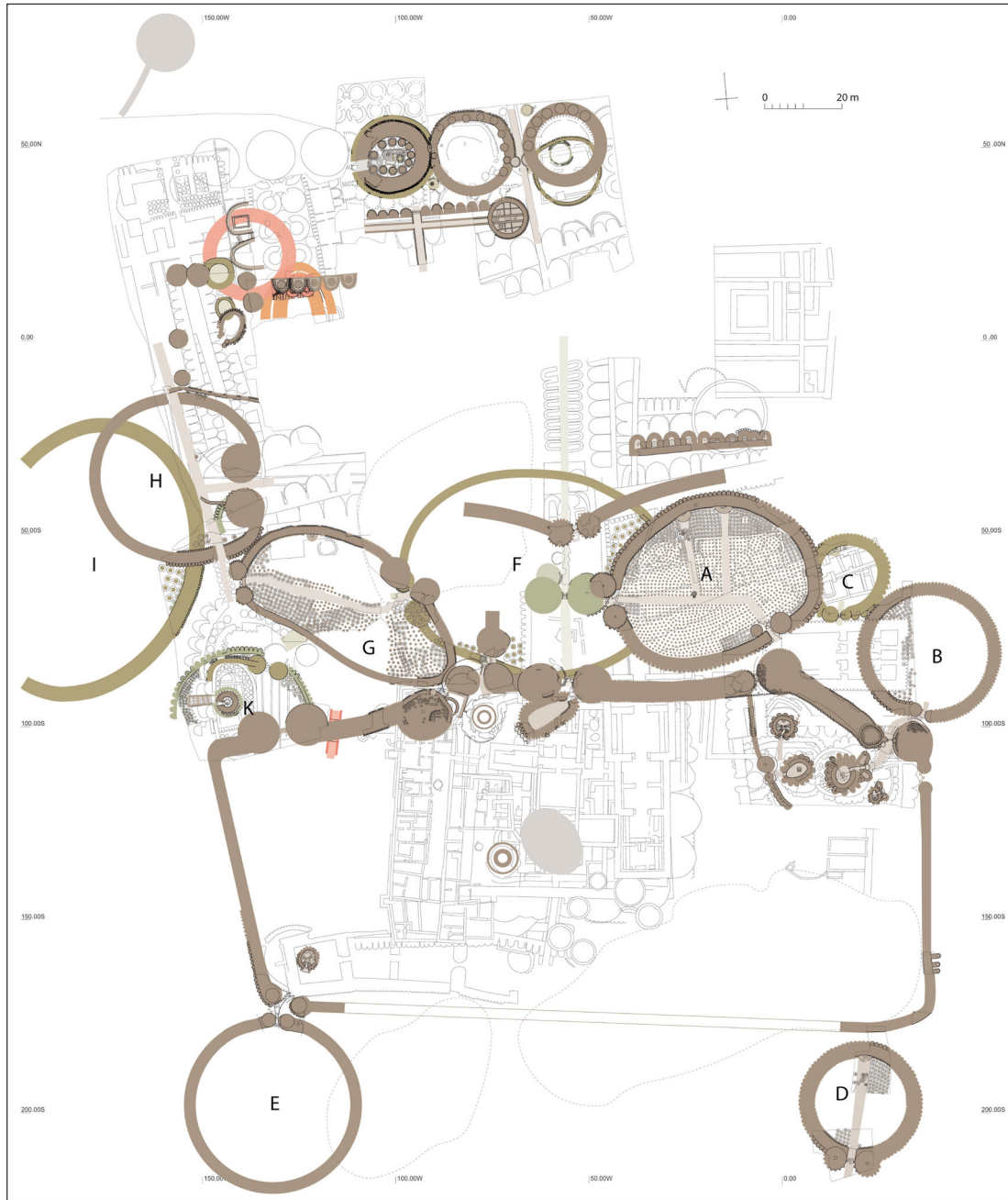


Figure 2. General map of the city of Dokki Gel during the Kerma Classique period.

established on a foundation 1 to 1.50m deep (Figure 3 and Plate 1) and despite a diameter reduced to 0.7m, they probably rose to nearly 10m in height. Recent examples confirm our hypothesis. There was no wooden beam to complete the support system. We therefore had to conclude with such foundations that the columns very close to each other had been used to support a roof with an area of 55 x 49m, and with a peripheral wall more than 4m thick supported by semi-circular buttresses (Plate 2). The general layout showed the absence of an intermediate level on the ground. We dared to compare this construction to the 19th century palace of

Kasubi (Moriset 2011),⁷ which was later taken over to house the royal tombs of the Ganda culture around Kampala. The palace of Muteesa I was visited in 1875 by Henry Morton Stanley during a trip in search of the sources of the Nile.⁸ The latter was able to observe the many wooden columns that the king considers a sacred forest where only women can wander. The architecture of Palace A in Dokki Gel is not made of wood and our comparison only proposes a working hypothesis to explain the multiplication of mud brick

⁷ The palace has been replaced by the tomb building; more recently a fire destroyed the complex.

⁸ The tradition described by H.-M. Stanley (1874-1877) is impressive.

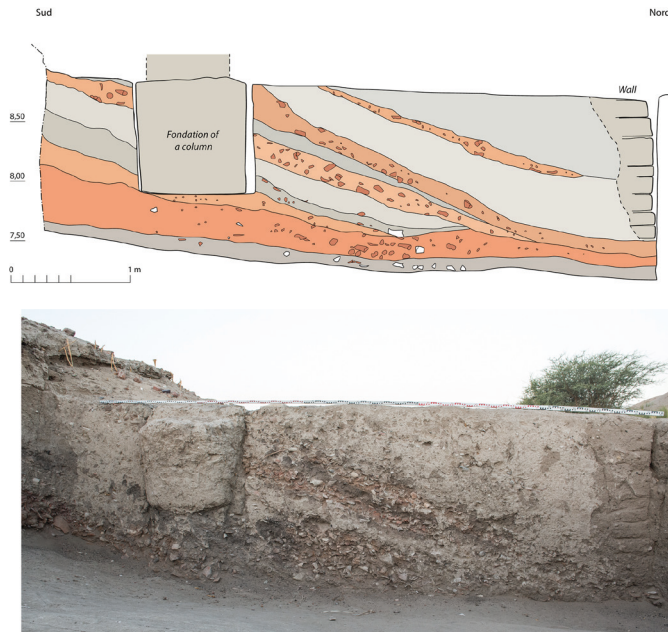


Figure 3 and Plate 1. Stratigraphy of a New Kingdom column foundation.

columns leaving only a small space available between them.

The remains we have interpreted as palaces occupy only part of the periphery of the central enclosure, and there were probably others. The six partially recognised monuments all have numerous interior columns built of mud bricks. Each example allows us to observe the complete occupation of the surface area by these very close supports. In four of them, paved brick alleys led to a monumental seat preceded by a rounded staircase of 3 or 4 steps surrounding the base of this throne leaning against an external or internal wall of the building. This arrangement is identical to that found in the throne room of the north-eastern Egyptian palace in the *menenu* of Thutmose I (Figure 4). In the case of Palaces A and G, which were cleared over a larger area, several of these seats appeared. Some were preceded by an offering table surmounted by a canopy. The seats were always associated with a ceremonial alley and, in one case, with an enclosure



Plate 2. Remains of a monumental alley and seat in Palace A.

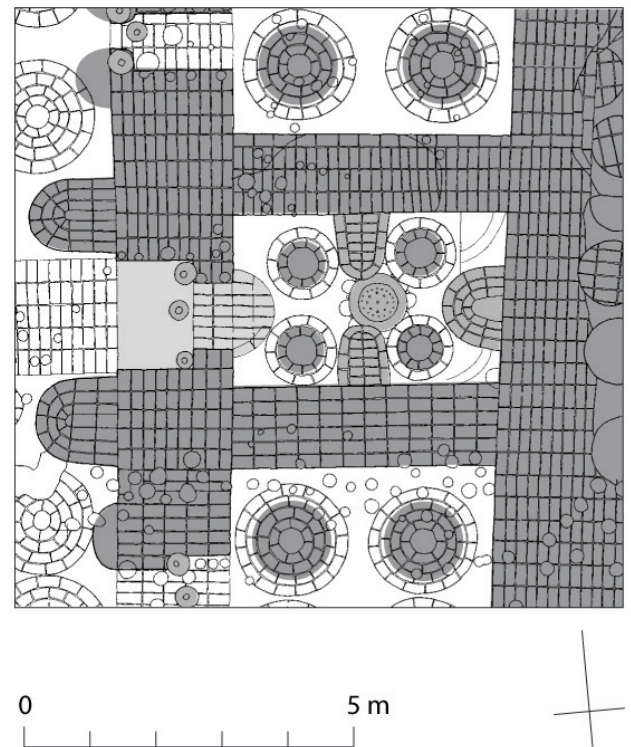


Figure 4. Throne room of the ceremonial palace of the *menenu* of Thutmose II and Hatshepsut.

associated with an altar (Figure 5).

Concerning the development of elevated soils, we discovered in circular temples, and in some entrance defence towers, devices made up of masses of hardened silt with a diameter of about 0.6m. These earthen balls were used to fix wooden pieces or vertical beams whose rectangular

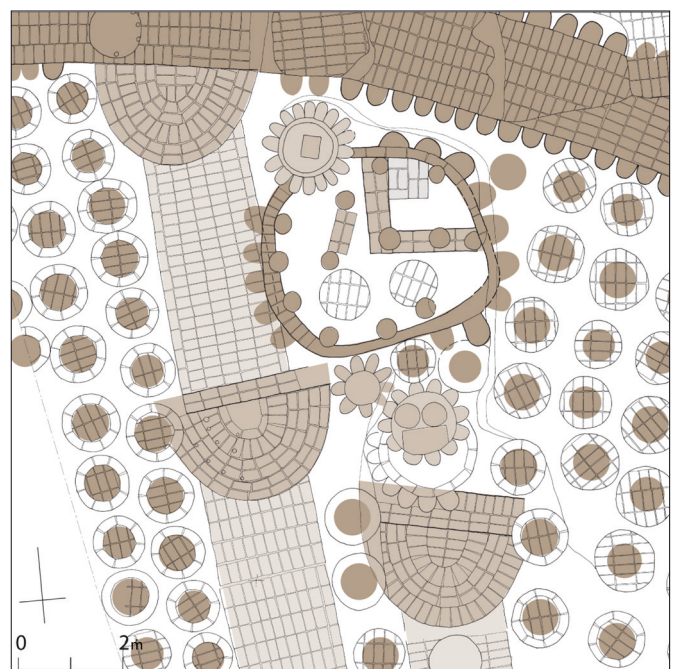


Figure 5. Several arranged seats, side offering tables and religious enclosures in Palace G.



Figure 6. The wooden northern temple during the Napatan period. General plan after the excavation and the interpretation.

negatives are clearly visible. Thus constituted, the installations had closely spaced supports for platforms at different levels depending on their function. In the towers, high floors allowed the soldiers to stand behind the merlons at a height of several metres. Such beams, placed in numerous foundations, can be found up to the present day in neighbouring villages supporting the upper floors of the houses. In the ancient temples, the platforms corresponded to simple floors where the worshippers gathered in front of a doorway to the interior spaces where a rite linked to altars was performed (Figures 6 and 7).

It is perhaps with these circular or oval monuments that the

greatest differences in the building method can be observed. There are no known examples of other round sanctuaries in the Nile Valley to date apart from the recent discovery by Julie Anderson in Dangeil (Anderson 2019) from the Meroitic period or the mysterious circular building at Wad Ben-Naga (Onderka 2014, 86-87). Thanks to these buildings, we have a late attestation of an African architecture that is still difficult to understand. The few studies of Kordofan (Gratien 2013) or Darfur (Arkell 1951; 1952) provide some information on these unknown lands that, without systematic work, will not deliver the data needed to capture the early history of Africa. We believe that the remains of Dokki Gel provide a new

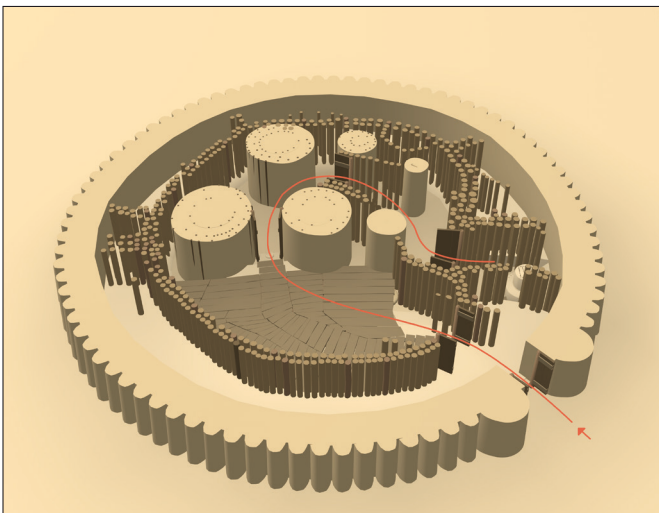


Figure 7. The wooden northern temple with the restitution of the elevations and the floor. Main circulation in red.

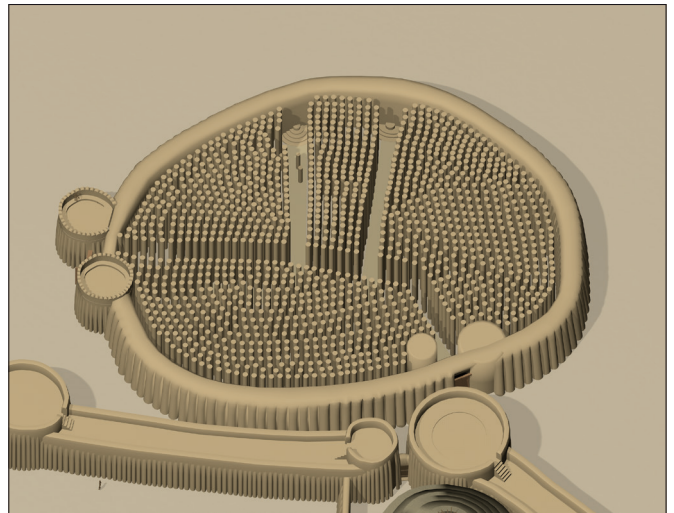


Figure 8. Architectural reconstitution of Palace A.

picture of an African city at the origins of the organisation of sub-Saharan populations. While this is of course a first step in the research and our interpretations will need to be better substantiated, I would like to take this opportunity to provide some evidence of the complexity of architectural problems (Figure 8).

Illustration credits: S. Marchi, X. Droux, M. Berti, P. Meyrat, A. Gout, J.-M. Willot

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