

The Temple of Queen Hatshepsut at Deir El Bahari—The Results of Architectural Research over the North Part of the Upper Terrace¹⁾

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(Tafeln 34–35)

In the course of architectural research carried out on the Upper Terrace I discovered in the walls a number of traces testifying to two phases of its building. The architectural research mentioned here was conducted in the season 1983/84 and was part of preservation work being executed in the Temple of Queen Hatshepsut since 1968. The evidence showed that two quite different conceptions lay in the background of two succeeding building phases. The final form created by the Queen belongs to the second phase and was started when the first building phase was still unfinished.

Such a sudden change of building plans, resulting in rebuilding and extension of the structure carried out already in the second phase as well as the data given in my article on the discoveries made here, made me think that it was not the Queen but her royal predecessor, Tuthmosis II, who could have been the founder of the first architectural form of the temple. But the extension of the structure in the Hatshepsut time enriched it in many directions.²⁾

Since the evidence on which I based my conclusions was best preserved in the north part of the Upper Terrace, particularly in the joint of the wall separating the court of the Sun-Altar from its vestibule, I continued my research on this site in the season 1984/85. There I made a number of observations which I present below.

As I have already mentioned, the wall separating the court of the Sun-Altar from its vestibule was an additional element raised at the north wall of the Upper Courtyard when a change in architectural conception took place. This is likely the result of the Queen's taking over of buildings after her husband's (Tuthmosis' II) death. Provided that, the wall has been an element of the second stage of the building phase. It has been preserved intact nearly along its entire length only in the lowest layer. Only its rearmost, north segment attaching to the north wall on the Sun Court and its vestibule reached up to the fifth layer (Fig. 1). Along the axis of this wall there was a portal connecting the court with the vestibule on which there was a floor with a portal jamb drawn on it (pl. 35). Moreover, the line of the entire wall crossed also the passage between both places, which was indicated by incisions on the passage blocks (Fig. 1 j).

At the beginning of our research there we removed the debris filling from inside the wall in its segment south of the passage and then in its north part. The following construction

¹⁾ This article has been worked out in the Ateliers for Conservation of Cultural Property (P.K.Z.) in the scope of the research work of the interdepartmental problem III/9 of the Polish Academy of Sciences entitled "Ancient and Early-Christian Cultures in the Mediterranean and in the bordering countries."

²⁾ Z. WYSOCKI – "The Temple of Queen Hatshepsut at Deir el Bahari – Its original form." – in print.

emerged. The mud rock was covered with a layer of big, irregular blocks to make the foundation (Fig. 3 c and 4 c). The incisions were hewn to indicate the course of the wall and next the wall was built made firm with fish-tailed anchors (Fig. 1). Besides, its irregular, large joints were filled with lime mortar from inside. And until today the filling bears traces of stuffing it into joints (Fig. 2 r).

This was the way applied both at the foundations and higher in the wall. After uncovering the wall we saw things unknown so far. In its south part, 85 cm from the north face of the Upper Courtyard's wall, we discovered a sketch of a door-way, the reveal of which, also drawn on the floor, was placed 140 cm to the north (Fig. 1 h). On the side of the vestibule, closer to the east face of this wall, a jamb was drawn which made the passage 120 cm wide (pl. 35). Moreover, in this part the wall had a floor laid inside, between foundation blocks (Fig. 1 d), unlike the wall in its north part. There was only the mud rock under the filling on which foundation blocks were placed. The blocks of the floor inside the south part of the wall were as large as the foundation blocks laid directly on the mud rock (Fig. 3 d).

At first I thought that also the north part of this wall had once a similar floor inside, which could have been removed in the course of excavation of our predecessors. I thought that the fragment of the floor preserved inside the wall had its counterpart in the floor of the Sun Court and the vestibule, which simply covered the entire surface of the Upper Terrace in its north part.

Yet this was not the case. Such an idea is contradicted, firstly, by the foundation blocks set in one line with the floor of both rooms adjoining them. And secondly, the floor inside the wall was made of blocks of the same height as the foundation blocks (Fig. 3 d), but the floor blocks of the Sun Court and those of the vestibule were only 10 to 28 cm thick and were laid on a layer of debris (Fig. 5, I-VIII, Fig. 6, Fig. 7).

So one can draw a conclusion that the floor of the court and the vestibule was laid after the wall separating the two places had been raised. With the wall raised in the second phase, it is obvious that the Upper Terrace in its north part did not have any floor in the first phase.

The sketch of a portal door-way discovered inside the wall is set almost exactly opposite a similar door-way bricklaid during the second building phase, that is by Queen Hatshepsut. The other door-way is well readable on the west wall of the Sun Court. This tracing was slightly narrower and was 120 cm wide between the reveals (Fig. 8).

So it is clear that the initial plan of both this wall and the entire present court of the Sun-Altar looked different from the form eventually introduced there by the Queen. At the beginning of the planned rebuilding its architects tried to follow the plan already carried out. Thus, raising the wall separating the area of the north part of the Upper Terrace into two, they planned at first a portal along the axis of the existing portal in the west wall of the present court. Providing that they laid a floor inside this part of the wall and with incisions indicated the course of the wall on foundation blocks and a portal on the door-way floor. The present portal had not been previously planned, which is testified by incisions on the foundation blocks of the present passage, set just at the incisions indicating the course of the wall, the former pointing to the joints of the first layer of the wall (Fig. 1 i). However, before they started executing the plan another change in the building conception occurred, which must have taken place before the relief decoration was introduced in this part of the structure. Then the door-way in the west wall of today's Sun Court was given up, thus making room for the present Chapel of Amon. The once-existing door-way is now covered with a relief decoration, which proves that the closing occurred before the decoration was set there. At the same time

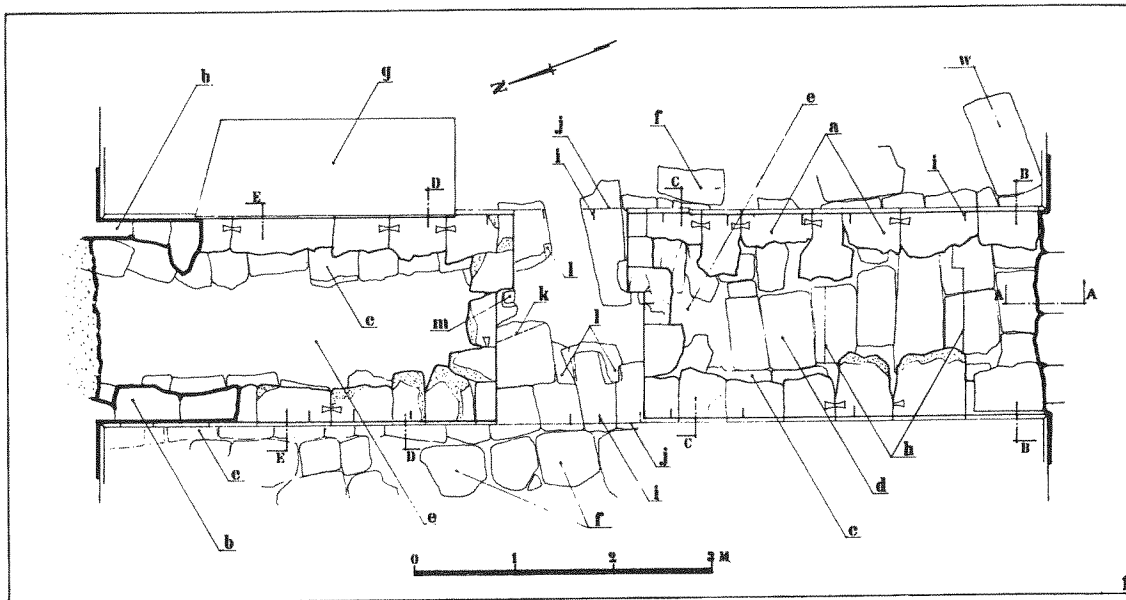
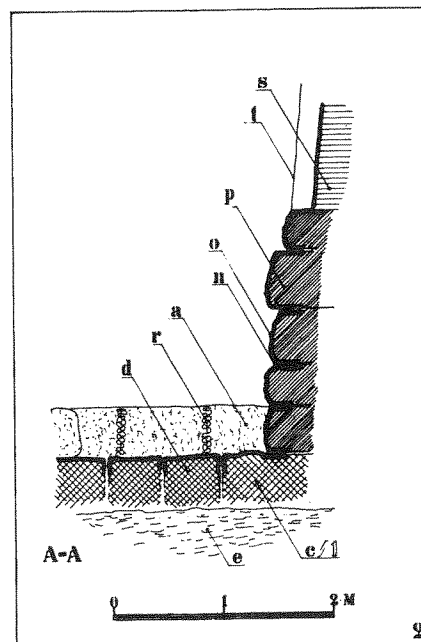


Fig. 1. Horizontal section of the wall separating the Sun Court from its vestibule.

- a Blocks of the preserved first layer.
 - b Blocks of the preserved second layer.
 - c Foundation blocks.
 - d Blocks being a filling between foundations of the wall.
 - e Surface of the bed-rock.
 - f Floor blocks.
 - g Stone slab of unknown origin and use.
 - h Incisions tracing a non-existent portal.
 - i Transverse incisions for blocks of a succeeding layer.
 - j Longitudinal incisions indicating the course of the wall.
 - k Slant incision on a pavement block of the passage.
 - l Sockets and grooves of unknown use.
 - m Socket of the door hinge in the existing portal.
 - w Square block in the floor of the vestibule.
- A-A, B-B, C-C, D-D, E-E, - Vertical sections.

Fig. 2. Vertical section A-A.

- a Blocks of the preserved first layer of the wall separating the Sun Court from its vestibule.
- c/1 Well dressed foundation blocks of the north wall of the Upper Courtyard.
- d Filling blocks between foundations.
- e Bed-rock.
- n Facing blocks of the Upper Courtyard's wall with bevelled edges on the joints.
- o Rough dressed face of blocks of the north wall of the Upper Courtyard.
- p Blocks being a filling of the butt of the two walls.
- r Joints with traces of stuffing with lime mortar.
- s Brick wall construction done by the Mission.
- t Plane of the dressed wall facing.



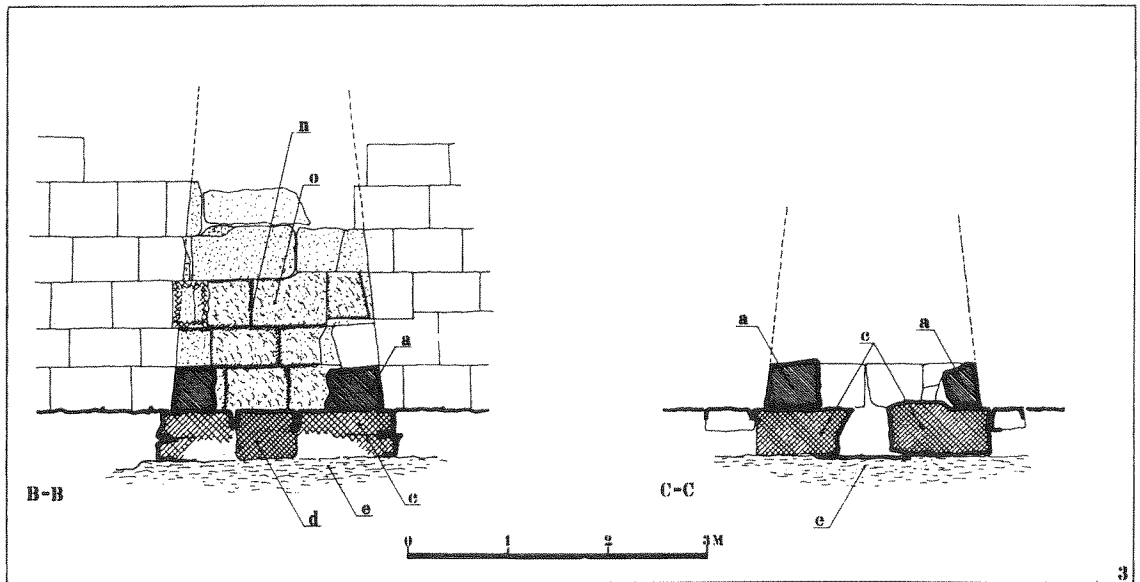


Fig. 3. Vertical sections B-B and C-C.

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|---|----------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------|
| a | Blocks of the preserved first layer of the wall separating the Sun Court from its vestibule. | e | Bed-rock. |
| c | Foundation blocks of the wall. | n | Bevelled edges of blocks of the rough facing of the north Upper Courtyard's wall. |
| d | Filling blocks between foundations. | o | Rough face of the north Upper Courtyard's wall. |

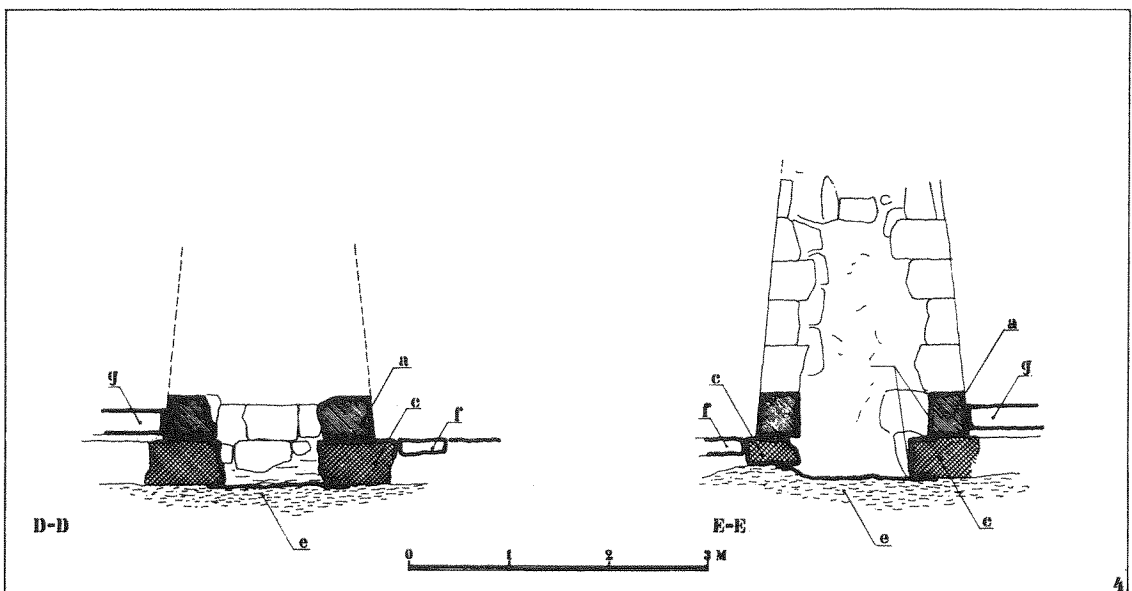


Fig. 4. Vertical sections D-D and E-E.

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|---|----------------------------------------------------------------------------------------------|---|---------------------------------------|
| a | Blocks of the preserved first layer of the wall separating the Sun Court from its vestibule. | e | Bed-rock. |
| c | Foundation blocks of the wall. | f | Floor slabs. |
| | | g | Stone slab of unknown origin and use. |

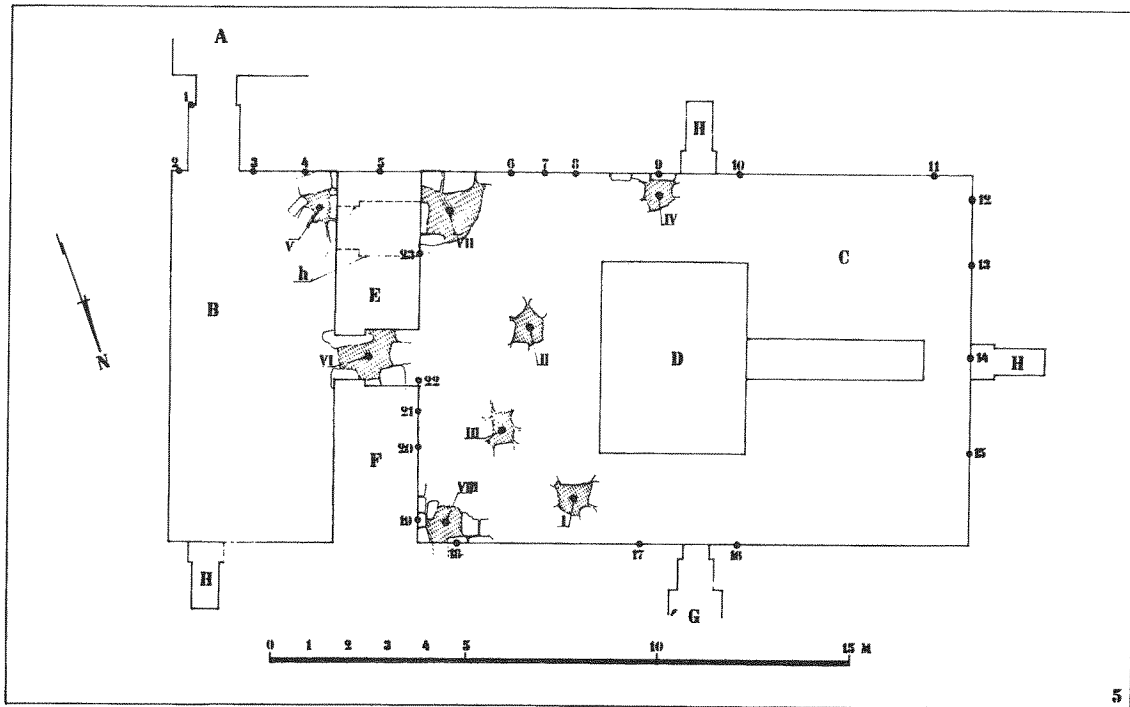


Fig. 5. Horizontal projection of the Sun-worship assembly with marked excavation tranches.

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|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| A Upper Courtyard. | G Upper Chapel of Anubis. |
| B Vestibule of the Sun Court. | H Niches in the walls. |
| C Sun Court. | h Incisions tracing on the floor a non-existent portal. |
| D Sun Altar. | I-VIII Floor and foundation excavation tranches. |
| E South part of the wall separating the Sun Court from its vestibule. | 1-23 Places of evidenced longitudinal incisions of the foundation blocks of the walls. |
| F North part of the wall separating the Sun Court from its vestibule. | |

the plan of the wall between the Sun Court and its vestibule was also changed. The door-way was replaced onto the wall's axis and the facing blocks of both sides of the wall covered the marks indicating a previous portal door-way. That one had never tried to carry it out in a previously planned place is testified by facing blocks of the first layer set at both sides of the wall, which do not correspond with the outline of the portal door-way. So, unlike the west wall of the court, there was no closing of a once-existing door-way, but, if compared with the original plan, there was a change introduced in the wall before it had been raised.

There is one arresting fact among the data of the last excavation. One of the blocks of the present passage between the Sun Court and the vestibule has an incision which is in no way connected with it. It is about 50 cm long and is set slantwise to the wall, but fits exactly the north-south line (Fig. 1 k). It would not be surprising if not for a block set square with the incision in the corner of the south and west vestibule wall (Fig. 1 w). This block, which is included into the vestibule floor, is different from the floor blocks both in its regular, rectangular upper facing and in its thickness. It is as thick as the foundation blocks. Unlike other floor blocks

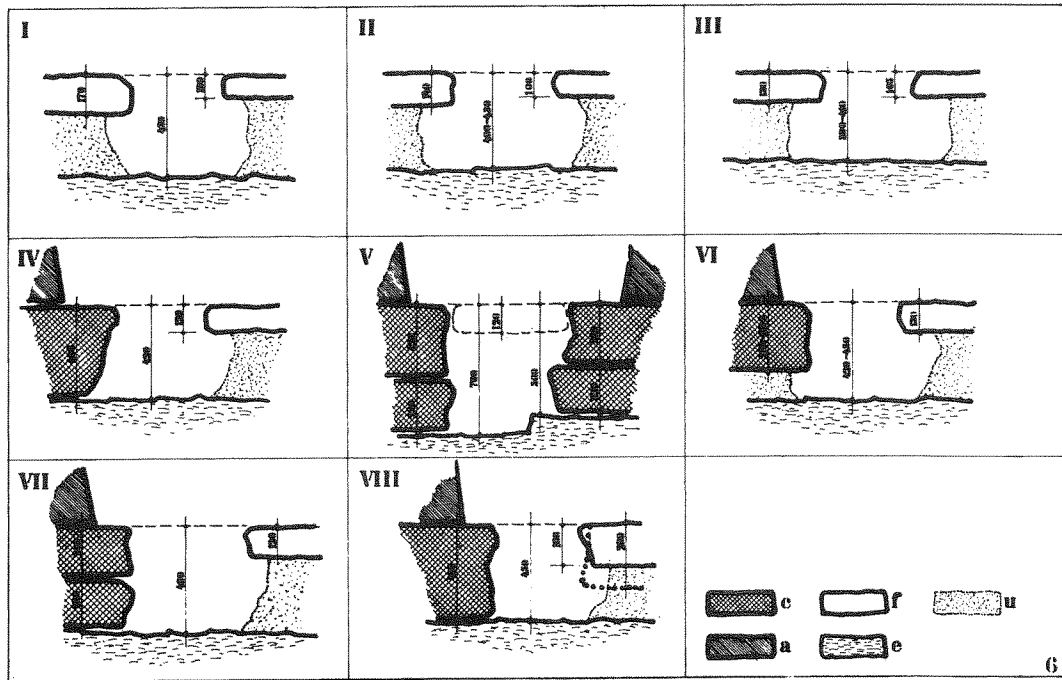


Fig. 6. A comparison of floor excavation tranches.

I-VIII Different excavation tranches.
 a Blocks of the first layer of the walls.
 c Foundation blocks.

e Bed-rock.
 f Floor slabs.
 u Sub-crust of the floor.

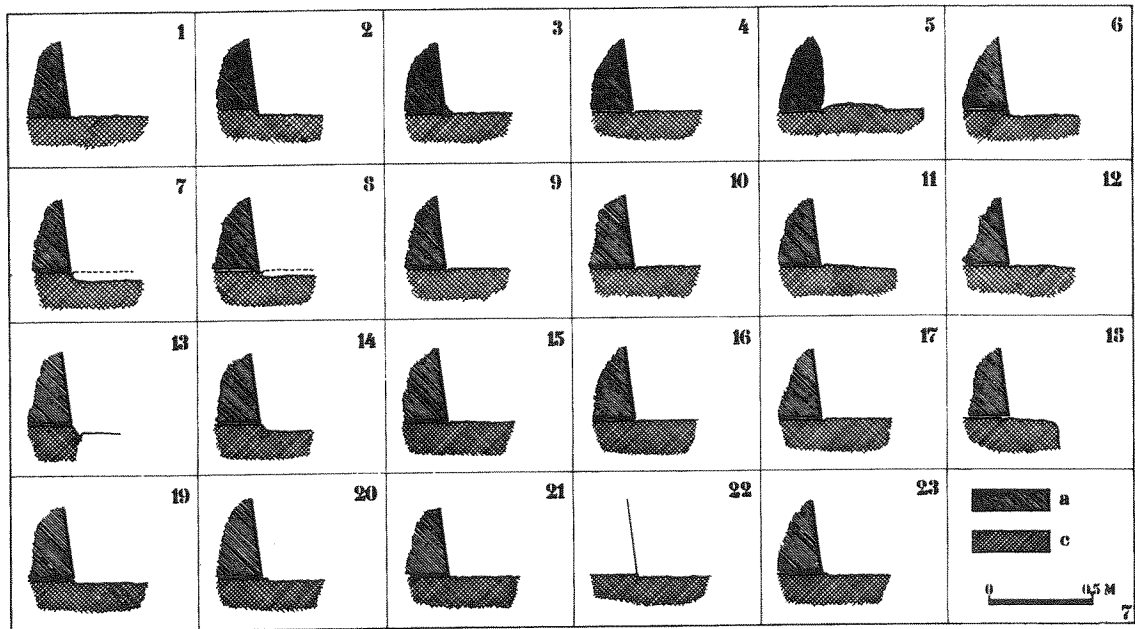


Fig. 7. A comparison list of wall joints with the foundation longitudinal incisions.

1-23 Different points of checking.

a Wall blocks.

c Foundation blocks.

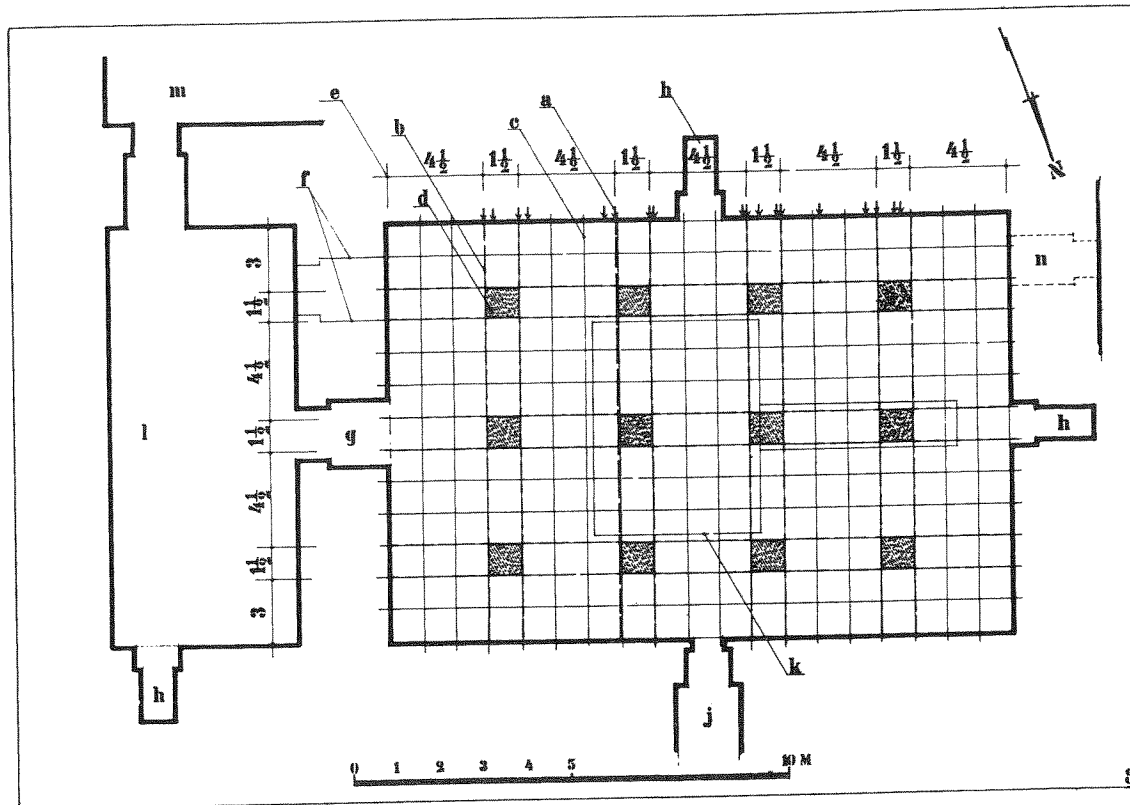


Fig. 8. A theoretical reconstruction of the arrangement of the colonnade planned on the present Sun Court.

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|---|-----------------------------------------------------------------|---|----------------------------------------------------------------|
| a | Incisions on lower layers of blocks. | g | Eventually executed door-way. |
| b | Lines indicating the disposition of columns. | h | Niches. |
| c | Modular division of the yard. | j | Entrance to the Chapel of Anubis. |
| d | Outline of pillars or columns in the scope of a module. | k | Outline of the Sun Altar. |
| e | Measurement lines. | l | Vestibule of the Sun Court. |
| f | Incisions tracing a door-way jamb on the floor inside the wall. | m | Upper Courtyard of the temple. |
| | | n | Previous passage between the Chapel of Amon and the Sun Court. |

Note: Dimensions are given in royal cubits.

laid on a debris sub-crust, it is set directly on the rock. However, it does not have any incisions on its surface.

Thus, two possibilities can be considered here. One is that their coexistence, of the one with an incision in the present portal and the one set in the vestibule corner, is a mere coincidence. The block with an incision could have been reused while completing the floor when the original conception of the wall was changed. The other possibility is that it could be a remnant of an even earlier construction left there, possibly of the XI Dynasty. The precise north-south setting of both fragments seems to support such a claim. Unfortunately, too scarce evidence preserved there leaves it an open question.

Eng. POŁOZANIN in his research over an architectural module of the temple discovered incisions on the ground course of the south wall of the Sun Court. The incisions are set in an arranged course indicating pillars or columns which must have been once planned on the present court. They are made double, one not far away from the other. So they form two distinguishable courses indicating the setting of the colonnade (Fig. 8 a). Most probably one of them is a proper one whereas the other one is a correcting line. In the metric system they correspond to the measurements established by eng. POŁOZANIN for the modular composition of other temple elements.³⁾

So, despite minor differences, one can state that the ground for the applied module here is a royal cubit and the module stands for 1,5 royal cubit. Differences in centimeters are likely to result from a different measuring cubit used by ancient architects.

The same has been stated by eng. POŁOZANIN in his research over incisions in other parts of the structure and while examining ancient measuring rulers preserved until our times.⁴⁾ Those rulers were most often made of wood which must have been already deformed when it was used. Those preserved to our times showed still greater disfigurement subject to the material they were made of. In our case the module averaged 79 cm. At first I thought that the incisions came from the original plan of the structure, that is from its first phase. But, after a close examination I learned that they had come from the second phase, that is they made a plan for the first building of the present Sun Court after it was formed as a separate place through raising a wall separating the court from the vestibule.

Such a conclusion results from the fact that the incisions were made on an already finished and smoothed course of wall blocks and as we know the first phase was unfinished when the plan changed. Another proof is that the incisions plan a colonnade between the west and east wall of the court and do not appear in its vestibule. If, however, they had outlined the original plan of the structure, that of the first phase, we would have found further incisions also in the vestibule. Then the incisions would not have been restricted to the south wall of the court, but they would have been extended onto the entire length of the wall. Their arrangement on the court in the east-west direction indicated five intercolumnar spaces 3 modules i. e. 4,5 royal cubit each (Fig. 8). The conclusion is that the incisions indicated elements of the structure raised in the second phase, the structure being covered by a ceiling supported by a colonnade.

Unfortunately, we could not find a corresponding indication neither on the west nor the east wall of the court, which would let us establish a number of rows in the north-south direc-

³⁾ W. POŁOZANIN - *"The Temple of Queen Hatshepsut,"* edited by The State Enterprise for the Conservation of Cultural Property, Information Centre, Warsaw 1980. The article entitled *"The Upper Portico of the Temple of Hatshepsut at Deir el Bahari,"* pp. 66-90.

⁴⁾ *Ibid.*, pp. 85 and 86. "The above given module is close to the contemporary Egyptian measure, that is 1,5 royal cubit. As opposed to the standards made of precious metal, these measures in general use were made of wood. Most probably, such were in use on the construction site of the temple of Hatshepsut. Six wooden measures preserved till today of a royal cubit in length dating from XVIII dynasty, found in a tomb of Tutankhamon, were examined. They are registered in the Egyptian Art Museum in Cairo bearing number from 61 315 to 61 320. Each wooden measure is divided into seven units called palms, some of the measures have palms divided in four smaller units called fingers. Few of them have a mark of 1,5 cubit. Three rulers were measured and their equivalents in the metric system are as follows:

1. bearing of a reg. No. 61 315 - 1,5 cubit = 794 m/m
2. bearing of a reg. No. 61 316 - 1,5 cubit = 799 m/m
3. bearing of a reg. No. 61 319 - 1,5 cubit = 793 m/m."

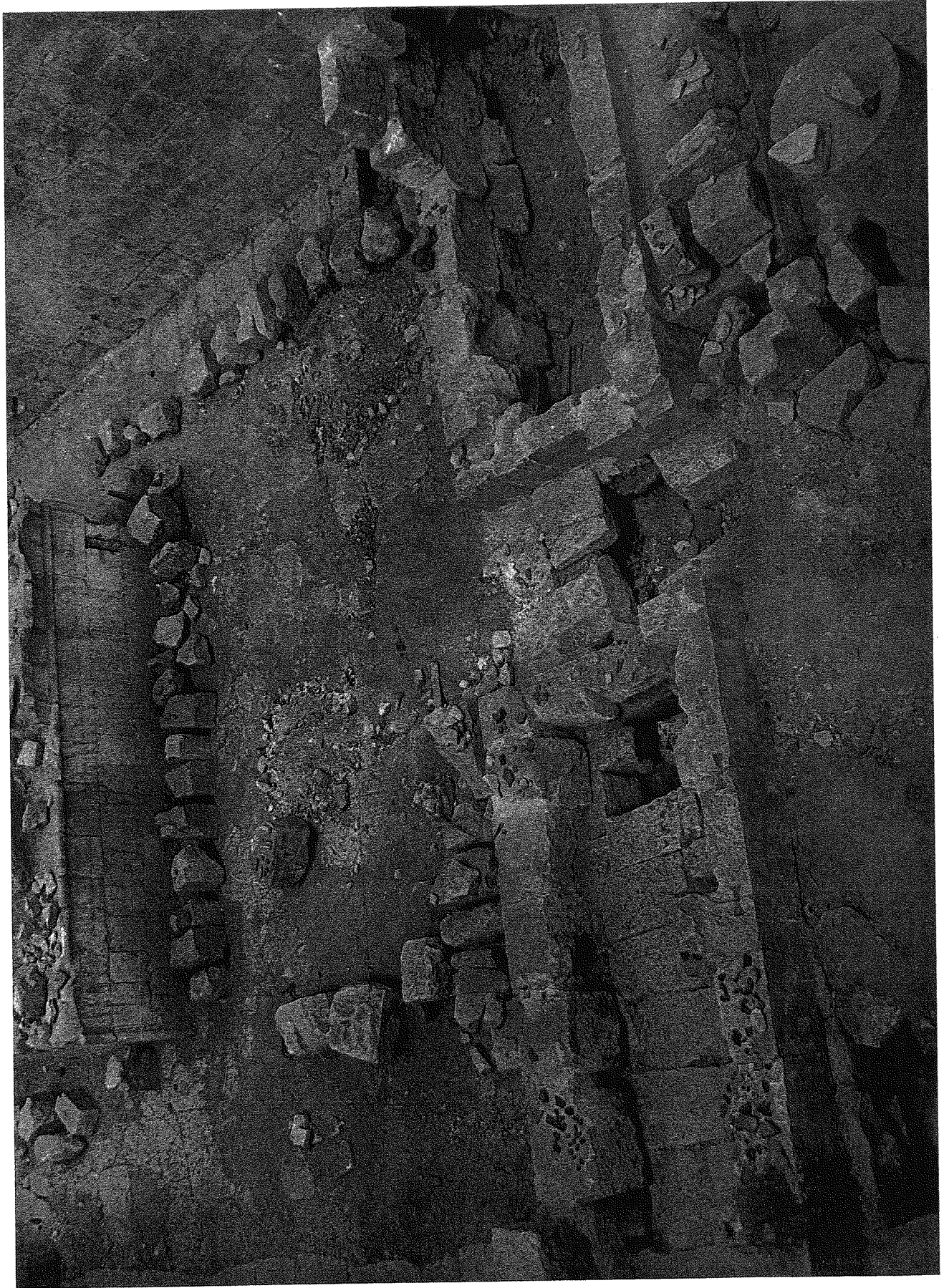
tion. The only way to reconstruct a possible arrangement of the colonnade in this direction was to divide the discussed area into modules. The whole projection of this interior provides 13×19 modules i. e. $19,5 \times 28,5$ royal cubit. Of course the pillars here correspond to 1,5 royal cubit, the middle intercolumnar space to 4,5 cubit and the side spans to 3 royal cubits (Fig. 8). That the colonnade in the north-south direction was not indicated may be another proof that the colonnade and also the hypostyle interior were part of a plan connected with the door-way which had not been executed but marked on the floor in the wall separating the present Sun Court from its vestibule. It was also connected with the door-way existing then but brick-laid, which led to the present Chapel of Amon. The plan had never been carried out since at that time the Queen or her architect must have changed the conception of arrangement for the north part of the Upper Terrace. Then they closed the door-way to the present Chapel of Amon, abandoned a previously planned passage between the court and the vestibule shifting it to the wall axis and altered the original plan of carrying out a hypostyle hall covered with a ceiling, introducing an open court instead. This was connected with the idea of introducing the sun-worship in this place, which is proved by raising a sun altar there. At the next stage the altar was elevated, which is to be seen in its construction and in the construction of its stairs. The previously planned column hall might have been connected in some way with the Chapel of Anubis, the entrance to which is to be found in the north wall of the Sun Court. Unfortunately, the state of this wall, renovated by our predecessors, does not allow to draw any conclusions. So, it is hard to state whether the Chapel of Anubis in the north part of the Upper Terrace belonged to the first phase or was rather one of the stages of the second phase, the latter having been carried out under Hatshepsut's reign. If there was, however, any liturgical connection in the Anubis cult with raising colonnades in front of his chapel it could be assigned to the time of planning a hypostyle hall, that is to the second phase. Each of the temple chapels had a colonnade in front of it. So it is highly probable that a colonnade was also planned in front of the chapel devoted to Anubis.

Obviously, architectural research will be carried on in the temple and it is likely to reveal significant evidence which will additionally confirm the reasoning presented here or it will make us correct the already drawn conclusions. But it is necessary to formulate them at this stage of research so that they may inspire researchers to check, think over and possibly discuss them.

Conclusions

1. The first building phase encompasses the north wall of the Upper Courtyard and the west wall of the Sun Court.
2. The original plan of the wall separating the present Sun Court from its vestibule was connected with this first building phase, among other things with a once-existing entrance from the court to the present Chapel of Amon. This is testified by the position of the outline of the portal jamb discovered on the floor slabs inside the wall in its south part.
3. This wall has never been executed as it was planned. It could have been begun in the ground course, but soon afterwards it took its present form. This is testified by its facing blocks which close the original outline of the passage. They do not come in line with the door-way tracing.

4. The incisions on the south wall of the present Sun Court, which indicate columns or pillars in this place, are likely to be contemporary to the first, unrealized version of the east wall of the court with a portal situated in its south part, opposite to the door-way of the west wall.
5. The interior of the present Sun Court was planned at that time as a covered column hall, the ceiling of which was supported by 12 pillars or columns.
6. Both the plan of separating a place and of raising columns there belonged to the second building phase. It was carried out already by Hatshepsut and it can be ascribed to the first stage of this phase. At the second stage the plan was changed as far as shifting the door-way to the axis of the east wall of the present court. Then the covering and also the colonnade were abandoned. At the same time the entrance to the present Chapel of Amon was brick-laid in the west wall of the court.
7. This change is connected with introducing the sun-worship and building a sun altar, which should be included in the second stage of the second phase.
8. At the third stage of the second phase the sun altar and its stairs were rebuilt, that is their height was raised.
9. One should consider the vestibule in front of the Sun Court as an element of the second stage of the second phase.



A general view of the examined wall separating the Sun Court from its vestibule (Z. Wysocki)



A view of the southern part of the examined wall separating the Sun Court from its vestibule. a Blocks of the preserved first layers of the wall; d Stone filling between foundation blocks of the wall; h Incisions of a not executed portal (Z. Wysocki)

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