

# Some Remarks on the Great Rectangular Monuments of Middle Saqqara\*)

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## Introduction

It is surprising how little we know about the early great rectangular monuments in Egypt<sup>1)</sup>. Whilst some archaeological progress is under way at Hieraconpolis and Abydos<sup>2)</sup>, nothing, at present, seems to be intended at middle Saqqara and Abu Rawash<sup>3)</sup> – the former being spectacular. I believe that they could offer us some interesting information by studying aerial photographic maps and by investigating their sites. Unfortunately, however, ed-Dair, the rectangular monument with a square brick massif at Abu Rawash, has been so badly disturbed for civil purposes<sup>4)</sup> and academic efforts spent on studying the great rectangular monuments of middle Saqqara do not result in agreement among scholars<sup>5)</sup>.

Looking at the layout of the great rectangular monuments of middle Saqqara, namely Gisir el-Modir, the remains of a second rectangular monument, the Netjerykhet complex and the constructions of Sekhemkhet, I imagine that the builders could have chosen better and easier locations<sup>6)</sup>; and I observe that certain orientations and relationships with each other and with some

\*) This study is gratefully presented to Professor WERNER KAISER who is a promoter of contemporary progress of the study of earliest Egypt, moreover, his ideas will undoubtedly remain a landmark in the literature of our fascinating science.

1) I believe that the term 'great rectangular monument' is more appropriate and covers all those specifically called 'step pyramid complexes', 'forts', 'enclosures', 'open courts', 'funerary palaces', 'valley buildings', 'Talbezirke' etc. Moreover, it seems to me that there is no proof that the unfinished step pyramid of Sekhemkhet was surrounded by a complex similar to that of Netjerykhet, consequently I will refer to it as the 'constructions of Sekhemkhet' until some clearer understanding of this monument is reached.

2) The untimely death of the late Prof. M. HOFFMAN earlier this year (1990) will have some negative bearings on the important current work at Hieraconpolis; D. O'CONNOR, *New Funerary Enclosures (Talbezirke) of the Early Dynastic Period at Abydos*, in: *JARCE* 26, 1989, pp. 51–86.

3) Concerning these monuments at Saqqara the only activities were the result of a by-product in the Polish expedition, K. MYŚLIWIEC, in: *Abstracts of Papers, Fifth Congress of Egyptology*, Cairo 1988, p. 201. He mentions the discovery of blue tiles in an excavation west of the Netjerykhet complex. This work was hardly begun when it was unfortunately discontinued.

4) N. SWELIM, *The Brick Pyramid at Abu Rawash*, Alexandria 1987, pp. 91–95.

5) R. STADELMANN thinks that, apart from those of Netjerykhet and Sekhemkhet, three other great rectangular monuments at middle Saqqara date to kings Hetepsekhemuy, Ninetjer and Khasekhemuy of the 2nd dynasty (in: *F5 Mokhtar II*, *BdE* 97, Cairo 1985, p. 306 and *Die ägyptischen Pyramiden*, Darmstadt 1985, p. 30). W. KAISER believes these monuments belong to the 3rd dynasty (*Ein Kultbezirk des Königs Den in Sakkara*, in: *MDAIK* 41, 1985, p. 54, no. 39). O'CONNOR opposes the 2nd dynasty dating (in: *JARCE* 26, p. 83 no. 60). The idea that these great rectangular monuments predate the complex of Netjerykhet was first announced by the present writer in a series of lectures following his discovery of the pyramid at Sinky (October 1977) in Grenoble during the Second Congress of Egyptologists (September 1979) and published in: N. SWELIM, *Some Problems on the History of the Third Dynasty*, Alexandria 1983, p. 29, 33–35, 224.

6) A better place to view the Netjerykhet complex and the Sekhemkhet constructions from the cultivation would be to the east of their present location close to the edge of the plateau (in subdivisions L 21 [5] and Apa Jeremias [9], see

archaic monuments are maintained. Have these better and easier locations been occupied by earlier monuments which are unnoticed by us?

The scientific aims of this study are to argue the close by areas after subdividing middle Saqqara, and to point out the mutual relationships of the great rectangular monuments.

### The site of middle Saqqara

Whilst writing this thesis, I discovered that local names of the topographical features of middle Saqqara were long lost and new names of the wadis needed to be introduced. The borderlines of the subdivisions need to be determined by geographical latitudes and longitudes, and the topography has to be briefly explained to understand its influences.

Here I offer names to the wadis and subdivisions of the site under discussion. On the published map (fig. A) the reader will find the following new names: 'Wadi Userkaf', 'Wadi Unas', 'Wadi Sekhemkhet', 'Wadi el-Modir' and 'Wadi Pepi I'. The subdivisions mentioned below are numbered and named after monuments within them; those without monuments are given descriptive names.

By the term middle Saqqara, I mean an almost square area of the desert plateau from the latitude of the office of the chief inspector in the north to a latitude running through 'Wadi Pepi I', immediately north of his pyramid, in the south, 2,5 kilometres long, and from a longitude running along the extreme easterly desert outcrop in the east to a longitude 100 m west of the north-west corner of Gisir el-Modir in the west, 2,18 kilometres wide. North Saqqara extends northwards for a distance of a little less than one kilometre where archaic mastabas and Late Period galleries of sacred animals were excavated. It is a triangular extension of the elevated desert plateau of middle Saqqara, surrounded by the cultivation and the village of Abu Sir on the east and a natural depression on the west. South Saqqara extends southwards for a distance of 3,5 kilometres from 'Wadi Pepi I' to the pyramid Lepsius XLVI - a trapezoidal part of the plateau cut across by 'Wadi et-Taflah'. Its border with Dahshur, in the south, is the Bahriya Oasis railway line.

The topography of middle Saqqara shows a desert plateau rising to the height of 40,5-63,1 m above sea level, overlooking the flood plain cultivation which is 17,2-21,5 m above sea level. The eastern side of the plateau, as a result of quarrying at some areas, is cliff-like, rising to a height of 30-40 m over a horizontal east-west distance of less than 200 m, and is roughly bearing north-south. The cliff recedes westwards at two places:

At the area called 'Sign Youssef', approximately measuring 100 × 150 m, which continues rising westwards as 'Wadi Userkaf' towards that king's pyramid.

At the valley temple of Unas a sandy depression, approximately measuring 300 × 150 m, continues in two directions: In the north-west it follows the causeway of Unas, partly built in the outer south channel of the dry moat of the Netjerykhet complex, as 'Wadi Unas' and in the south-west it rises as 'Wadi Sekhemkhet' towards his constructions. These two wadis embrace the plateau of Apa Jeremias and the New Kingdom necropolis.

Generally speaking, the desert surface of middle Saqqara is high in the north-east, east and south and low in the west and north-west by the natural depression, which continues along the western side of north Saqqara. Beyond this depression is the site of the pyramids of Abu Sir.

below). An easier location to build Gisir el-Modir and the Sekhemkhet constructions would be a little to the south, in the southern subdivision [12] (see below) for the first, and a little to the east, in the subdivision of Apa Jeremias [9] (see below) for the second, where the plateau is more level and there would be no need for the builders to work on enormous embankments and terraces.

## The subdivisions of middle Saqqara

The site of middle Saqqara is divided into subdivisions some of which are occupied by great rectangular monuments. The subdivisions have been delineated by geographical latitudes and longitudes crossing and running along very close to or at an indicated distance from a well known reference point. Only in one case the division line is a diagonal north-east of Gisir el-Modir. I have considered 12 unequal subdivisions in this area. The subdivisions are given numbers from east to west as we go south on the reduced reproduction of the maps *Le Caire H 22* and *H 23* (1:5000) in this study (see fig. A).

### [1] The subdivision of the pyramid of Teti

The borders of this area measure 520 m N., 630 m E., 520 m S., and 630 m W. between the latitudes of the chief inspector's office in the north, 'Wadi Userkaf' in the south, the longitudes of the easterly desert outcrop in the east and L 21 in the west.

To the north are the 1st dynasty mastabas, to the east is the Anubieion, to the south is 'Sign Youssef' and 'Wadi Userkaf', and to the north-west the plateau drops 10 m where the subdivision of D 70 [2] is located. To the south-west the north-east corner and the east channel of the dry moat of the Netjerykhet complex [6] is found.

The absence of archaic mastabas in this subdivision is remarkable; the southern logical limit of the archaic necropolis should overlook, 'Sign Youssef' and 'Wadi Userkaf'. In other words, the monuments of this subdivision may have been built over them. The pyramid Lepsius XXIX in this subdivision is thought to date to the 5th dynasty but this has not been proved. It is interesting however that the pyramids of Teti and his queens are oriented  $11^\circ$  west of north thus following the direction of a 1st dynasty row of tombs in the subdivision of the Serapeum [3], while the pyramids of Userkaf and Unas are correctly oriented to the cardinal points.

### [2] The subdivision of the tomb no. D 70

The borders of this area measure 610 m N., 370 m E., 610 m S. and 370 m W. between the latitudes of the chief inspector's office in the north, the resthouse in the south, the longitudes of L 21 in the east and Ptahhotep in the west.

This subdivision separates the north channel of the dry moat from the tombs of the nobles of Netjerykhet. Why should such a gap exist? Do the archaic mastabas and the sacred animal galleries of north Saqqara extend southwards into this subdivision? It is curious also that, whilst almost all mastabas are oriented with their longer axis bearing north-south, the important mastaba D 70 of the 5th dynasty is oriented east-west.

### [3] The subdivision of the Serapeum

The borders of this area measure 500 m N., 370 m E., 500 m S. and 370 m W. between the latitudes of the chief inspector's office in the north, the resthouse in the south, the longitudes of Ptahhotep in the east and 170 m west of the second rectangular monument in the west.

The subdivisions of the Serapeum [3], the second rectangular monument [7] and the area of the longitude of 'Wadi el-Modir' are part of a natural depression separating Abu Sir from Saqqara to the north and extending into middle Saqqara to the west and south. The west channel of the dry moat of Netjerykhet, the pyramid of Unas, the north-western half of the constructions of Sekhemkhet, the north-eastern part of Gisir el-Modir and the east side of the north-western subdivision are surrounding this depression on levels which are 15–20 m higher.

It has been suggested that the second rectangular monument extended into this subdivision (see below). At a distance of 100 m towards the north from the Serapeum itself are groups of tombs of the 1st dynasty. One of them, group F, dating to Horus Den contains 22 tombs in one line of 75 m oriented  $11^\circ$  west of north. It is not therefore clear, if they were subsidiary to some rectangular brick monument as we see at Abydos. They were excavated by R. MACRAMALLAH and are considered as cult area of Horus Den by W. KAISER<sup>7)</sup>. It would be logical to ask if other subdivisions, e.g. D 70 [3], L 21 [5], Apa Jeremias [9] and the southern subdivision [12], could possibly hide great rectangular monuments which are not surrounded by subsidiary tombs and which are not seen on the aerial photographic map.

#### [4] The north-western subdivision

The borders of this area measure 550 m N., 800 m E., 550 m S. and 800 m W. between the latitudes of the chief inspector's office in the north, 100 m north of Gisir el-Modir in the south, the longitudes of 170 m west of the second rectangular monument in the east and 100 m west of Gisir el-Modir in the west.

This subdivision is a south-western extension of the Abu Sir plateau overlooking the depression. Like the subdivisions of L 21 [5], the second rectangular monument [7], Gisir el-Modir [11] and the southern one [12] this subdivision of middle Saqqara has not been excavated.

#### [5] The subdivision of the shaft number L 21

The borders of this area measure 520 m N., 570 m E., 520 m S. and 570 m W. between the latitudes of 'Wadi Userka' in the north, 'Wadi Unas' in the south, the longitudes of the easterly desert outcrop in the east and L 21 in the west.

I have named this subdivision after a Late Period shaft numbered 21 by LEPsius which lies 10 m to the east of the east channel of the dry moat of Netjerykhet. This unexcavated subdivision would be a convenient site for a great rectangular monument. If the prominence of the Netjerykhet complex were a true claim, the first choice of its builders would have been this area. Was there an earlier rectangular monument which prevented them or is the prominence of the complex of Netjerykhet unimportant? I wish that these two questions could be clarified.

#### [6] The subdivision of the complex of Netjerykhet

The borders of this area measure 630 m N., 800 m E., 260 + 370 m S., and 140 + 660 m W. between the latitudes of the resthouse in the north, 'Wadi Unas' in the east half of the southern border, the north side of the pyramid of Unas in the west half of the southern border, the longitudes of L 21 in the east and Ptahhotep in the west.

It had been built in the centre of middle Saqqara on the high desert east of the depression. The temenos wall of the complex is surrounded by the dry moat. They measure  $272 \times 536$  m and  $750 \times 600$  m respectively<sup>8)</sup>. Their orientation is  $4^\circ$  east of north, consequently the dry moat does not coincide with the borders of this subdivision; it comes within it.

While the complex of Netjerykhet is enclosed by the temenos wall and the dry moat, the boundaries of the other great rectangular monuments (Gisir el-Modir, the second great rectangu-

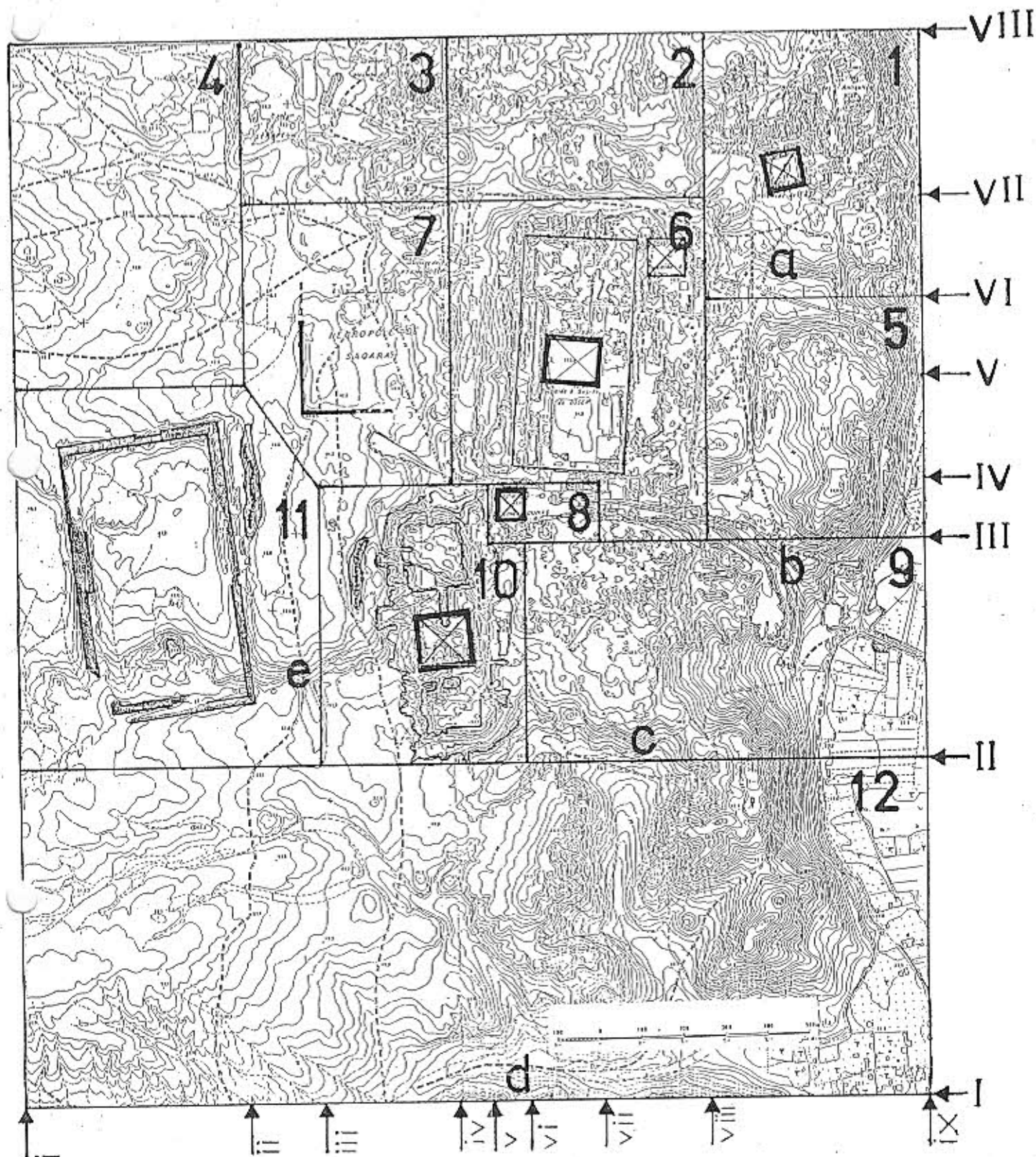
<sup>7)</sup> R. MACRAMALLAH, *Une cimetière archaïque de la classe moyenne du peuple à Saqqarah, Fouilles Saqq.* 16, 1940; W. KAISER, in: *MDAIK* 41, 1985.

<sup>8)</sup> N. SWELIM, *The Dry Moat of the Netjerykhet Complex*, in: *Fs Edwards*, London 1988, p. 12.



A

THE SUBDIVISIONS OF MIDDLE SAQQARA  
 [A reduced extract from the maps Le Caire H 22 and 23; 1:5000]



- SUBDIVISIONS:**
- |               |                    |                   |                      |
|---------------|--------------------|-------------------|----------------------|
| [1] Teti.     | [4] North Western. | [7] Second Rec.M. | [10] Sekhemkhet.     |
| [2] D 70.     | [5] L 21.          | [8] Unas.         | [11] Gisir el Modir. |
| [3] Serapeum. | [6] Netjorykhet.   | [9] A. Jeremias.  | [12] Southern.       |
- WADIES:**
- |                   |                      |                    |                |
|-------------------|----------------------|--------------------|----------------|
| [a] Wadi Userkaf. | [c] Wadi Sekhemkhet. | [e] Wadi el Modir. | [b] Wadi Unas. |
|-------------------|----------------------|--------------------|----------------|
- LATITUDES:**
- |                      |                       |                          |                        |
|----------------------|-----------------------|--------------------------|------------------------|
| I- Wadi Pepi I.      | III- Wadi Unas.       | V- 100 m. N. G el Modir. | VII- Rest House.       |
| II- Wadi Sekhemkhet. | IV- N. side Unas Pyr. | VI- Wadi Userkaf.        | VIII- C. Insp. office. |
- LONGITUDES:**
- |                                       |                            |                             |
|---------------------------------------|----------------------------|-----------------------------|
| i- 100 m. W. Gisir el Modir.          | iv- Ptah Hotep.            | vii- Unas boat pits.        |
| ii- 170 m. W. Second Rectangular Mon. | v- W. encl. wall Unas Pyr. | viii- L 21.                 |
| iii- Wadi el Modir.                   | vi- 100 m. E. Sekhemkhet.  | ix- Eastern desert outcrop. |

lar monument and the constructions of Sekhemkhet) are embankment walls; in my opinion, this creates a serious difference.

[7] The subdivision of the second rectangular monument

The borders of this area measure 500 m N., 660 m E., 310 m S., 430 m W., and 310 m diagonally SW. between the latitudes of the resthouse in the north, the north side of the pyramid of Unas in the south, the longitudes of Ptahhotep in the east and 170 m west of the second rectangular monument in the west and the south western diagonal.

In the depression of middle Saqqara the south-west corner of the second rectangular monument can be observed in a central location. The two stone walls creating this corner are oriented to the north and east running for a distance of 100 m and 40 m respectively. This corner is a fundamental point in the mutual bearings of the great rectangular monuments (see fig. E).

The dimensions of a reconstruction of the second rectangular monument by MARAGIOGLIO and RINALDI show it as large as Gisir el-Modir<sup>9)</sup> but LAUER does not agree with that<sup>10)</sup>.

[8] The subdivision of the pyramid of Unas

The borders of this area measure 270 m N., 170 m E., 270 m S. and 170 m W. between the latitudes of the north side of the pyramid of Unas in the north, 'Wadi Unas' in the south, the longitudes of the Unas boat pits in the east and the west enclosure wall of Unas in the west.

The boat pits and part of the causeway of Unas were constructed in the outer south channel of the dry moat of Netjerykhet. The 2nd dynasty royal galleries under the upper temple of Unas and under the mastaba of Nebkauhor and the possibility of a third one under the west side of the pyramid of Unas, where the bed rock was excavated and filled in for the foundation of the pyramid, make this little subdivision very important.

The burial chamber of the gallery of Hetepsekhemuy is on an extension of the east-west axis of Gisir el-Modir. Had these galleries any superstructures and enclosure walls, and how do they relate to their predecessors and their successors? In other words, in which channel of development do they stand<sup>11)</sup>?

[9] The subdivision of the monastery of Apa Jeremias

The borders of this area measure 950 m N., 500 m E., 950 m S. and 500 m W. between the latitudes of 'Wadi Unas' in the north, 'Wadi Sekhemkhet' in the south, the longitudes of the desert outcrop in the east and 100 m east of Sekhemkhet in the west.

The desert plateau in this subdivision is a triangular area measuring 600×700×800 m. This interesting subdivision poses a similar situation to that of subdivision L 21 [5]: At this site the builders of the constructions of Sekhemkhet could have possessed a better location concerning its prominence and levelling. Was there an earlier rectangular monument which prevented them or is the prominence of the constructions of Sekhemkhet unimportant?

<sup>9)</sup> V. MARAGIOGLIO and C. RINALDI, *L'architettura delle piramidi menfite II*, Turin 1963, p. 53, Tav. 7.

<sup>10)</sup> J.-P. LAUER, *A propos de l'invention de la pierre de taille par Imhotep*, in: *Fs Mokhtar II*, BdE 97, Cairo 1985, p. 66.

<sup>11)</sup> Investigations carried out in that very difficult area by P. MUNRO may throw some light on these tombs.

