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Frédéric Guyot, Valentina Azzarà, François Briois, Julie Marchand, Béatrix Midant-Reynes

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An Early Old Kingdom Rural Community in the Eastern Nile Delta

First Season of Excavations at Tell el-Neshed

FRÉDÉRIC GUYOT, VALENTINA AZZARÀ, FRANÇOIS BRIOIS, JULIE MARCHAND, BÉATRIX MIDANT-REYNES*

RÉSUMÉ

Le site de Tell el-Neshed est situé non loin de la limite orientale du Delta dans le gouvernorat de la Sharqiyah. Les fouilles conduites en 2015 et 2016 par l'Ifao y ont révélé les vestiges bien préservés d'un village du début de l'Ancien Empire. Plusieurs phases de constructions en briques crues associées à des silos ont été mises en évidence, tandis qu'un sondage a révélé que l'épaisseur des dépôts des III^e^ et IV^e^ dynasties atteint plus de 3 m avant que ces derniers ne soient noyés sous la nappe phréatique. Tell el-Neshed est l'un des rares sites d'habitat du début de l'Ancien Empire connus à ce jour. En tant que tel, il pourrait offrir des informations de première importance sur la vie économique et sociale des communautés rurales à cette période. En venant enrichir ce que l'on sait grâce aux textes de la gestion territoriale au début de l'Ancien Empire, les fouilles conduites à Tell el-Neshed visent à mieux comprendre les modalités des réformes territoriales conduites par les souverains des III^e^ et IV^e^ dynasties et l'implication du pouvoir royal dans les zones rurales.

Mots-clés : début de l'Ancien Empire, village, communautés rurales, delta du Nil.

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ABSTRACT

Tell el-Neshed is located in the Sharqiya governorate, not far from the eastern edge of the Nile delta. Excavations led by the French Institute for Oriental Archaeology in Cairo (IFAO) in 2015 and 2016 uncovered extensive remains of an early Old Kingdom settlement. Fieldwork brought to light several superimposed mud-brick buildings and silos dated to the early 4th Dynasty. A test trench revealed more than 3 m of 3rd – early 4th Dynasty deposits above the water table. Tell el-Neshed is one of the very few early Old Kingdom settlements known so far in the Nile Delta. As such, it should provide us with new insights into the economic and social life of the rural communities in this time frame. By supplementing the textual evidence about how the territory was run in the early Old Kingdom, excavations at Tell el-Neshed aim at making a meaningful contribution towards a better understanding of the implementation of the territorial reforms undertaken by the 3rd and 4th Dynasty monarchs and the involvement of royal power in rural zones.

Keywords: Early Old Kingdom, settlement, rural communities, Nile Delta.

The early Old Kingdom witnessed both the full expression of the royal ideology that steadily established itself during the Early Dynastic, and the increasing control of the central administration over many fields of economic and social life. In order to restore their power after the troubles at the end of the 2nd Dynasty, the kings of the 3rd and 4th Dynasties carried out vast reforms to political, economic and religious affairs.[1] The agenda driving these reforms seems to have gone well beyond the mere necessity of taking over the management of the territory. By magnifying the primary role of the royal institution in maintaining the equilibrium of the cosmos, both political and symbolic reforms played an important part in legitimating the power appropriated by the ruling class. Through restructuring the systems of exchange and production to the benefit of the Crown, they furthermore reinforced the economic foundations on which the power of the king's lineage was based.

With regard to royal propaganda, the number of funerary monuments in the Memphite region provides sufficient evidence for how symbolic concepts were manipulated during this period to publically express the dominance of the ruling class and the privileges linked to their status. In contrast, the reality of the reforms in the more practical fields of the kingdom's economy or administrative organisation is still poorly understood, just as little is known about how these reforms affected the daily lives of the people.

What we know about how the territories were run during the early Old Kingdom is largely dependent on autobiographies inscribed in the tombs of a few privileged individuals, providing us with desultory information on the existence of high officials running royal institutions in the countryside of Upper and Lower Egypt. It is chiefly through prosopographic research that questions relating to the economy and the relations between village communities, urban

1 Wilkinson 1999, pp. 90–98; Moreno García 2013, pp. 87–94.

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centres and central administration have been answered.[2] It is recognized that these biographies were quite often hagiographic and only reflected a fraction of the social or economic reality by ignoring aspects that did not directly interest the tomb's owner, or by remaining vague about certain practical features of the functioning of these institutions. References are made to establishments called *ḥw.t*, *ḥw.t-ꜥ3.t*, or *grg.t* without any description of their size, the range of their activities, or to the relations they might have had with the surrounding communities.[3]

To make up for deficiencies and complete the information provided by the textual evidence about how the territory was run in the early Old Kingdom, it is necessary to examine archaeological data from settlements and production centres. Archaeological evidence is indeed more likely than written sources from funerary context to inform us about the extent to which the royal administration was genuinely involved in the economic or social activities of the villages and major regional centres. Nonetheless, the excavations carried out over the last century have only yielded a relatively small amount of information on the towns and villages because Egyptologists largely neglected the settlements in favour of funerary complexes. Less than some ten settlements from this period have been excavated throughout Egypt;[4] therefore, we know scarcely anything about the environment in which people lived their lives.

It is in this context that the excavations of an early 4th Dynasty village such as Tell el-Neshed take on significant importance by providing direct evidence on how village communities were organised in the early Old Kingdom (fig. 1). This project has the potential to renew our approach to the territorial management during this period by providing new data about economic practices and the presence of royal power within rural zones.

TELL EL-NESHED IN ITS REGIONAL CONTEXT

The site of Tell el-Neshed is located in the Sharqiya Governorate, not far from the eastern edge of the Nile Delta approximately 15 km south-west of Tanis. It was initially identified in the 1980s during a vast programme of archaeological surveys and palaeo-geographic studies conducted by the Amsterdam University Survey Expedition north of the modern town of Faqus.[5] Potsherds were gathered from the surface, together with 90 other tells surveyed within this zone covering an area of 900 km². An Old Kingdom date (with perhaps a few Middle Kingdom finds) was then proposed for the site, which is mentioned as Tell el-Iswid (north). The Amsterdam University Survey Expedition subsequently selected several tell sites for trial trenching: Tell Ibrahim Awad, Tell el-Murra, or Tell el-Iswid (south) for instance, which were then excavated by various European missions (see pp. 176–178). Tell el-Neshed was not the

2 Particularly, Papazian 2013, pp. 46–48, 66–70; Moreno García 1996, pp. 129–132; Moreno García 2007, pp. 322–327.

3 The written sources relating to these royal estates will be discussed below concerning the management of the rural provinces in the early Old Kingdom (pp. 169–174).

4 Elephantine and Elkab in Upper Egypt, the villages of the workers at Giza in the Memphis region, Kom el-Hisn in the western fringe of the Delta. In the Delta: Buto, Mendes, Tell el-Murra. See below the descriptions of the sites for the bibliographic references.

5 Van den Brink 1987, pp. 7–13, 24; Van den Brink 1988, pp. 66–69; Van den Brink 1993, pp. 281–290.

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subject of a more detailed investigation until a new excavation led by the French Institute for Oriental Archaeology in Cairo (IFAO) was begun in 2015.

Today the preserved part of the tell consists of just over 13 ha, and at its highest point rises 5 m above the surrounding fields (fig. 2). However, aerial photographs by the British army in November 1968 indicate that the tell occupied a much larger area of approximately 130 ha.[6] The intensive cultivation of the region since the late 20th century has caused nearly nine–tenths of the site to disappear under the fields, but the tell's original dimensions may well have been even larger. It is important to bear this destruction in mind while discussing the size or status of the site during the early Old Kingdom, as only a tiny portion of the original settlement can now be observed. This is all the more true as a fruit grove now occupies the summit of the tell at its centre, and in the east, west, and north of the tell areas continue to be brought under cultivation. The tell's southern edge is however intact, which explains why the three areas opened during the first campaign were all located in this area. It has to be kept in mind that these excavated areas are not located at the highest part of the tell, as it is now occupied by the fruit grove. Consequently, it may well be that all the occupation levels, especially the last, are not represented in the trial trenches. This may produce a bias in the chronology of the occupation of the site as presented below. Despite these many restrictions, Tell el-Neshed nonetheless offers a unique opportunity to study rural settlements of the early Old Kingdom, owing to the state of preservation of the area under archaeological investigation that is still quite extensive, and to the absence of modern construction that would prevent any access to certain zones.



Fig. 1. Early 4th Dynasty mudbrick buildings and silos, Area 1 view from the south (photo F. Guyot).

6 See online GIS: mapg.sig.huma-num.fr/Gezira

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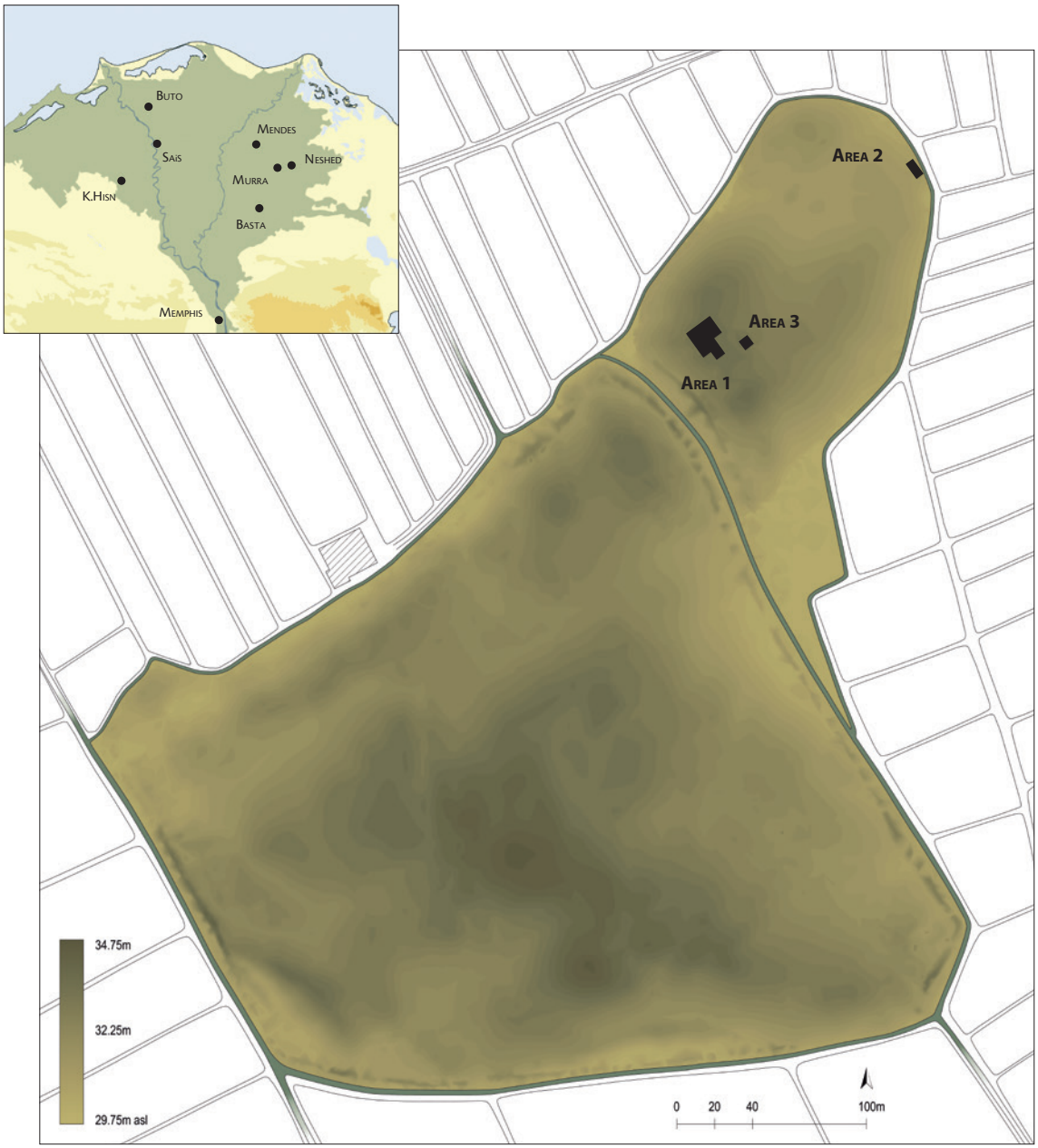


Fig. 2. Preserved part of the tell and areas excavated in 2016 (F. Guyot, site survey M. Gaber, Ifao).

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The site is all the more interesting when placed in its regional context: far from being isolated, it was surrounded by other settlements of the same period that are regularly situated along the main waterways.[7] Studies by the Amsterdam University Survey Expedition on the hydraulic systems and the establishment of the sites in this region have shown that the area around Tell el-Neshed was bordered by two branches of the river Nile: the Bahr Faqus to the east, of which the course corresponds pretty well to the ancient Pelusiac branch; and the Bahr Muweis to the west, which is generally considered to be the remaining part of the Tanitic branch.[8] Naturally, the courses of these branches have varied over the centuries, but only to a certain extent, as they are bordered by high banks of sandy middle Pleistocene sediments running from north–east to south–west.[9]

South of the junction between the Pelusiac and Tanitic branches, the Amsterdam University Survey Expedition has brought to light a cluster of different sites dating to the early Old Kingdom, each about 5 km apart. Tell el-Neshed, 3 km south of the Bahr Muweis, is bordered on the east by Tell Ibrahim Awad, and on the west by Tell el-Iswid and Tell el-Murra. This distribution is probably not due to chance and raises numerous issues as to relations of interdependence that may have existed between these sites, their respective roles in regional economy, and the reasons for this regular spacing out, which may be owing to deliberate planning of the rural territory. This leads to questions concerning the actual nature of these settlements: were they relatively important centres founded as far back as the Predynastic, mere peripheral villages? Were they royal settlements freshly created in the countryside at the beginning of the Old Kingdom? In order to provide preliminary answers to these questions, the first season at Tell el-Neshed focused particular attention to the issues relating to the sizes of these communities, the nature of their economy, and their link to the royal administration.

KEY RESULTS FROM THE FIRST SEASON

The first excavation campaign at Tell el-Neshed was conducted from March to April 2016.[10] The previous year had been spent conducting a series of surveys to establish firstly, that the potsherds collected on the surface were no later than the early Old Kingdom; and secondly, that at several points on the site the archaeological deposits were more than 2 m deep. This first mission therefore held three objectives: 1) to uncover the latest occupation levels over a vast area so as to study the spatial organisation of the village and its economic functioning, 2) to check

7 VAN DEN BRINK 1993, pp. 292–295.

8 VAN DEN BRINK 1987, pp. 26–30, fig. 2.

9 During the annual flood the alluvial plain between the sand banks was inundated and the sediments that the branches of the Nile progressively deposited gradually covered the lower part of these banks (called *gezira*, from the Arabic word meaning island). Like all the other sites in the Delta Tell el-Neshed was located on one of these *gezira*, which were the only places out of reach of the inundation.

10 The team was composed of: Valentina Azzarà (co-field director), François Briois (lithic industry), Muhammad Gaber (cartography), Frédéric Guyot (co-field director, topography), Julie Marchand (pottery), Béatrix Midant-Reynes (lithic industry), Radwa Muhammad (archaeologist), Christiane Petit (designer), Yeyah el-Shahat (archaeologist), Sherouq Shehada (archaeologist). The workers from the Samara village were led by Rais Rafat Muhammad. The Ministry of Antiquities was represented by Messelhi Ahmed and Heda Abdel al-Sadek.

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whether the occupation of the site did not extend beyond the early Old Kingdom, 3) to search for the earliest remains in order to establish a stratigraphic sequence as complete as possible.

Three areas were opened in the north-west part of the tell on account of their accessibility: Area 1, at the highest point, was planned for extensive excavation of the latest occupation. Area 2 on the other hand was located on a lower part of the tell, on the edge of the fields, for rapid access to the earliest levels. Area 3 was a trial trench opened next to Area 1 in order to complete the stratigraphic sequence observed in the latter by exploring the under-lying levels.

Results of these operations are presented below, beginning with the chronology of the tell as it has been observed in Area 3. A description of the 4th Dynasty remains uncovered in Area 1 is followed by a presentation of the pottery assemblage, and the lithic material. As Area 2 has only yielded limited results, its data will be discussed along with those of Area 1.

Stratigraphy of the site

Three occupation levels have been uncovered in the Area 3 trial trench. Originally, this trial trench located 10 m west of Area 1, measured 5 × 5 m. Its area was then reduced in order to descend as deeply as possible by limiting the surface excavated. In this way it was possible to safely explore the archaeological layers 3 m below the surface, without for all that reaching the virgin sand of the *gezira* (fig. 3). Despite the limited size of the trial trench at its lowest point, variations have been observed between the ceramic material from the earliest and the latest levels. Nevertheless, these differences are not striking: indeed the ceramic material changed very little between the late 2nd Dynasty and the early 4th Dynasty, which implies working on large assemblages to be able to more precisely date pottery types that exist between the end of the Early Dynastic and the beginning of the Old Kingdom (see pp. 159–162). As it happens, the 3 m of stratigraphy revealed in Area 3 date precisely from this poorly defined transition period, and the assemblage these layers have yielded remains limited owing to the narrowness of the test pit. This is why the tentative division into three levels presented here may well evolve over the succeeding missions, especially concerning the dating of the lowest layers.

At the time of publication, the division proposed is as follows: Level 1: 4th Dynasty; Level 2: 3rd Dynasty; Level 3: early 3rd Dynasty or transition 2nd–3rd Dynasties. Level 1, the latest, is only represented in this area by three thick layers of filling (Layers 609-601). Not much can be said about these deposits that can be up to one metre thick; however, there is enough evidence to assign an early 4th Dynasty date. It is thus contemporary with the extensive buildings uncovered in Area 1. As no stratigraphic connexion has been made yet between Areas 1 and 3, we cannot be sure whether the reason for the absence of architectural remains within the trial trench is because it has been opened at the periphery of buildings, or in an open space between them.

BIFAO 118 (2019), p. 143-187 Frédéric Guyot, Valentina Azzarà, François Briois, Julie Marchand, Béatrix Midant-Reynes
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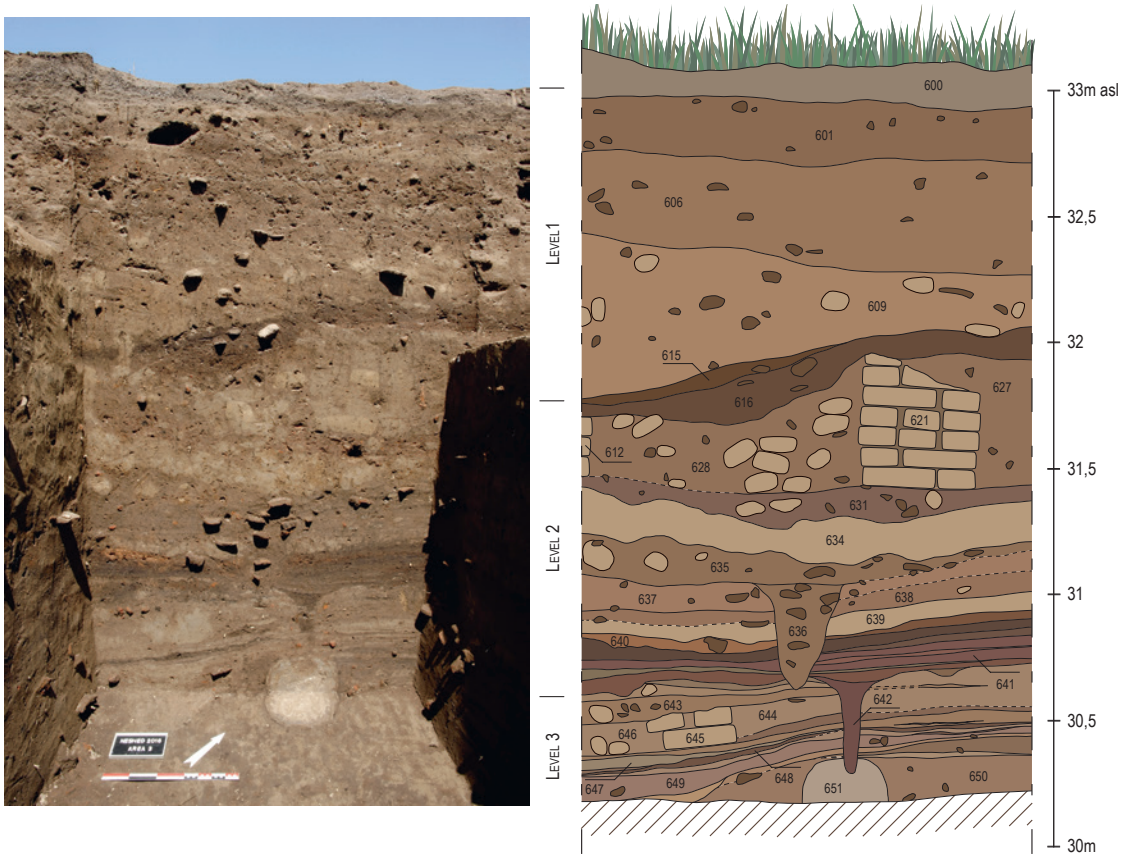


FIG. 3. Stratigraphical sequence of the latest occupation levels, Area 3 section north (F. Guyot).

Level 2 starts at 2.5 m below the surface with an accumulation of thin occupation layers reflecting intense activity in the area (641). Doubtless because of the trial trench's limited size, it has not been possible to associate any structure with these layers. Next come four successive layers of filling (640–637, followed by a thick layer of refuse (635). This suggests a change occurring in how the settlement was organised, although the importance of this shift in the settlement pattern is difficult to assess. The area was then abandoned (634), before being levelled (631) to take a large mud-brick structure (612, 621). At this level the trial trench still covered 25 m², which enabled us to obtain some information about the building's plan and construction. In two places its walls rested on earlier walls, which had been dismantled to the third course that was used as the foundation of the new building (walls associated with Layer 635 not visible in the section). Rubble from the previous building had been levelled to form the floor of the three rooms present in the trial trench. The levelling down of this destruction layer, which is about 30 cm thick, created a kind of paving consisting of sandy bricks in sharp contrast to the dark brown soil. However, the disordered arrangement of the bricks and the fact that many of them appear to be fragmentary, as well as the proximity of the collapsed walls, leave little doubt that this paving was not intentional. It has not been possible to determine the size of the rooms as none have been entirely excavated. One

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room appears at least to have been used as a storage area, as seems to be shown by a small circular mud-brick silo not far from a pit in which several jars were found.[11]

The abandonment of this structure marks the end of Level 2 and it is interesting to note the area subsequently remained unoccupied for a certain amount of time. It appears that the building collapsed gradually and a mixed layer of sediments, fallen bricks from the walls and redeposited material piled up over the whole area (627–628). The resumption of activity in the area is evidenced by two dark layers with plenty of potsherds and organic material (616–615), marking the transition with Level 1.

Level 3 has only been partially excavated to the bottom of the trench, between 2.5 and 3 m below the surface. There appears to be a succession of occupation layers of which the interpretation, as much as the dating, is made difficult by the restricted size of the trial trench. The ceramic material it yielded remain similar to the following levels, but include certain forms having close similarities to the Early Dynastic types. These forms are no longer present in the Level 2 assemblage and so may be evidence of an earlier occupation at the beginning of the Old Kingdom. This is why a dating for early 3rd Dynasty (or the transition between 2nd–3rd Dynasties) is proposed for this level.

The only architectural remains relating to this level is a wall one brick thick, of which only two courses were preserved (645). The bottom of this level has not been reached; however, an auger drilling made at the bottom of the trench revealed there was still a metre of deposits before reaching the water table (therefore at 29 m above sea-level in early April). The potsherds from the drilling were too small to provide evidence for dating. All that can be said of them is that they are not part of the repertoire of the early Predynastic cultures of Lower Egypt.[12] This implies a *terminus post quem* of Naqada IIIB (i.e. a bit before the 1st Dynasty), for the layers located above the water table, but not reached in this season.

In the south part of the tell four other test drillings have provided similar results: the early Old Kingdom deposits are 2 or 3 m thick before being covered by the water table. No evidence of an earlier occupation that can be attached to the Lower Egyptian Cultures has been discovered. If an occupation of this period existed at Tell el-Neshed, which is quite likely inasmuch as the sites around about had been inhabited since at least the middle of the 4th millennium BC, it is entirely covered today by the water table. An isolated find corroborates this hypothesis: a bifacial sickle blade found out of context in the upper layers of Area 1, but manufactured with a technique that leaves little doubt as to its Neolithic origin (see pp. 165–166). This indicates that small groups frequented the site at least sporadically as early as the 5th millennium BC.

In the areas opened this year, the *gezira* on which the first occupants of the site settled certainly lays several metres under the water table. This excludes any possibility of excavating the earliest levels. Nonetheless, the *gezira* extends to the north part of the tell, where in places sandy outcrops can be seen just beneath the fields. The area surrounding the modern fruit grove

11 The silo in this room is similar to that of the smaller module uncovered in Area 1 (see p. 154): it measures 1.6 m in diameter, its walls are not very thick (a single line of stretchers) and preserved for two courses.

12 The generic term of "Lower Egyptian Cultures" applies to the populations in the Delta and Memphis region before the unification of the Egyptian State, i.e. between 4000 and 3300 BC. This culture disappeared suddenly at the end of the Predynastic Period to be replaced by a culture from the south that spread throughout the Nile Valley on the eve of the 1st Dynasty. For a comparison between the ceramic assemblages of these two cultures, see for instance the material from the nearby site of Tell el-Iswid (Guyot 2015; Bréand 2015).

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may therefore be a favourable zone for exploring the early levels, if the latter have not been totally razed by agriculture. Future trial trenches in this part of the site will test this possibility.

Apart from this trial trench, the operations carried out this year aimed to open a large area in order to explore the last occupation layers of the tell over an area large enough to provide information on the settlement pattern. The results of this first campaign primarily concern the early 4th Dynasty remains.

Early 4th Dynasty remains

The Area 1 excavations were conducted over 225 m² (i.e. nine 5 × 5 m squares), down to just over a metre beneath the surface. They brought to light several superimposed mud-brick buildings dated to the early 4th Dynasty (fig. 4). The earliest construction phase (1c) is represented by a few wall fragments of which the foundations have not been reached.

These walls were largely destroyed or covered by subsequent constructions, so that no satisfactory reconstruction can be proposed for the plan of this building. However, the walls (72, 74) appear to extend to the east, where the remains of a long collapsed wall have been detected under the surface of a large open space (18) delineated by the enclosure wall belonging to the last phase (22) (fig. 5).[13] The most that can be said is that the construction follows the classic scheme that emerged at the end of the Predynastic Period; namely, one and a half bricks wide, with headers and stretchers in alternation repeated every three courses.[14] As is frequently the case, fragments of mud-bricks were inserted in the brickwork to compensate for the gaps due to the thickness of the joints or the varying lengths of the bricks. At certain places mud-bricks were laid on their sides in order to keep the courses horizontal. In this phase, as in those following, the overwhelming majority of the mud-bricks were made with a mixture of clay and sand without the addition of chopped straw.[15] Their size, ranging from 24 × 12 cm to 27 × 13 cm for a thickness of about 7–8 cm, is a standard inherited from late Predynastic architecture. The relative homogeneity in the mud-bricks' size does not necessarily imply they were moulded.[16]

13 A whole section of the wall has collapsed on its face while preserving the entire brick bonding, which can thus be followed for over seven metres. As it came to light in the very last days of the season, there was not sufficient time to investigate its stratigraphic connexions with the other Phase 1c features, and its survey has not been completed. This is why it has not been shown on the plan. However, it can be clearly seen bottom right of fig. 5.

14 Many mud-bricks architectures are known in the Nile Delta from Naqada IIIB onwards (ca. 3300–3200 BC). See for instance Midant-Reynes et al. 2014, pp. 41–43.

15 The bricks that only contain a mixture of sand and clay take longer to dry but are more resistant than those containing straw and sand (Spencer 1979, p. 3). Both types were commonly used from the beginnings of brick architecture in Egypt, sometimes side by side in the same brickwork (La Loggia 2015, pp. 25–27). At Tell el-Murra—just to take the example nearest to Tell el-Neshed—most of the bricks used are, as here, sandy bricks (Jucha et al. 2013, p. 103).

16 The earliest attestations of brick moulding date from the Middle Kingdom. On a wooden model of this period, seven workers are depicted kneading clay before moulding it on the ground with a wooden frame (Nims 1950, fig. 2). Identical wooden frames have been found at Kahun in contexts also dating from the Middle Kingdom (Petrie 1917, pl. XLVII.55). Construction scenes are rarely depicted in the tombs: the earliest scene illustrating the methods used to make bricks does not appear until the 18th Dynasty (Kemp 2006, p. 83).

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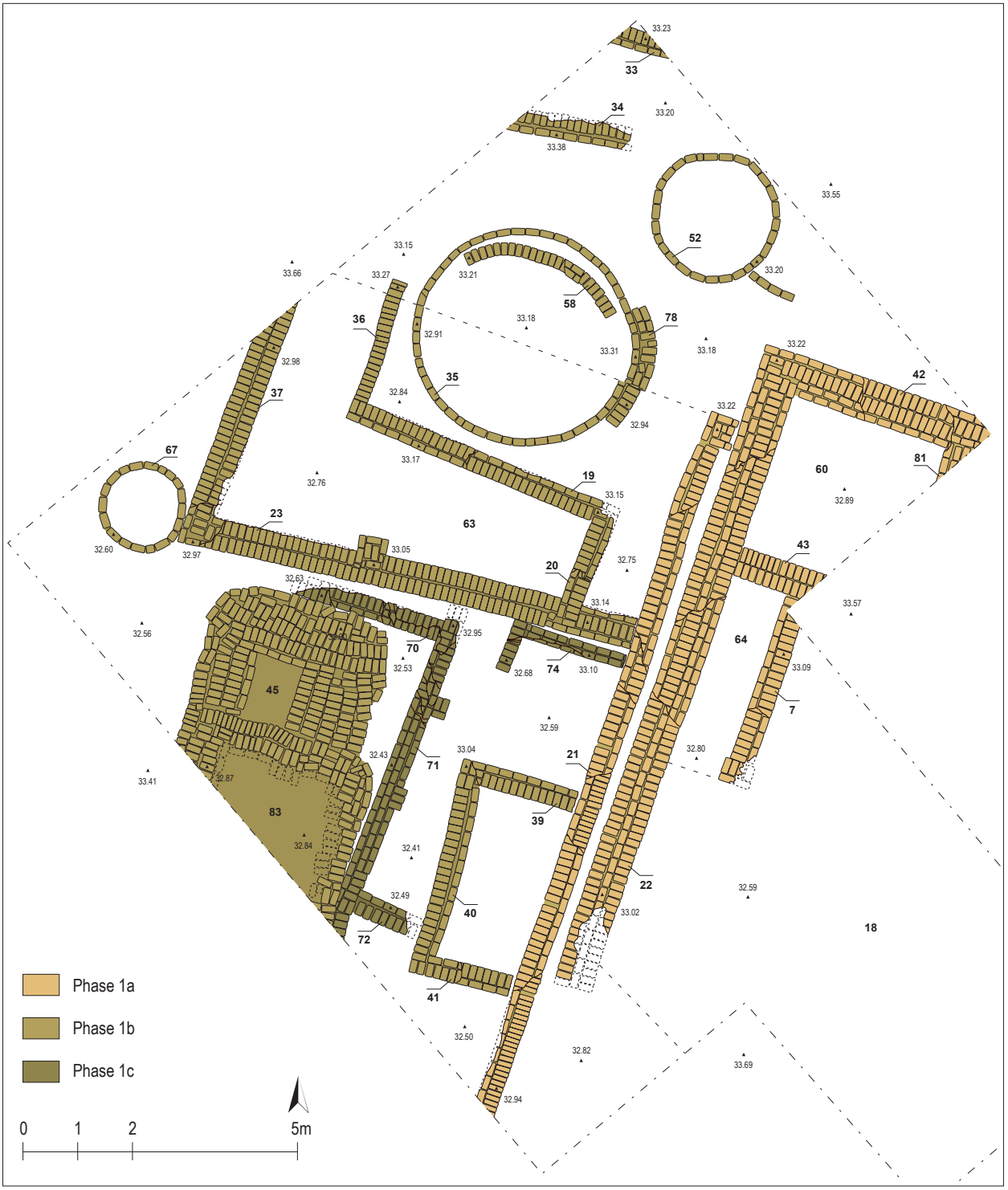


Fig. 4. Three building phases from the early 4th Dynasty in Area 1 (topographical survey and plan F. Guyot).

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While the impressive building activity from the 1st Dynasty may lead one to think that the bricks were moulded, no proof exists and many other methods might have been used to obtain bricks with a regular size (such as shuttering for example). Both at Tell el-Neshed and other sites in the Delta, the wet environment and the proximity of the water table have given the bricks a friable consistency. It has not been possible to take complete samples in order to observe traces of how they were made. A more advanced technological examination will therefore be needed in the future (in particular, thin-section examination of the bricks' micro-stratigraphy), to determine if they were moulded or made by other methods.

As mentioned above, the floor associated with Phase 1c buildings was not reached. Consequently, the related ceramic assemblage has not been studied, making the dating of this phase uncertain. The abundant material from the filling layer that sealed the floor (fig. 1) is consistent with the early 4th Dynasty repertoire found in Phases 1b and 1a. Moreover, the enclosure wall constructed in the following phase was backed onto the north wall that was still preserved for at least six courses. The fact that the Phase 1c construction still reached a certain height at that time suggests the interval between the two phases must have been quite short. Therefore, it seems reasonable to date this phase to the early 4th Dynasty, as with the following two phases.

Phase 1b is more thoroughly documented. In the southern part of the area, a small rectangular construction (39–41) can be seen next to a large brick platform (45, 83) (fig. 6). Further to the north was a larger building delineated by an enclosure wall (23, 37) surrounding a court in which at least two silos were built (35, 52). Next to the northern corner two isolated wall fragments, obviously in connexion with the silos are evidence of other installations extending beyond the excavated area (33–34).

The southern building was largely destroyed during the construction of an enclosure wall in the subsequent phase (21). Its preserved part yields little evidence of its function since it did not contain any installation. However, it is noticeable that the poor quality of the brickwork led to the wall's partial collapse on the western side. The same applies to the enclosure (23) wall, which did not receive more attention in its construction: the thickness of the joints, the irregularities in the brick bounding, and the fact that the walls are not entirely perpendicular suggest fairly hasty workmanship. The brickwork was reworked to some extent when a wall (20) was later added to mark out a space between the silos and the corner of the enclosure wall. The absence of continuity in the bonding at its junction with the earlier wall, as well as the difference in thickness (one brick and a half as opposed to two bricks), indicate that it was an addition to the initial plan. The space thereby created (63) must have been related to the adjacent silos, but for lack of installation or *in situ* material it has not been possible to determine its precise function. It may have been covered, unlike the area containing the silos. In the excavated part of the courtyard there is indeed no indication of an east-west wall before at least 10 m, which rules out any form of roofing.

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Fig. 5. Overview from Area 1, view from the south-west (photo F. Guyot).



Fig. 6. Mudbrick platform and phase 1b enclosure wall, Area 1 view from the west (photo F. Guyot).

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The silos themselves are circular and measure 4 and 2.5 m in diameter (a third [67] outside the building measures 1.6 m in diameter). Their walls are quite thin as they are only half a brick thick. The largest (35) was preserved for five courses and the lower layers of its filling contained whitish organic remains (vestiges of matting lining the bottom?). A wider low wall (78), of which the use will be discussed below, was constructed against its eastern side, while a strange alignment of bricks in an arc (58) was fitted inside when it was still in use.

Although these types of installations still have not been studied systematically, the numerous examples discovered in both the Delta and Upper Egypt tend to show it was the most common method for storing agricultural produce in the early Old Kingdom.[17] Such arrangements are attested in large numbers at the settlements of Buto, Mendes, or Tell el-Farkha from the late Predynastic.[18] In general, they are grouped in open spaces, sometimes beside large oval or sub-rectangular installations, which also must have been related to food storing or preparation activities.[19]

None of these examples has been preserved high enough to reconstruct the roofing system, but many depictions exist that cast light on how they worked. Among which are in particular the terracotta or calcite models, placed in tombs of the first dynasties to cater symbolically to the needs of the deceased.[20] They represent cylindrical silos with a domed roof and two openings: one at the top to pour the grain into the silo, the other at the bottom to take it out. Other depictions of these silos can be found on the stelae of private individuals.[21] On them can be seen the same cylindrical domed roof structures represented in two dimensions (surmounted with a biconical feature that could have been the closing system for the top opening), but also flat-roofed forms that one imagines had a rectangular plan. What these stelae provide above all is the names of the commodities stored in each silo, thereby indicating that the silos were

17 By systematic study we mean a comparative analysis of the construction methods, size, and contents of all the silos from their earliest examples in Naqada IIIB. This is to determine: the range of commodities that could be stored in them (cereal grains, partially processed poaceae, pulses, etc.), the volume and end-use of the products stored on the scale of a site (extended family, community, exports), and the various methods employed (ventilated or confined atmosphere). The usage is to use the term silo for stores with a confined atmosphere, and granary for the others. Since we have only limited information on this point, we shall use the term silo here. As for the various types of storage facilities attested for this period, see the summary by M. Ziermann (2003, pp. 97–99). We also refer the reader to the works of L.A. Warden (2017, pp. 143–146) and A. Bats (2017, pp. 170–172). In order to specify the nature of the commodities stored in the silos at Tell el-Neshed, several samplings for flotation and palaeo-botanic examination were taken from the bottom of the filling in these structures. The coming analyses may make it possible to draw a functional distinction between the large and small silos. Let us note that a similar study on the silos in the village of the workers of Khentkawes at Giza showed the grain was stored at various stages of the winnowing and threshing process with by-products from weeds (Malleson 2016). This shows the grains were not entirely processed before being stocked in the silos, and the last stages of the preparation were doubtless carried out in each domestic unit.

18 The contemporary sites in the Nile Delta will be reviewed below while discussing the settlement pattern at the beginning of the Old Kingdom. Regarding the silos, see in particular: Buto (Way 1997, pp. 130–131, figs. 73, 74; Faltings, Köhler 1996, p. 91, fig. 1; Hartung, Engel, Hartmann 2012, p. 90, fig. 5; Hartung 2014, p. 11, fig. 6), Mendes (Adams 2009, pp. 150–153, fig. 25), Tell el-Farkha (Chlodnicki, Geming 2012, pp. 110–113, figs. 11, 14).

19 Unlike the silos these large installations have irregular walls that in several cases intersect, which seems to rule out their having been roofed (for instance at Mendes: Adams 2009, p. 142). Consequently, we should be inclined to see in them areas for threshing or drying grains, constructed next to the silos in which the cereals were meant to be stored. Only an analysis of their filling may nonetheless confirm this hypothesis.

20 Kolodziejczyk 2009, pp. 49–50, who also deals with terracota models found in settlement context at Tell el-Farkha.

21 In particular the stelae of Meretites and Iounou, 4th Dynasty (Der Manuelian 2003, pp. 23–24), mentioned and commented on by A. Bats (2017, pp. 159–160).

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used for different categories of foodstuffs.[22] The form of these structures with just two openings argues in favour of a storage within a confined atmosphere (which would justify using the term silo). Nevertheless, one may wonder whether in the case of granaries, the openings for ventilating their interior would be indicated on these schematic representations, intended more to indicate the facilities' contents than how they worked.[23]

Similar speculations are possible concerning the purpose of the low wall juxtaposed against the wall of the large silo at Tell el-Neshed, of which several comparisons are known in contemporary settlements. It could be a wall built to consolidate a weakened portion of the silo to prevent it from collapsing. But in the present case at least, the base of the low wall is on the same level as the first course of the silo, implying that they were built at about the same time. So the hypothesis of a consolidation is rather unlikely. Accordingly, the low wall may have had a functional purpose, to do with emptying or filling the silo: it may have been used as a step for filing it, or as a support for the containers in which the grain was poured. If such was the case, the silo's opening would have been above the preserved courses. The difficulty in finding these openings (whether at Tell el-Neshed or other sites in the Delta), considerably reduces the possibilities of studying how these silos functioned, and the kind of conservation process they employed. Better preserved examples would certainly be a great help in making more progress on this issue.[24]

South of the courtyard was a mud-brick platform 3 m wide and at least 5 m long. The mud-bricks of which it consists are unequal in size and uneven in their layout. The outlines of the platform are irregular as well; its roughly rounded corners are marked by a line of mud-bricks where some are laid on their side and attached to the rest of the brickwork by thick joints. Only the central part includes a coherent outline that seems to be organised around an empty space left in the middle of the platform. It is also noticeable that the line of mud-bricks south of this opening crosses the whole platform and draws a limit between two sections (45, 83) that obviously were not built at the same time. The platform was reworked after its construction, as is confirmed by its section. The base of the platform was built at the bottom of a pit the digging of which obliquely obliterated the walls (70–71) from the previous phase (fig. 1). Four courses of this first platform are preserved. A layer about 5 cm thick separates them from the second platform, presenting the same features and was built just above the preserved platform. The latter, however, is only two courses thick. The courses of the first platform are continuous all around the structure, whereas there is a break in the upper courses at the junction between the two parts of the second platform. This indicates that the platform was not enlarged (since it had this size from the beginning), but that it was reconstructed in exactly the same place for reasons we do not know, and that this reconstruction was carried out in two stages, initially in the north (45) and then the south (83). This observation may be significant in the interpretation of this platform for which, as far as the author knows, no comparison exists for these periods.

22 On several occasions in the iconographic documentation the sign for silo *šnw.t* is shown enclosing the names of the foodstuffs it contains: barley, emmer wheat, carob pods, figs, dates, etc. (Papazian 2013, p. 62).

23 Interestingly, at Tell el-Murra a silo with two openings at the bottom has been uncovered (Jucha, Bak-Pryc, Malecka-Drozd 2015, p. 212, fig. 11).

24 Outside the Delta large storage facilities have been found at Giza and Elkab. Both these early 4th Dynasty sites will be dealt with below when discussing Tell el-Neshed's economic status (pp. 170–171).

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Three points should be considered: 1) the techniques used to make this structure imply it cannot have been very high and must therefore have been the base for something more important; 2) it was rebuilt several times in a short period of time; and 3) it was close to other storage structures. This is why we propose to interpret this platform as the base for several silos in a row, as can be seen depicted on the walls of tombs.[25]

At any event, the image that emerges of the Phase 1b constructions is not that of a residential sector, but rather an area dedicated to storing agricultural commodities. While it is still not possible to estimate the extent of this zone or the volume of commodities that were kept there, the storage capacities were obviously well in excess of a household's needs, and must have been either for the use of the community or reserved for the export of surpluses.

Phase 1b seems to have come to a brutal end following a fire. The roofed area inside the enclosure (63) was destroyed by the flames that spread to the platform and small adjacent building. The whole area was covered with a thick blackish layer containing burnt bricks and carbonised organic material. The combustion was especially strong against the north side of the enclosure wall where the fire severely damaged the brickwork (particularly in the east where all the lower courses are reddened). The wall collapsed both inside the courtyard and by the platform, creating an ashy destruction layer about 40 cm thick on either side of the enclosure. The area around the silos seems to have been less affected, but the ashy layer extends to the west and south beyond the excavated zone, testifying to the size of the fire.

When activity resumed in Phase 1a, the type of occupation radically changed. Storing structures were no longer present in the area, which seems to have been solely occupied by a large building; however, only the north-west corner has been uncovered to date. Relatively thick walls (two bricks and a half wide), appeared only 40 cm beneath the surface in the middle of the area. These walls were badly eroded and only preserved for one or two courses in the southern part where it has not been possible to follow them for their entire length.

An original thinner wall (21—a brick and a half wide), seems to have been constructed on the destruction layer of the silos (fig. 1, section to the right of the silo). The wall can be seen to turn to the east at its extremity. It was intersected by the construction of a second thicker wall (22, 42), constructed to follow the same orientation.[26] This wall's thickness indicates that it was probably an enclosure wall, constructed after the levelling of the whole western part of the area. What remained of the Phase 1b brickwork was totally flattened, and no trace of it was evident west of the enclosure. This suggests considerable terracing work was carried out to prepare for the new building. This structure should therefore have had a certain importance, which for the moment is difficult to estimate as the portion that has been excavated is so small.

All that can be said at the end of the first campaign is that the north corner (22, 42, 81) includes a square room (60), 3 × 3 m, placed next to a second narrower room (64). There were no traces of a posthole or a stone base to hold a supporting beam in the middle of the large room, so the roofing system of this space remains unknown. Both of these rooms opened onto a vast open area (18) that did not contain any structures. The extension of the excavations

25 Amongst numerous examples one can mention the 5th Dynasty tomb of Ti, in which a man is shown drawing grain from the base of a series of silos on a platform (Roik 1988, pp. 186–188).

26 The stratigraphic connections between these two features have not been studied during this season. It will be necessary to dismantle the brickwork of both the walls to observe how their first courses fitted together. So it is only because the thicker wall seems to intersect the corner of the thinner one that the latter is presumed to be earlier.

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eastwards will make it possible to complete this plan and doubtless will provide evidence to throw light on the function of this architectural complex.

Results obtained from the Area 2 trial trench are sparse. Conducted in the lower part of the tell, the excavations consist of two squares (5 × 5 m), and revealed a succession of circular mud-brick structures 2 to 4 m in diameter. Preserved for only one or two courses, their walls mostly look like heaps of melted mud-bricks. It cannot be excluded that they may not have been built with mud-bricks, but merely with earth. Twelve of these structures were preserved, whole or in part, and most are on top of each another, some intersect one another, suggesting they were reconstructed at regular intervals. The mediocre quality of their construction, together with the frequency with which they seem to have been abandoned and rebuilt, leads one to consider them to be simple installations used for daily activities. As the area was in the lower part of the tell, it was likely located close to the fields. Therefore, one is inclined to see in these circular structures threshing or drying areas for the cereals harvested in the vicinity. However, the water table's proximity has made excavating these installations extremely difficult and the observations necessary to demonstrate such a hypothesis could not be made this year. The water table has been reached at only 1.6 m below the surface, and work in this area had to be abandoned before reaching the levels predating the 4th Dynasty.

The ceramic assemblage

The ceramic assemblage from the first campaign has been published in detail elsewhere.[27] Here we shall point out the main characteristics, while focusing on the diagnostic features that allow Levels 1 and 2 to be dated to the 3rd and early 4th Dynasties respectively. It should be acknowledged that the period between late 2nd Dynasty and early 4th Dynasty is, as far as the ceramic repertoire is concerned, a period of transition with Early Dynastic types coexisting with prototypes of forms that would later be typical of the Old Kingdom.[28]

This gradual transition from one repertoire to another makes the period difficult to characterise, and rules out a dating criteria solely based on the presence or absence of certain types of vessels. The most common types in the assemblages of this period, such as burnished tableware, beer jars, or bread moulds, were already present during the 1st Dynasty and did not evolve a great deal in the course of the 2nd and 3rd Dynasties. Only by the late 3rd Dynasty and early 4th Dynasty did the repertoire begin to renew itself and the assemblage typical of the Old Kingdom progressively become established, which would last from the middle of the 4th to the end of the 6th Dynasty. To distinguish the late 2nd – early 4th Dynasties assemblages, the relative frequency of the forms inherited from Early Dynastic types in relation to those that already prefigure the classic Old Kingdom forms has to be considered. Consequently, the assemblages studied have to be important enough to be representative of the statistical distribution of the various types.

A problem that arises at Tell el-Neshed is that the Level 2 finds are only known by the limited assemblage from Area 3. This limits the comparisons with the Level 1 repertoire, which

27 For a comprehensive review of the ceramic assemblage from Levels 1 and 2 please refer to Guyot 2018a.
28 Köhler 2011, pp. 104–109; Op de Beeck 2009, p. 173; Hendrickx et al. 2016, pp. 279–281.

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is well documented by the Area 1 excavations. This is also the case for the Level 3 assemblage, of which only the upper layers have been reached over a very restricted area, and have consequently yielded scant information about the associated material. Added to this is the issue of very low representative material and the still limited number of sites that could serve as a comparison for the late Early Dynastic and early Old Kingdom. While the numerous funerary monuments in the Memphite region inform us about the ceramic assemblages placed in the tombs between late 3rd and early 4th Dynasties, the pottery used for everyday domestic contexts are only known to us through the few settlements excavated to this date.[29] The Tell el-Neshed assemblage may therefore help define the early 4th Dynasty domestic repertoire, but until Levels 2 and 3 are explored over a much more extensive surface, the transition between the 3rd and 4th Dynasties remains difficult to define.

The assemblage from all the areas excavated this year amounts to over 40 000 potsherds of which nearly half are bread moulds. Of the 22 000 fragments of pottery material found, 2 800 are diagnostic forms. The fabrics used are 98 % Nile clay mixed with a varying quantity of straw tempers. Similar fabrics are found all over Lower Egypt, so that it is impossible to know for any given vessel whether it was produced locally or imported from another site in the Delta. Marl clay vessels that barely represent by over 1% of the assemblage have been imported, although it cannot be determined whether they came from the edge of the Delta, the Memphite region, or Upper Egypt. It may however be noted that the marl clay vessels are jars represent only a few types (fig. 8.d–e), indicating that imports were rare and only concerned a limited range of products.

The repertoire of pottery made from Nile clay can be divided in six groups: bowls and plates (a category grouping together all open forms for food consumption and preparation); pots (small closed containers); hole-mouth jars (medium- to large-sized closed forms reserved for storing or cooking foodstuffs); basins (large thick-sided open forms); jars (medium-sized forms with neck); and bread moulds.

Among the bowls and plates, the shallow forms with direct rim and a smoothed or burnished surface are by far the most common (fig. 7.a–b). These are ordinary vessels for everyday life, extremely common on all sites from the late Predynastic; as such, they provide very little chronological information. The same applies to the spouted bowls (fig. 7.c), as well as the rough platters found in large numbers within domestic or funerary contexts from the 1st Dynasty (fig. 7.d–e).[30] The carinated bowls (*Meidum Bowls*) provide very good dating criteria (fig. 7.k). This type of bowl emerges in the 2nd Dynasty, but its use remained limited and confined to funerary purposes until the late 3rd Dynasty; only in early 4th Dynasty do they appear significantly in domestic assemblages.[31] The Level 1 *Meidum Bowls*, with their deep form, high carination and everted rim are characteristic of the earliest types (they would become more shallow after

29 Concerning the funerary assemblages from the Memphite area: Dashur (Alexanian 1999; Alexanian et al. 2006; Alexanian, Bebermeier, Blaschta 2012; Kopp 2006), Abusir (Barta, Coppens, Vymazalova 2010), Abu Rawash (Marchand 2009). Regarding the pottery from settlement contexts: Kromer 1978, Rzeuska 2014. As for the settlement assemblages from the Nile Delta: Bouto V–VI (Köhler 1998; Hartmann 2007), Mendes IV (Adams 2007; Adams 2009), Tell el-Farkha 7 (Jucha 2011), Tell el-Murra (Kazimierczak 2014). In Upper Egypt: Elephantine VII–VIII (Raue 1999), Elkab CS2-1 (Hendrickx, Eyckerman 2009; Hendrickx et al. 2016).

30 Adams 2009, p. 165, fig. 39.14,17; Hartmann 2012, fig. 16.e–f; Op de Beeck 2009, fig. 3.2.

31 Op de Beeck 2004, pp. 267–268, fig. 3.1–11; Op de Beeck 2009, pp. 72–73.

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the middle of the 4th Dynasty).[32] Likewise, the internal lip bowls are attested in the Lower and Upper Egypt assemblages from the 2nd Dynasty (fig. 7.k). However, from the early 4th Dynasty they were more opened-out and the internal lip is lower on the side (fig. 7.j).[33] Inversely, the restricted bowls found in Level 1 assemblage have their inner and outer surfaces burnished using a distinctive technique (fig. 7.g), applied in horizontal or oblique stripes with a tool of which the traces are still visible on the surface of the vessel. This "Stroke polished" decoration became less common from the late 3rd Dynasty, and ceased to be used from the 4th Dynasty, when the bowls with this type of surface treatment disappear in favour of the *Meidum Bowls*.[34] Although a few examples are present in Level 1, these types of bowls are more frequent in Level 2, while the opposite is the case for the *Meidum Bowls* (fig. 7.f, h). This is one of the main arguments for dating Level 2 to the 3rd Dynasty and Level 1 to the 4th Dynasty.

The pots (fig. 8.h) and large storage vessels, whether hole-mouth jars (fig. 7.m) or basins (fig. 7.l, n), provide little chronological information. Most are generic forms that continued from the Predynastic without any significant variation. It can be noted that similar forms are found in other locations in the Delta dated between 3rd and early 4th Dynasty.[35] The same is the case for the jars that essentially derive from Predynastic forms that scarcely changed between the late 1st and the mid-4th Dynasty (fig. 8.i). Significant variations, however, may be observed in the general category of beer jars that group together all rough fabric vessels of which the surface is smoothed in the upper part and generally scraped in the lower.[36] They may be divided into three types: shouldered beer jars with lip rim (fig. 8.a); those with a direct rim (fig. 8.b); and collared beer jars (fig. 8.c). These three types are abundantly present in the domestic and funerary assemblages from the Early Dynastic until the early Old Kingdom, but their frequency varies depending on the periods.[37] The jars with a lip rim were in use in the Delta sites from the 1st to the 4th Dynasty; however, from the 3rd Dynasty onward their frequency decreases. The direct rim type appears in the 2nd Dynasty, is less frequent by the 3rd Dynasty, but becomes the most common form between the 3rd and 4th Dynasties. As for the last type, it also appears in the 2nd Dynasty, but disappears in the course of the 4th Dynasty. The high proportion of beer jars with direct rim in Level 1, their poor representation in the previous level, as well as the limited number of specimens with direct rim, match the general trends observed between the 3rd and 4th Dynasties.

Two other categories of jars support an early 4th Dynasty dating for Level 1. These are the jars with a strip rim slightly protruding inwards (fig. 8.f), and the squat jars with a thick trapezoidal rim (fig. 8.g). Although only few in number in the Tell el-Neshed assemblage, both types of vessels are frequently found in funerary and domestic assemblages of this period.[38]

32 In particular Hendrickx, Eyckerman 2009, p. 15, fig. 16; Raue 1999, pp. 185–186; Adams 2009, p. 168, fig. 39.1–5; Kazimierczak 2014, p. 123, fig. 45.15–16.

33 Hendrickx et al. 2016, p. 265, fig. 10. This kind of bowl was no longer in use after the 4th Dynasty (Raue 1999, p. 183).

34 Raue 1999, p. 183; Hendrickx et al. 2016, p. 267.

35 Hartmann 2016, figs. 28.8, 32.17; Köhler 1998, pl. 1.5–6, 19.4–6, 22.6, 39.2–3; Adams 2009, fig. 40.14–15; Kazimierczak 2014, fig. 48.10–12.

36 Faltings 1998, pp. 221–222, fig. 16.

37 Raue 1999, p. 176; Op de Beeck 2009, pp. 71–72; Hendrickx et al. 2016, pp. 271–272.

38 In particular at Mendes (Adams 2009, fig. 40.13) and Tell el-Farkha (Jucha 2011, p. 967, fig. 4.5–6), but also Dashur (Alexanian, Bebermeier, Blaschta 2012, fig. 19.p–t), Abusir (Barta, Coppens, Vymazalova 2010, fig. 2.5.4) or Elkab (Op de Beeck 2009, fig. 4.3).

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Concerning the bread moulds, an evolution comparable to the beer jars is noticeable for the transition between the 3rd and 4th Dynasties. The shallow forms (fig. 8.k) are characteristic of the first two dynasties, whereas the deeper, narrow examples (fig. 8.j) are typical of the Old Kingdom.[39] The transition between the two types occurred gradually so that both types still coexisted in early 4th Dynasty. Only in the mid-4th Dynasty did the shallow forms stop being produced.[40] At Tell el-Neshed most of the bread moulds from Level 2 are shallow, supporting a date prior to the 4th Dynasty. On the contrary, the narrow, deep forms are conspicuous in Level 1, just as they are common in early 4th Dynasty contexts. A further point in favour of this dating concerns the bread baking dishes (or *dokka*), which are present in Level 1 (fig. 8.l), whereas they are not attested on the other sites prior to the transition between the 3rd and 4th Dynasties.[41]

Apart from evidence for the chronology of the occupation, the ceramic finds provide us with little information about the site's economy. The repertoire includes a large range of vessels associated with the most varied subsistence activities (storage, preparing and consuming foodstuffs, beer storage, etc.). No container type appears in quantities significantly higher than others, which might have indicated that the community specialised in producing specific commodities such as cereals, beer, or wine. It is just as difficult to understand how the village fitted into the regional economy through the ceramics. Inasmuch as it still is not possible by means of the fabrics to distinguish local production from those of other sites in the Delta, it cannot be established whether the community was essentially self-sufficient or consumed goods that came in part from other regional centres. Judging by the small quantity of marl clay vessels, it seems at least that its long-distance imports were limited. The extent of its contacts with the Memphite region, and so with the royal administration, cannot be inferred from this small proportion of marl clay vessels, as the pottery imported from the Memphite area could just as well be made from Nile clay (and cannot therefore be distinguished from regional productions). Failing a more precise identification of the Nile clay fabric's origins, the ceramic assemblage from Tell el-Neshed, as from the other sites in the Delta, can therefore only provide very little information about their intra-regional exchanges or the extent of the community's dependence on the central power.

39 Hendrickx et al. 2002, pp. 294–295.
40 Adams 2009, p. 174, fig. 41.1–9.
41 Adams 2009, p. 174, fig. 41.10–12.

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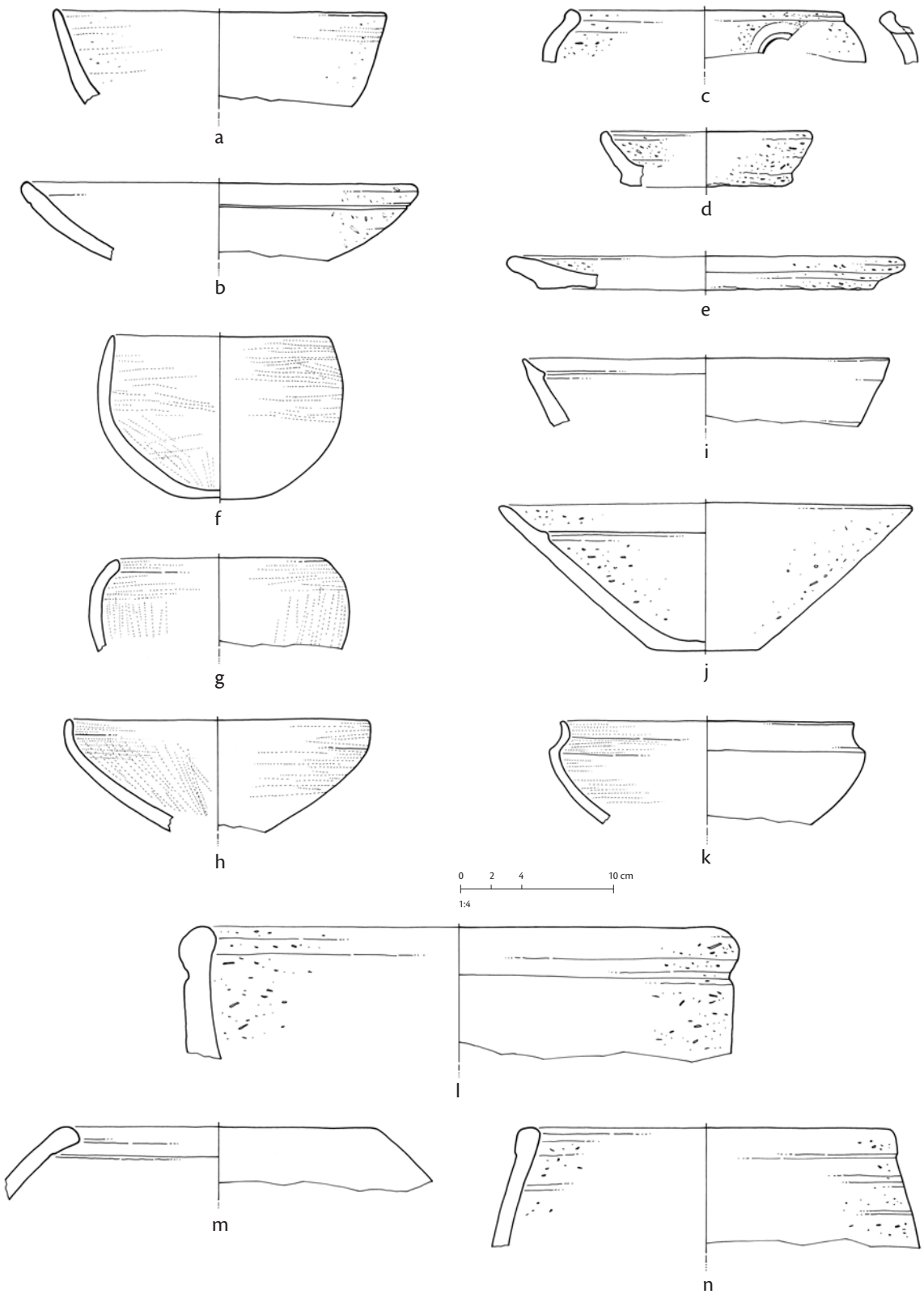


Fig. 7. Pottery assemblage from the early Old Kingdom (drawings J. Marchand, C. Petit).

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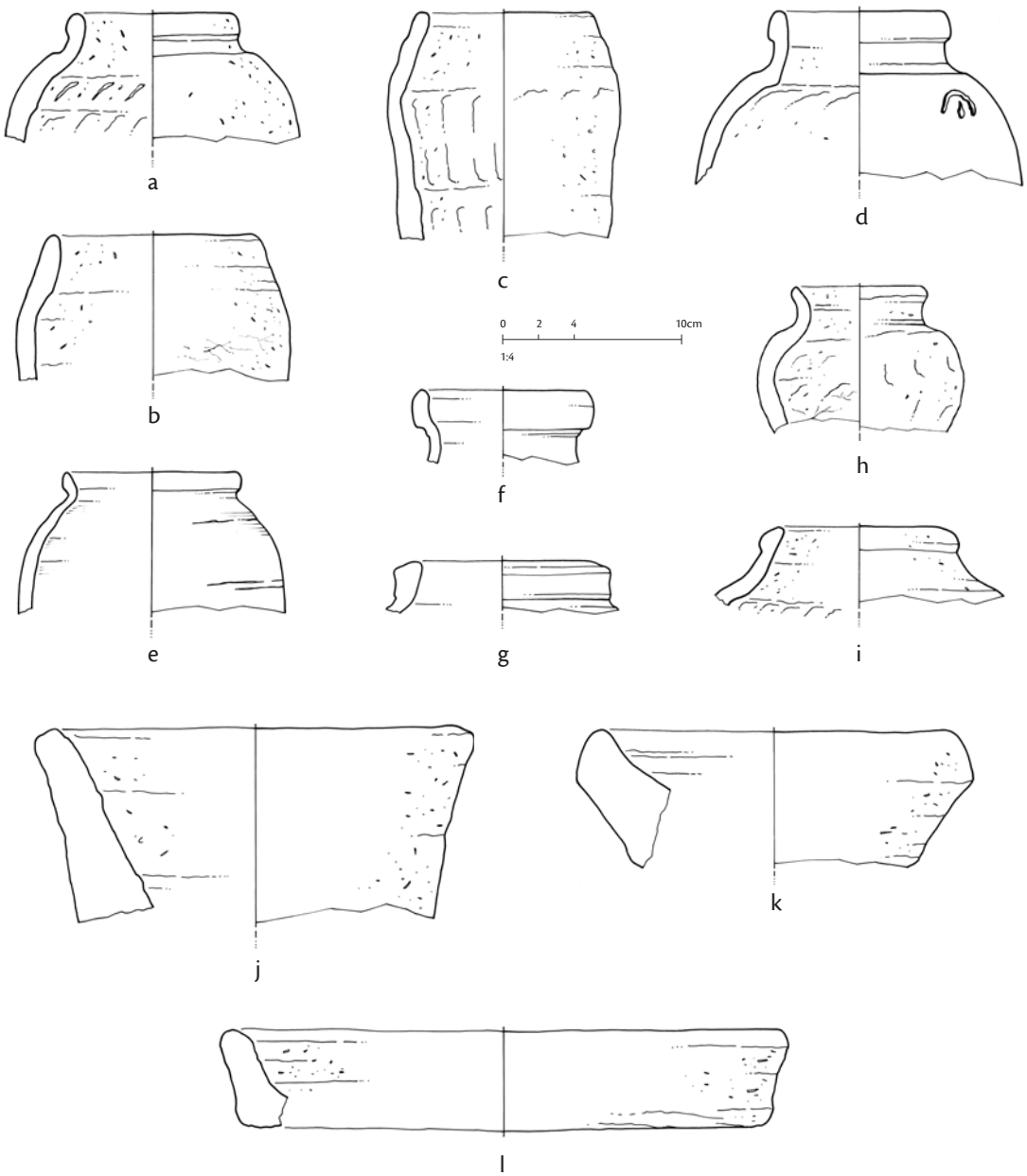


Fig. 8. Pottery assemblage from the early Old Kingdom continued (drawings J. Marchand, C. Petit).

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The lithic industry

The lithic assemblage was essentially a blade industry. It includes 648 pieces, most of which are represented by tools (421).[42] The unretouched pieces comprise of blades (197), flakes (26), and bladelets (4). Varieties (52 %) of fragmented grey semi-opaque to opaque translucent flint were found in a good state of preservation. Quarries and production centres have been identified at the Wadi Sannur, in the Eastern Desert about 200 km south of Tell el-Neshed.[43] Alongside a large number of burnt pieces (40 %), other facies have been identified in very small quantities (< 2 %), which indicate other production workshops. Among these is a beige opaque finely grained flint, sometimes zoned, a light brown opaque flint with concentric zoning and vitreous cores, and a small batch of opaque brown flint blades with dark impregnations.

It therefore appears that all tools were not produced on the spot, but imported in the form of finished tools or blanks ready for use. Indeed, no evidence has been found of on-site production, except for a few flakes of which some are pebbles, along with nine flat foliated flakes from making bifacial pieces. No cores have been found.

Among the considerable number of unworked blades counted, 19 are complete. These blades are all from full debitage, with a triangular morphology overall and regular often convergent ridges. Special care was given to how these products were detached, as is indicated by the ogival form of the proximal part with a small smooth protruding butt. The bulb is barely marked, with an occasional fissure starting from the butt that seems to indicate detachment with a metal-pointed lever. A slight abrasion of the overhang before detachment can be seen and practically all the distal parts are acute. The series corresponding to the Sannur facies conforms to the known and studied productions from north Galala that are made from triangular cores with basilar crests and smooth, very inclined striking platforms.[44] One very characteristic blade from this series stands out due to its dimensions (fig. 9.k), which is particularly thick (7 mm), with triangular morphology, convex edges, two convergent ridges and a rectilinear profile is a candidate for being a "Razor blade" blank. The blade (fig. 9.j), though produced from brown finely grained flint, results from a technology comparable to the Sannur products. With inverse scaled bilateral retouches, it appears to be a scraper in its distal part. Like the previous specimen it has morphology and dimensions close to those of the blades serving as blanks for "Razor blades."

The series of tools is homogeneous in its components and is broadly dominated by the group of segmented blades and sickle blades (344 pieces, i.e. 81 % of the tools). Next, in fewer numbers, come the retouched blades "Razor blades," and the bifacial knives. The remaining types of tools are marginal. However, it is worth noting three pieces made from heated flint and a bifacial sickle that stands out against the rest of the otherwise very homogeneous collection. This burnt piece, with parallel pressure retouches and rectangular in form, is undoubtedly

42 The numbers of the various types of tools is as follows: denticulate blades with gloss (sickle blades) (187), segmented blades (157), retouched blades (31), "Razor blades" (19), bifacial knives (12), borers from blades (4), retouched bladelets (2), scrapers from blades (2), scrapers from flakes (2), circular scrapers (2), retouched flakes (2), bifacial piece (1).

43 Briois, Midant-Reynes 2014, pp. 74–76; Briois, Midant-Reynes, Guyot forthcoming.

44 Briois, Midant-Reynes 2014, figs. 10, 11.

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part of the Neolithic repertoire. This type of tool is known from the late 5th millennium BC Neolithic Fayum and in a triangular form at Merimde Beni-Salame that evolved towards a rectangular form represented by the Neshed piece.[45]

As for the segmented truncated blades and the sickle blades, the Sannur flint facies is largely dominant. The range is completed by other facies, including opaque beige zoned flints. The blanks are calibrated by a double truncation that gives the pieces their rectangular morphology (fig. 9.f). A more limited number of triangular items were also found (fig. 9.h), made to fit into the end of a sickle. The edges are frequently worked with continuous marginal retouches and sometimes with a partial back on the thickest part of the blade. The presence of blackish traces (bitumen) suggests some of these pieces were fitted on the site itself.

These truncated segmented blades constituted the blanks for the sickle blades (fig. 9.a–e); they are not very thick but have regular ridges with a trapezoidal and often very elongated section. The denticulations are deep, regular, direct, or inverse, made from a small retouche used as a fulcrum for detaching a notch by pressure. The characteristic gloss systematically can be seen on the denticulate edge and in rare cases both edges are affected.

The tools called "Razor blades" are pieces with a double rectilinear truncation or double convex front made from thick, regular blades with a trapezoidal, squat section, always thicker at the distal end (fig. 9.l–q). The birth of the bulb very often survives, which proves the whole blade was used in this way. This very special type is well attested in the last phases of the Predynastic and lasted until the Old Kingdom.[46] Of the 19 examples from Tell el-Neshed, 18 present a rectilinear truncation by very regular oblique sub-parallel retouches and only one (fig. 9.q) has a convex double front. This straight front type appears during the 2nd Dynasty and lasts until the 4th Dynasty.[47] The primary function of these pieces remains enigmatic. One specimen (fig. 9.o) preserves a trace of hafting marked by a black deposit at the distal end and a "burin blow" removal.

A series of bifacial knives is made up of fragmentary items, of which the initial morphology was modified by unifacial oblique retouches.[48] Consequently, the width of the knife diminished; however, in so far as the reworking that was to follow the initial shape, the original form may still be determined (a slightly concave back and a convex cutting edge). Certain fragments correspond to the junction between the blade and the tang, a junction defined by a notch that can be clearly seen. In one case the end of the tang, marked by a slight lug, is preserved and in another, a fragment was reworked as a scraper.

The raw materials used to make these knives have various origins. The Sannur facies are found, along with opaque beige and brown varieties, but apart from these three large groups, the usual tool kit is poorly represented. There is a scraper made from a flake, a beautiful flat triangular side scraper, and a number of less significant retouched items. Several high-quality scraper fragments are also present.

45 Caton-Thompson, Gardner 1934, pl. X.36–41, XXII.15, 17, XXX; Eiwanger 1992, fig. 15. At the beginning of the 4th millennium BC, rectangular specimens were found at Maadi (Rizkana, Seeher 1988, pl. 73), while a single triangular specimen has been evidenced at Badari (Brunton, Caton-Thompson 1928, pl. XXVI–XXIX).

46 Midant-Reynes, Briois 2014, pp. 199–200.

47 The double rectilinear truncation specimens appear in level V of Buto (Schmidt 1992, p. 36, fig. 4.4).

48 Midant-Reynes, Briois 2014, p. 200, fig. 6.

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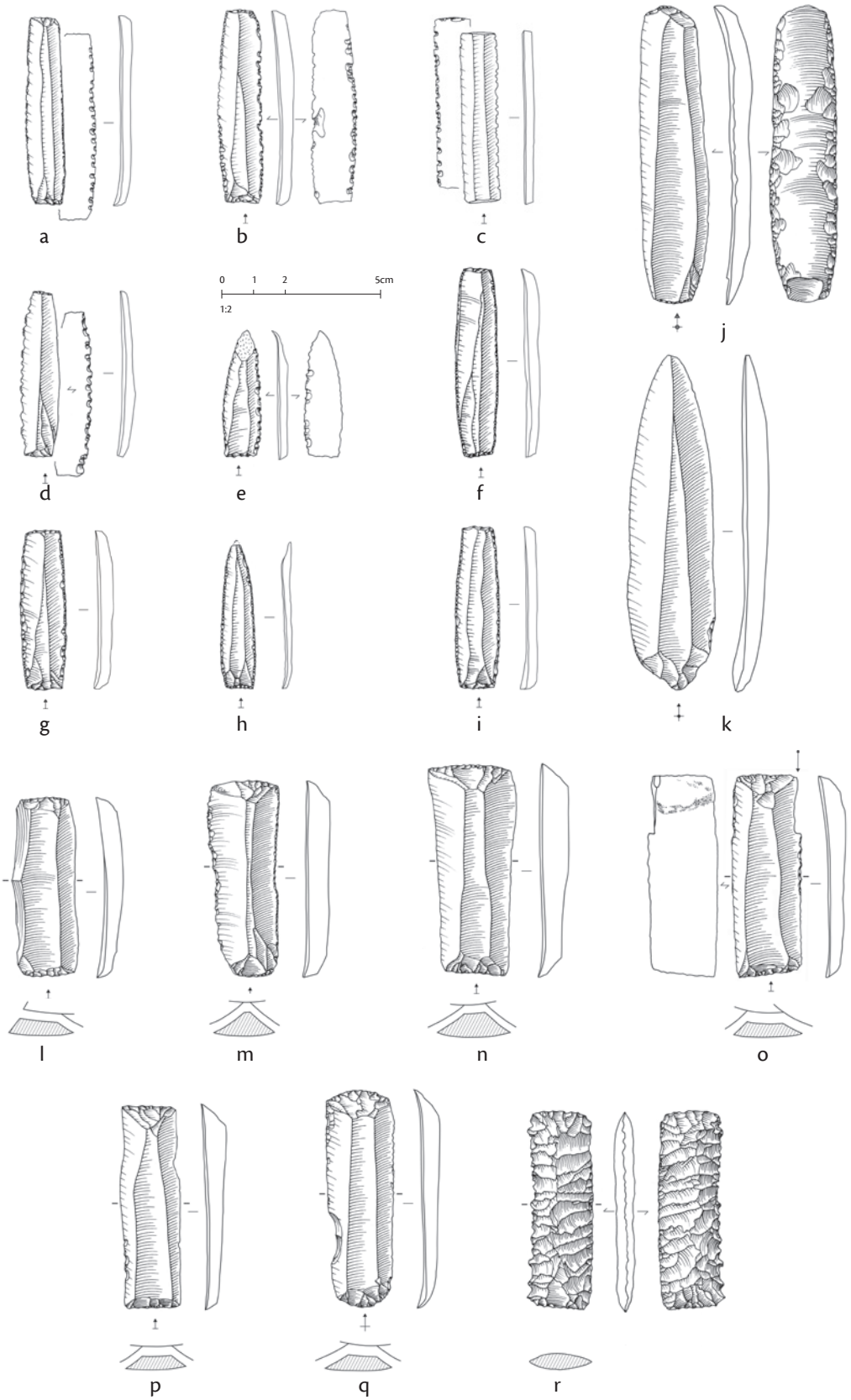


Fig. 9. Flint tools assemblage from the early Old Kingdom (except r: Neolithic) (drawings F. Briois).

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The Tell el-Neshed lithic assemblage constitutes a good reference collection for 3rd and 4th Dynasty production. As a whole, the sample consists of various specialised productions, knapped elsewhere and linked to the quarries and workshops of North Galala, indicated by their facies and techniques used. At the heart of the production is a blade industry, clearly focused on making tools for agricultural purposes, as seen by the sickle items made from segmented blades. The tools termed "Razor blades" concord with a typo-chronological point of view. The bifacial knives are recurrent in this kind of assemblage, but their fragmentation makes it difficult to classify them among the types that are known. The very high proportion of flint tools imported from the region of the Wadi Sannur raises a question concerning supply networks for this raw material, which is not found naturally in the Nile Delta. To understand if one or more distribution circuits existed, this well identified category of flint would have to be traced within other Delta assemblages to determine whether the Sannur productions are so wide-spread in the whole region, which would suggest that other sources were not exploited to the same extent. Nevertheless, the Tell el-Neshed assemblage by itself already offers numerous perspectives for research on how the products were selected and disseminated between the producing establishments of Galala and the consuming centres of Lower Egypt.

TELL EL-NESHED AND THE RURAL ESTABLISHMENTS OF THE NILE DELTA IN THE EARLY OLD KINGDOM

To help interpret these remains and see how the excavations at Tell el-Neshed can contribute to better knowledge of the rural communities in the early Old Kingdom, the economic context and social transformations that occurred during the 3rd and 4th Dynasties have to be considered. In this period new establishments managed by the royal administration were created on the outskirts of the provincial centres in order to respond to the Crown's intention to enhance its presence in the rural zones. This had the consequence of modifying not only the regional economic networks, but also the relations between the local elites and the capital at Memphis. So it matters whether Tell el-Neshed was an establishment connected to a royal institution, or an ordinary village depending on a provincial centre. In the second case it should be asked what the consequences of these reforms by the monarchs of the 3rd and 4th Dynasties on the settlement's economic development may have been, as well as what were the nature and intensity of the links connecting it to the central administration.

Few textual sources concerning how the provinces were organised exist; however, certain passages of the royal annals, royal decrees, and titles of some high officials permit a general picture to be drawn up with regard to the administrative management of rural zones. Contrary to what the monumental nature of the royal construction sites or the omnipresence of the Crown's officials would lead one to believe, they also reveal that the early Old Kingdom was still a formative period during which all the administration's workings were not yet fixed.[49]

49 Moreno García 2013, pp. 85–86; Warden 2014, pp. 223–232. However, this assertion could be challenged by the papyri recently discovered in the Wadi Jarf, which provide evidence of the involvement of the Crown in the management of cereal products from the early 4th Dynasty (Tallet 2017).

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The high officials' responsibilities were neither homogeneous nor clearly defined, any more than were the functions of the various branches of the administration or boundaries of the provinces. As a result, the mechanisms of power are quite often difficult to determine and an uncertain line separated what depended on the royal authority from what depended on the provincial elites.

Management of the rural provinces between royal institutions and provincial centres

Reforms undertaken by the State in the early Old Kingdom to increase its presence in the countryside were mainly based on: the foundation of royal institutions for agricultural and administrative purposes, the appointment of high ranking officials to oversee their operations, and a clientelistic policy regarding the provincial elites.[50] Two institutions had pride of place in this policy, namely the *ḥw.t* and the *ḥw.t-ʿ3.t*. These represented production centres or agricultural domains, placed under the direct control of royal power.[51] Both were territorial units governing several localities and possessing farming units of about 50 ha each (200 *aroures*), forests and livestock, as well as a dedicated contingent of workers. These estates also functioned as administrative centres, governing districts made up of the surrounding localities and the recently created farming units. Particularly numerous in the Delta and Fayoum where arable land was abundant, these institutions thus served as relays for royal authority, while at the same time providing it with regular provisions for construction sites, the royal funerary cult, and the temples maintained by the State.[52]

Among the royal domains there were similarly the *grg.wt* and the *pr.w*. The *grg.wt* were additional agricultural production units that were widespread mostly during the 4th Dynasty.[53] The way these units functioned cannot have been much removed from the *ḥw.wt* and the *ḥw.wt-ʿ3.t,* but they seem to correspond to an earlier phase in the exploitation of the territories directly administered by the Crown. They seem to have been the first establishments to be founded in the Nile Delta, before being replaced by the *ḥw.wt-ʿ3.t* following the reforms by the kings of the 5th Dynasty. The same applies to the *pr.w*, which may have indicated earlier administrative districts. They sometimes appear among the dependencies of *ḥw.wt* or temples, and disappear after the 6th Dynasty when the *ḥw.wt-ʿ3.t* increased in number.[54]

The texts record at least four types of royal estates dedicated to agricultural production in the service of the Crown; however they are not detailed enough to inform us about their differences or how they functioned. The archives of these institutions, which could have

50 Moreno García 2007, pp. 317–321. To a certain extent these reforms continue the foundation of royal domains initiated by the monarchs of the first two dynasties (Engel 2013, pp. 26–35).

51 Moreno García 1998, pp. 46–47; Moreno García 2008; Moreno García 2013, pp. 96–98. The difference between the two establishments is probably a matter of size, the *ḥw.wt-ʿ3.t* being larger than the *ḥw.wt*. See also Moreno García 2005a; 2005b.

52 The strong presence of the royal estates in Lower Egypt and the north of Middle Egypt has led to the idea that these regions were directly managed by the king's administration (Moreno García 1999, pp. 243–245).

53 Moreno García 1996, pp. 123–124, 134.

54 Moreno García 1998, p. 48.

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provided first hand documentation on their sizes and activities, were kept on papyrus and have not come down to us. Failing more precise information on the classification of these establishments, we shall continue to use the generic terms of royal institutions or domains to discuss the archaeological documentation.

The administration of the granaries provides another source of information about the economy of the rural provinces. Three expressions in particular are associated with the storage facilities and may relate to the installations discovered at Tell el-Neshed: *šnw.t* and its dual *šnw.ty* and *mḫr*.[55] The term *šnw.t* collectively describes the silo, a group of silos, and the institution responsible for managing the food reserves. The dual *šnw.ty* is more frequently attested in the titles of the high officials of whom many occupy important positions; therefore defining the institution controlling all national granaries. The word *mḫr* appears as early as the Early Dynastic period and describes a structure for storing cereals and plants for fodder. It is less used than the term *šnw.t* and appears to have more to do with the rural environment as it is mentioned several times in close relation with fields and threshing floors.[56]

The *šnw.t* and the *mḫr.w* are well attested in the texts and iconography; they are much less so in archaeology. Two sets of silos which, owing to their size, may be thought to have been used for a significant number of people, are known for the period. The first was uncovered in the village of the workers near the pyramid of Menkaure at Giza.[57] It is a large building with an enclosed courtyard, containing a granary consisting of at least two ranks of five adjoining silos.[58] They are surrounded by a parapet that was probably used to fill them through an opening in each of their top sides. Given its location there can be little doubt this granary was directly managed by the royal administration. This is not necessarily the case for the second earlier example found at Elkab, dating to the 3rd Dynasty. The arrangement is different here: four silos are constructed side by side in a central courtyard, while the others are grouped in pairs in what seems to be closed spaces.[59] Fifteen silos were discovered, but as the extent of the building has not been found, it is possible that it may contain others. Unlike the Giza building, the building of Elkab was not exclusively used for storage. It also contained several basins lined at the bottom with carefully arranged potsherds covered with clay to make them watertight. What their function was is uncertain, but several grinding stones and grinding implements have been found in the courtyard, which indicate that at least a part of the grain was processed on site.

55 PAPAZIAN 2013, pp. 59–66.

56 BATS 2017, pp. 159–166, 172. The author proposes seeing in the term *mḫr* a granary (storage in ventilated atmosphere) the rural communities used to store their crops and the fodder for their animals, as opposed to the term *šnw.t*, which would designate the silos (storage in confined atmosphere) present in palaces, temples and urban settlements.

57 LEHNER 2002, p. 62. See also LEHNER 2007, pp. 39–47.

58 The existence of a third rank is suggested by the start of another silo joined to the south. The silos measure 2.6–2.7 m in diameter. Their upper sections are missing and no observation has been published as to how they were emptied via their lower sections. It should be noted that isolated silos smaller in size (about 1.5 m in diameter) were also constructed in the neighbouring residential quarter (LEHNER 2002, pp. 65–66). This observation agrees with that formulated at Tell el-Neshed and leads one to think two forms of silos existed depending on whether they were used for community or domestic purposes.

59 HENDRICKX, EYCKERMAN 2009, pp. 4–10, 17 for the architectural elements and finds mentioned below. The silos measure between 1.2 and 3.5 m in diameter, but the old excavation documentation does not provide a detailed description. According to the photographs they must have been constructed in a single line of stretchers and been preserved up to a maximum height of about 80 cm. No information is available concerning their contents or opening system.

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The state of conservation of the silos at Elkab and Giza does not allow a comparison of the total volume of commodities that could be stored on each site. However, it may be pointed out that the Elkab building was not organised to meet the same yield requirements as is apparent at Giza, and that it was home to more varied activities. The question is to know whether this is indicative of a difference of status between the two buildings; one having been constructed and run by the central administration for a precise purpose, the other being the storage site of a provincial community administered by a local authority. A group of seal impressions discovered at Elkab could have given a clear answer to this question.[60] However, the titles they contain are difficult to interpret.

The seal impressions do not enable their holders to be connected with certainty to the central administration, which well illustrates the murky boundary between the bureaucracy of the State and provincial administrative authorities at that time. Five out of the 69 seal impressions found bear the title of *sḫḏ Nḫb* (inspector of Nekheb), associated with individuals who are also attested at Abydos and Elephantine. Three interpretations have been proposed on the basis of this title: the first concludes that the granary was supervised by members of the central administration on detachment in the province to monitor the provisioning of the temple of Elkab (thus considering the granary as a local branch of the royal administration).[61] The second confirms the role that the Crown played in the management of provincial resources, but it stresses the necessary collaboration with dignitaries of the provincial centres that were not necessarily attached to the central administration.[62] The third suggests that the royal authority was not directly involved in running the granary, mainly because the locally produced seals do not bear royal names and the titles of the individuals are not the same on the documents from Elkab, Abydos, and Elephantine.[63]

This example shows two points that have to be borne in mind when studying the occupations of this period. Even in the very rare cases in which epigraphic documents are associated with remains, they are often ambiguous and insufficient to prove any dependency between the site and the central administration, any more than they can rule out the intervention of local dignitaries without any official functions. The part played by these provincial elites is difficult to assess for lack of documents concerning them, but their involvement in running the territory was evidently still important in the early Old Kingdom. This can also be seen at Elephantine, where an important administrative complex constructed in the 3rd Dynasty has yielded abundant epigraphic documentation,[64] revealing the establishment of a complex network of agricultural domains, warehouses, and outposts to assure the subsistence of the town and ship commodities to or from the capital. Furthermore, it records negotiations between the royal administration based in the town and the dignitaries of the neighbouring centres, particularly to obtain certain commodities from the surrounding villages.[65]

Two spheres of power, one royal, the other local, coexisted and cooperated to manage the kingdom's resources. Therefore the idea of a centralised economy in which the State played

60 Regulski 2009, pp. 31–39.
61 Regulski 2009, pp. 43–44; Papazian 2013, pp. 63–65 reads inspector [of the granary] of Elkab: *sḫḏ [mḫr] Nḫb*.
62 Moreno García 2013, pp. 90–91.
63 Warden 2014, pp. 263–264.
64 Seidlmayer 1996, pp. 119–121.
65 Moreno García 2013, pp. 89–90.

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the main role has to be abandoned. Firstly, because there is no doubt that the State was still incapable of supervising every aspect of economic life throughout its territory. Under the 3rd and 4th Dynasties administration of the provinces was mostly in the hands of members of the royal family who lived and were buried in Memphis.[66] Only after the reforms of the 5th Dynasty were administrators of the provinces obliged to reside on the lands for which they were responsible. Until this period, the Crown exercised an indirect and distant supervision of the provinces through an administration that exercised limited local influence, and subsequently little awareness of the local issues.[67]

Secondly, because the provincial elites had enough economic power to pay wages and commission works. This is indicated by the absence of standardisation throughout the territory for the measures used for bread and beer, which are fundamental markers of economic practices since they were the wages paid to the workers of farms, workshops, or construction-sites.[68] The variations observed from one region to another suggest that local commissioners, and not the royal administration paid the wages, otherwise the measures would have been the same throughout the kingdom. If the provincial elites were able to remunerate workers with bread and beer, they consequently controlled the means for producing these commodities. They therefore possessed resources that enabled them to maintain, independently of the Crown, their own patronage networks.

Lastly, the taxation system in the early Old Kingdom was not sufficiently developed to assure regular revenues for the State, or to control all the fields of production. During the 3rd and 4th Dynasties a census of cattle and gold did exist, but these practices were more ideological in nature than purely economic. The agenda, above all, was to assert the Crown's control over ostentatious wealth, whereas the basic means of subsistence—such as the fields, cereals, linen, flocks of sheep, goats, or pigs—were not subjected to any census.[69] The State's involvement in the economy of the provinces therefore appears to have been limited, just as was the volume of commodities the central administration came to manage through taxes.

These few observations indicate that the prevailing system in the early Old Kingdom was not a redistribution economy, in which all the provinces' agricultural or artisanal production converged towards the central administration before being redistributed on a national scale. The State was unquestionably an economic agent and managerial authority of the highest importance, but it was not the only one. The provincial centres had a position that was just as important, owing to their elites' economic potential and their ability to manage local affairs that could not be managed from the capital (irrigation, harvest, construction or renovation of the infrastructures, etc.).[70] This is why the elites were able to maintain a certain form of autonomy regarding the central power that had to come to terms with them in order to consolidate its support in the rural provinces.[71] However, the creation of the royal domains certainly called the authority of these elites into question by depriving them of a part of their economic power

66 Warden 2015, pp. 471–472; Moreno García 1999, pp. 236–237.
67 Warden 2014, pp. 222–226.
68 Warden 2014, pp. 246–252.
69 Warden 2015, pp. 471–478. Only in the late Old Kingdom was a regular tax system set up which applied to all the provinces.
70 Moreno García 2013, pp. 85–87; Warden 2014, pp. 233–234, 238, 242–243; Warden 2015, p. 489.
71 Moreno García 2010, pp. 39–44.

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and by interfering with their networks of clients. The king's representatives were obliged to form alliances in order to convince them that it was in their interest to collaborate with the royal power rather than oppose it. This policy, based on mutual interests and probably a few coercive measures, succeeded in at least theoretically imposing the royal authority throughout the provinces, while at the same time maintaining the privileged status of certain local potentates. These local potentates could then act as mediators between the royal administration and the local inhabitants in carrying out specific tasks without having a well-defined position in the official hierarchy.[72]

But at the same time, the central power needed to secure direct control of certain resources indispensable for maintaining the royal institution. It therefore selected a few strategic places suitable for providing it with enough goods and workforce to successfully complete its highly ideological architectural programme, to mount expeditions, and to maintain the funerary cult of the kings or the cult of the divinities connected to the Crown. The royal estates were founded for this purpose. On the other hand, the management of the rest of the province seems to have been left in the care of the local elites, who entertained relations with the royal administration of an intensity that varied depending on each individual's connections with the court at Memphis.

The strategic interest of Elephantine, being the point of control for routes to Nubia, is obvious and explains the foundation of a royal institution in the 3rd Dynasty. The Delta is equally strategic, since this vast agricultural region close to the capital could supply foodstuffs and workers for the regime's major constructions. It is hardly a coincidence that many *ḥw.wt-ʿ3.t* were founded there during the 4th Dynasty and that their number steadily increased until the end of the Old Kingdom.

Bearing this in mind, in what way can archaeology help improve our understanding of how the central administration and the local potentates interacted; in what manner were they involved in the regional economy, and how rural space was organised in the early Old Kingdom?

Several lines of research are becoming apparent, including the royal administration's actual investment in the provinces and its real influence on the local economies. The number of royal domains in relation to the number of villages and provincial centres, as well as their geographic distribution, may provide answers about the extent to which the Crown sought control over the provinces' economic networks, in appropriating some commodities rather than others. To do this, it would have to be determined whether each site known was either: a hamlet or village on the outskirts of a large agglomeration producing a large part of the commodities necessary for its subsistence; a centre of some importance administering a vast network of interdependences on a regional scale that had a wide range of agricultural and artisanal products for the local market and export; or a royal institution recently created in the countryside.

Studies on housing and production systems are indispensable approaches here. From the domestic area up until the organisation of the urban or village pattern, the spatial distribution of workshops and storage areas may indicate whether the installation of the site was planned, or if it resulted from the progressive addition of new buildings according to the needs of the community. The distribution of activities, and the potential dominance of some for the production of cereals or livestock, makes it possible to ascertain whether the economy of a site

72 Moreno García 2013, pp. 93–95.

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was directed towards local consumption or if its aim was to produce a surplus for an external client, which may have been the royal administration.

How the royal domains functioned may also be investigated on this basis, providing information about interactions between central administration and regional centres. Indeed, one may wonder whether they functioned autonomously or if their maintenance was dependent on communities within their vicinity. Rations required for workers' subsistence could be deducted from the estate's production before it was sent to the capital or a neighbouring town controlled by the Crown. However, if it is understood that in principle these domains were intended for the intensive production of limited types of commodities from agriculture, stock-rearing, or craft manufacture, their economic specialisation would have made them dependent on external production centres for the other categories of goods needed for daily life and the maintenance of the means of production. This may mean that the central administration directly provided the commodities they did not produce themselves, such as flint or copper tools for working in the fields, ceramic vessels for storing food, or animals for ploughing and transport.[73] It may also mean that in reality these domains' production was much more diversified than the texts proclaim, and that each was provided with workshops that enabled the supply of goods needed for them to work autonomously.

There is also a third possibility: that these estates were not autonomous. They may have planned a substantial part of their production for the local market so as to acquire their means of production and subsistence from the regional centres. If such was the case, the surrounding sites must have benefited from this new demand and we should then have to assess the extent to which the founding of royal estates may have influenced the development of the local economies.

Lastly, archaeology may inform us about the successive implementation stages with regard to the territorial reforms undertaken by the 3rd and 4th Dynasties monarchs. These reforms certainly did not affect all the establishments in the Delta at the beginning of the Old Kingdom. The royal domains were established progressively, reign after reign, and control by the royal administration increased in proportion to the number of localities administered by the *grg.wt, ḫw.wt*, and *ḫw.wt-ʿ3.t*. The diachronic vision offered by archaeology will provide the possibility of evaluating, site by site, from what period the first knock-on effects of the royal reforms on the daily life of the populations become apparent. By highlighting significant changes in the habitat or in the provincial establishments' modes of production between the Early Dynastic and the middle of the Old Kingdom, this vision may provide more extensive information about how the territorial policy under the 3rd and 4th Dynasties may have modified the economic and social organisation of the rural populations.

The issues relating to settlement sites in the early Old Kingdom are thus numerous. However, very few excavations have been dedicated to exploring such sites and it is still difficult to explore these various lines of research due to the dearth of current documentation.

73 Such a system of direct provision can be observed in the 4th Dynasty in the establishments of the Wadi Sannur and Jarf, though in a very different context (Briois, Midant-Reynes 2014; Tallet, Marouard 2016; Guyot 2018b). These were base camps for expeditions in desert zones, which rules out any possibility of local supplies, unlike in the Delta.

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The limited contribution of archaeology

In the whole of Egypt fewer than some twenty sites are witness to the organisation of urban and village spaces in the early Old Kingdom.[74] Not even Memphis the capital, of which practically no vestige has been found, is listed among them. While more settlements have been excavated in Lower Egypt, we still know very little of matters such as how the territory was occupied, the hierarchy of the establishments, or the location of the toponyms mentioned in the texts. Thus, according to surviving textual information, large centres in the Nile Delta such as Mendes, Bubastis, or Sais that we know were occupied from the Predynastic Period, continued to play an important role during the early Old Kingdom. However, the remains that have been discovered are not sufficient to reconstruct their urban planning, and provide little information on the extent of their economic power or on the part they played in managing the surrounding country.

Located on the western fringe of the Nile Delta, Kom el-Hisn has been interpreted as a royal domain whose main function was to produce livestock for the major construction sites of Giza.[75] Although some documents refer to a "*ḥw.t* of the cow" located in the area, such an interpretation is nevertheless anything but certain due to the lack of textual evidence found *in situ*. The site was probably founded in the 4th Dynasty, but excavations have concentrated on the 6th Dynasty occupation. These remains are therefore slightly later than those discovered at Tell el-Neshed. Nevertheless, it is one of the very few Old Kingdom settlements excavated to date and as such is relevant to the current discussion. The housing consisted of several adjoining mud-brick buildings, surrounded by large open areas and organised in approximately twenty rectangular rooms.[76] Each room is provided with either storage facilities, ovens or heaths, installations for processing grain; or a knapping workshop for sharpening flint tools. The activities were therefore distributed in space: well defined spaces were reserved for storing cereals, preparing meat, or for grinding grain right next to kilns in which the bread was going to be baked. Other areas were used for maintenance, while the exterior contained large oblong structures, possibly used as enclosures for livestock. All activities complemented one another and formed a functional unit dedicated to the preparation of foodstuffs. This is clear evidence for planned production management, demonstrated by the organisation of these structures.

In the western Delta, Buto was a regional centre of great importance during the Early Dynastic Period; however, evidence of its development during the 3rd and 4th Dynasties is scarce.[77] It would seem that the site was abandoned during the Old Kingdom and was not to be reoccupied until the Third Intermediate Period. In the south-west part of the tell, several large pits are the only indication for marginal activity between the late 2nd and the 3rd Dynasty.[78] Occupation seems to have moved north-west of the tell into a zone less inhabited during Predynastic times. At this place drill coring has revealed deposits over 5 m thick, corresponding to an occupation that could be dated from the late Predynastic to the early Old Kingdom

74 For a summary on the issue see most recently Moeller 2016, pp. 113–116, 161; Malecka-Drozd 2014, pp. 57–58.
75 Wenke et al. 1988, pp. 12–17; Wenke, Brewer 1996, pp. 277–278; Redding 1992, pp. 104–106.
76 Cagle 2003, pp. 164–165, 251.
77 Hartung 2008, p. 1206.
78 Way 1997, p. 159.

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(the small size of the potsherds from the auger drill has prevented a more precise dating).[79] The excavations carried out in a single season have revealed tombs and brick walls dated to the Third Intermediate Period.[80] These features were built on Old Kingdom structures that could not have been excavated before the end of the season. It is therefore difficult to have a clear idea of what the occupation at Buto contemporary with Tell el-Neshed might have looked like. While it cannot be ruled out that the site still had a certain importance on the regional scale, Buto appears nonetheless to have been by this time in a phase of decline.

Besides Kom el-Hisn, the other major centre of this period known in the western Delta is Sais. Here the archaeological evidence is even smaller than for Buto, since the early Old Kingdom levels have not been reached thus far: their existence is indicated only by a few potsherds from trial trenches and residual finds.[81]

In the eastern Delta, four sites dated to the 3rd and 4th Dynasties have been excavated. However, neither Mendes nor Tell Ibrahim Awad can be strictly speaking considered settlement sites.[82] Occupied from the middle of the 4th millennium Mendes increased its importance under the 1st Dynasty and steadily developed throughout the Old Kingdom.[83] The excavations conducted close to the great naos revealed a continuous stratigraphy from the Predynastic Period through into the First Intermediate Period.[84] West of the court of the great naos, two early Old Kingdom mud-brick buildings have been exposed. They were equipped with basins, pits lined with clay, and hearths. These installations associated with artisanal practices should probably be related to other installations for making bread and beer located 20 m further south.[85] All associated workshops adjoined an imposing brick platform constructed between the late 2nd and the early 3rd Dynasty, and as such, must have worked with it. This complex has been interpreted as a cultural centre, containing at its centre a chapel resting on the brick platform emphasising its monumental aspect, with workshops underneath that produced commodities needed to maintain the cult.[86] Owing to its size, it has been mooted that this project could not have been achieved without the Crown's support, which would imply that the breweries and bakeries of Mendes were built and supervised by a royal institution. Nothing proves, however, that it was the royal administration, rather than local elites, who subsidised the construction and maintenance of the religious complex (if it actually was a temple). Nevertheless, Mendes provides elements of comparison for the storage installations found at Tell el-Neshed. Apart

79 HARTUNG et al. 2009, pp. 179–181, fig. 31.

80 HARTUNG et al. 2009, p. 87.

81 WILSON 2011, pp. 185–187. At Quesna the discovery can also be mentioned of an isolated 3rd Dynasty mastaba in the Late Period settlement, which implies that an early Old Kingdom occupation was located nearby (ROWLAND 2011, pp. 12–14).

82 Tell Basta must also be mentioned; a large architectural complex has been discovered here (EL SAWI 1979, pp. 74–75, fig. 156b). It is quite obviously an administrative building, designed first of all in a square of 28 × 28 m, and including about thirty rooms served by a complex system of corridors and open spaces. In one of these open spaces in particular, nine silos were aligned of a size similar to those found in the granary of Giza. The publication gives an overall Old Kingdom dating for this architectural complex. Nevertheless, among the pottery assemblage are shallow *Meidum Bowls*, which lets the dating be narrowed to the 5th–6th Dynasties (EL SAWI 1979, fig. 159, no. 1826). As this building is later than the last occupation of Tell el-Neshed and is related to issues connected to the territorial reforms instituted after the 4th Dynasty, it will not be discussed here.

83 REDFORD 2010, pp. 18–40.

84 BREWER, WENKE 1992, pp. 194–196; ADAMS 2007, pp. 85–101.

85 ADAMS 2009, pp. 159–163.

86 ADAMS 2009, pp. 199–200.

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from these installations in the court of the naos, and the elite cemetery established nearby after the 4th Dynasty, nothing is known about the town of Mendes in terms of its extent or urban planning.

The same pattern is found at Tell Ibrahim Awad. A trial trench opened in the Middle Kingdom temple has revealed several superimposed and staggered mud-brick buildings dating from the late Predynastic to the 4th Dynasty. The 4th Dynasty structures take the form of a rectangular building comprising of two rooms bordered by a thick enclosure wall, and associated with a courtyard and an additional building, still unexplored.[87] In the building there was a small brick platform, four compartments partitioned by low stone walls, and a large number of vessels thought to be used for ritual practice (large spouted bowls, offering stands, one silver bowl), as well as a small number of faience figurines. A second deposit of the same nature has been discovered behind the building, in the narrow corridor separating it from the surrounding wall. The presence of both deposits, which have been interpreted in one case as a foundation deposit, and in the other as a ritual burial of ritual vessels after use, has served as an argument for interpreting this structure as the chapel of a first temple just underneath the Middle Kingdom temple. While this interpretation is open to discussion,[88] the fact remains that the very special composition of the ceramic assemblage indicates that this building was not used for domestic purposes. It is therefore hardly likely to provide sufficient information about the settlements of the Nile Delta in the early Old Kingdom. In the temple's vicinity vestiges of a small number of badly eroded buildings dating from this period have been recognised, but not published. As with the case of Mendes, nothing is known about the urban fabric surrounding the temple, or of how the centre of Tell Ibrahim Awad fitted into the regional economy.

Consequently, only Tell el-Farkha and Tell el-Murra can serve as comparisons with Tell el-Neshed, as they can provide us with enough information about the rural communities of this period. Unfortunately, Tell el-Farkha is in the same situation as Buto during the early Old Kingdom: after a period of prosperity during the late Predynastic Period, when the site entered a phase of decline from the end of the 1st Dynasty to be definitively abandoned by the late 3rd Dynasty.[89] Remains of the early Old Kingdom found at Tell el-Farkha are those of a declining community that by this stage occupied only the central kom and used the eastern

87 Van Haarlem 2002, pp. 106–107; Eigner 2000, pp. 22–29. See also Bietak (2010, pp. 66–67, fig. 2) for a discussion about a possible Southern Levantine influence on the plan of the building.

88 A discussion about this building's function goes well beyond the subject of this article, but several objections may briefly be made against this interpretation: the edifice was obviously part of a larger complex of which neither the extent nor the general design are known. Without knowing the plans and sizes of the neighbouring buildings it cannot therefore be affirmed that the only part happening to be excavated was the heart of the sanctuary (the chapel). The building's plan is very simple and the access was directly from the courtyard. All religious edifices of this period transcribe the fundamental concept of progress towards the sacred in their plans, expressed through a series of spaces to which access is more and more restricted up till the arrival in the hall of the naos. In the present case, the direct circulation from the exterior is incompatible with the gradation of the ritual spaces. Moreover, the building was reconstructed with little care shortly after its construction; it is much more modest in size than the Middle Kingdom temple and does not follow the same orientation. Consequently, nothing allows a link to be established from one to the other apart from their superposition. Going simply by the archaeological data it might just as well be one of the stores attached to the sanctuary, in which the vessels and implements used during the rites were stored. This would explain the plan's simplicity, the lack of care in laying the brickwork, and the heap of pottery thrown away after use at the back of the building.

89 Chłodnicki, Cialowicz 2002, p. 67; Chłodnicki 2011, pp. 42, 48.

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kom as a cemetery.[90] Despite the extensive excavations on the central kom only a few badly preserved remains of mud-brick structures have been uncovered. Their poor state of preservation does not provide much information about the village's economic or social organisation. The only well-preserved building is a monumental circular structure with a double wall measuring 2 m wide and 12 m in diameter. The presence of such a construction of what might be defensive in nature may reflect a period of troubles. On the east kom the remains from this period amount to a group of silos constructed close to the burial ground in use since Predynastic times. It may not be insignificant that these burials are shallower than those of the preceding periods, and contain hardly any funerary furnishings, suggesting a general decline of the site from the 2nd Dynasty onward.[91]

Consequently, the only site in the Nile Delta to have yielded relatively well preserved remains of an early Old Kingdom settlement is Tell el-Murra. Excavated over a large enough area to give an idea of the organisation of the structures and economic activities in the village, it provides the best comparisons to architecture and installations found at Tell el-Neshed.[92] It is also the nearest site to Tell el-Neshed, as the two establishments are barely 10 km apart. Tell el-Murra was occupied without interruption from the Predynastic Period through into the 6th Dynasty. The 3rd and 4th Dynasties constructions were organised following a north-west, south-east framework and comprise of three complexes separated by pathways. At least two construction phases can be distinguished without any notable changes appearing to the organisation of the village from one phase to another. The rooms are square or rectangular, unequal in size, and connect through doors with brick or limestone thresholds. Installations are located in various places; however, the distribution of activities is less evident here than at Kom el-Hisn. Silos of about 2 m in diameter indicate that certain rooms were used as stores, while others were used for baking bread due to clusters of bread moulds found on the site inside layers of ash witness. These facilities are notably dispersed about the settlement and did not form rationalised production units as in the case at Kom el-Hisn. They are evidence of domestic management of subsistence activities, in which each household has the installations needed for its daily tasks, but which are distributed differently in each dwelling. In this respect, Tell el-Murra illustrates well an example of a village that was formed over time without prior planning; as opposed to Kom el-Hisn, where the organisation of the installations were thought out from its foundation to enhance the workshops' productivity.

At the conclusion of this review of sites excavated in the Delta, the extent to which the current archaeological documentation is far from settling all issues discussed above. Assessing the ways in which the royal and provincial economic networks fitted together, or the relations between the local elites and the central administration, is still difficult when only seven sites are thus far identified. Two of these sites have yielded the scattered remains of communities in decline (Buto and Tell el-Farkha), and two others only provide evidence of activities connected to the ritual sphere, without much relation to issues concerning settlement (Mendes and

90 Chłodnicki 2012, p. 34; Chłodnicki 2014, pp. 66–68; Chłodnicki, Geming 2012, pp. 112–113; Dębowska-Ludwin 2012, pp. 72–74.

91 The same phenomenon can be observed at Tell el-Iswid. This Predynastic site was abandoned during the 2nd Dynasty, and only a few shards found in later contexts are evidence that a sporadic occupation existed in the Old Kingdom (Marchand 2014, p. 173).

92 Jucha et al. 2014, pp. 102–109 ; Jucha, Bąk-Pryc, Małecka-Drozd 2015, pp. 208–213.

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Tell Ibrahim Awad). Only three sites, Kom el-Hisn, Tell el-Murra, and now Tell el-Neshed, offer a possibility to provide information relevant to these questions. But given that the areas currently excavated within each location amount to only a window of barely 2 000 m², it is a challenge when considering how the provinces were run during the early Old Kingdom.[93] This is a relatively negligible window when we consider the size of the Delta, not to mention the rest of the country, where data from the Upper Egyptian archaeological projects is even more limited. Whilst the first excavation campaign at Tell el-Neshed could not be expected to provide a definitive contribution to these issues, it has at least begun to define certain aspects and brought up important issues for future research.

CONCLUSION

Tell el-Neshed offers the rare opportunity to study a village community during the early Old Kingdom. Studies carried out in 2016 revealed the presence of the well preserved remains of a settlement dating to the 3rd and 4th Dynasties, which should be explored further in order to gain a better grasp of the economic and social organisation of rural establishments in this period. Ultimately, the issue will be to define how the territorial reforms by the royal power were carried out in the early Old Kingdom, and the effect they may have had on the local populations' development.

A number of considerations may already be formulated on this subject: Tell el-Neshed certainly was not a royal institution. Not because of its size or organisation, about which we still know very little, but because the depth of the remains prior to the 3rd Dynasty show the site had not been founded during the early Old Kingdom. On the other hand, nothing prevents the village from having been attached to a *ḥw.t*(*-ʿ3.t*) or a *grg.t* during the 3rd or the 4th Dynasty. Exploration of levels earlier than early 4th Dynasty will teach us more about this question. For the time being, the storage installations uncovered in Phase 1b encourage us to reconsider the dichotomy that often appears in the literature between community management of resources that are in the hands of royal administration or the local elites, and family management organised on the scale of the household.[94] The economic and social life of rural communities was structured by relations between lineages, and by the customary law that governed local relations outside any intervention by an external power, whether emanating from the royal administration or regional centres.[95]

Subsistence activities, and especially agriculture, were by their nature community based and supervised by the dominant lineages. The latter's status to a great extent depended on their ability to assure the redistribution of the commodities produced by the work of the community to the various families that made up the village. Although they acquired a certain power from manipulating these economic flows and thereby maintaining client networks within the group

93 The excavations at Kom el-Hisn concerned in total 1 400 m², those at Tell el-Murra 300 m², and those at Tell el-Neshed 250 m².

94 Papazian 2013, pp. 65–66; Adams 2007, pp. 16–18; Bats 2017, pp. 170–172; Warden 2017, pp. 143–144.

95 Eyre 1999, pp. 33–60; Eyre 2004, pp. 176–185.

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to their own advantage, this power was not measured in terms of quantities of commodities accumulated. Rather, it was due to the way they were used socially. The concentration of a large number of storage facilities does not therefore imply the intervention by an external managing authority to control the local economy, or ostentatious accumulation by local notables. The number of silos merely reflects the needs, and therefore the size of the community. Likewise, the three kinds of storage facilities are able to coexist just as well in towns as in villages, since they correspond to different stages in the processing of agricultural products, from harvesting to consumption: the confined atmosphere of the silos serving to store the grain for the long term, whether to consume it long after being harvested or to replant it the following year. The granaries with ventilated atmospheres were used in the meantime to redistribute the product of the harvest to the various lineages, who in turn kept it in smaller silos installed within their homes. It is unsurprising to find large and small silos in the villages of Tell el-Neshed and Tell el-Murra, as in the large provincial centre of Buto during the 1st Dynasty;[96] the former concentrated in courtyards or enclosed spaces intended for this purpose, the latter scattered throughout the buildings. Consequently, the distinction mentioned above between *šnw.t* and *mḫr* should perhaps be sought elsewhere rather than in the opposing definition of silos in urban spaces, and granaries in rural areas.

The construction in Phase 1a of a large structure, of which currently only a section of its enclosure wall is known, raises questions concerning the abandonment of Tell el-Neshed during the early 4th Dynasty. Indeed, it seems strange that a large building was constructed in an area hitherto used for storage, and only a short time before the site was abandoned for good. If this is an example of an administrative building that the Crown founded to control the village's economy (in context of a *ḥw.t* for example), one would have to explain why this royal investment was written off after such a short time. Nonetheless, the abandonment of Tell el-Neshed is contemporary to the decline of several major centres in the Nile Delta at the same period.

It is hardly likely that the royal institutions in the Delta were founded in still unexploited zones. The large number of sites known from the Predynastic Period indicates that the region was already heavily populated. These royal estates must have been founded, either on the periphery, or on the very territories of the major provincial centres. This begs the question of possible land expropriation and of the real extent of the territorial reforms undertaken by the monarchs of the 3rd and 4th Dynasties. The first aim of these reforms was to ensure the Crown was supplied with certain resources, but the consequences they had on local economies may be perceived differently, depending on whether the royal power is viewed as an organising force involved in developing the provinces, or as a predatory power. In the first case, it may be assumed that the establishment of royal estates worked in favour of more efficient management of the agricultural territories and helped develop the local economies, which in any event was profitable for the Crown as it increased both its revenues and its legitimacy among the people through the reforms' beneficial effects. In the second case, it may be considered that the network of royal foundations was installed with the aim of confiscating land for the sole benefit of the Crown, thereby into the bargain, curbing the regional potentates' power by depriving them of a part of their land and as such their economic power. These two visions,

96 HARTUNG, ENGEL, HARTMANN 2012, pp. 89–90, fig. 5.

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for that matter, are not exclusive of each other and the State may have benefited from a double advantage with this new territorial policy.

Should we see in the decline of sites such as Buto, Tell el-Farkha, or Tell el-Neshed the consequences of such a policy, while at the same time Mendes and Sais continued to thrive and go on to maintain their rank as regional capitals until the First Intermediate Period? The fact remains that a change became apparent during the course of the 3rd and 4th Dynasties in regional dynamics, which may be associated with an ambition to struggle against the influence of the local elites and their possible inclination to contest royal authority.

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BIFAO 118 (2019), p. 143-187 Frédéric Guyot, Valentina Azzarà, François Briois, Julie Marchand, Béatrix Midant-Reynes
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