

<b>NAQADA CULTURE</b> (Kaiser's <i>Stufen</i> , 1957, 1990)	<b>WAVY HANDLED WARE TYPES</b> (Petrie's types SD, 1921)
<b>Naqada Ia-IIa</b>	Import of Early EB I Palestinian Wavy Handled ware in Lower-Egypt: Ma'adi Cluster
<b>Naqada IIb</b>	Vanishing of Ma'adi emporium. No W-ware in the Nile Valley
<b>Naqada IIc</b>	Palestinian imports: W 1t – W 2a – W 2b Copying of Middle EB I Palestinian Wavy Handled ware Egyptian types: W 3 – W 3b - W 3d- W 8 - W 14 – W 21h
<b>Naqada IIc-IIId1</b>	Palestinian import: W 2c Egyptian types: W 4 - W 19 – W 23 - W 25 - W 27
<b>Naqada IIId1</b>	Palestinian import: W 1g Egyptian types: W 6 - W 20h – W 21k -W 22 – W 26 – W 43a
<b>Naqada IIId1-late IId</b> (ex-Kaiser's IId1-IIId2 and IIIa1)	W 24 – W 43b - W 44
<b>Late Naqada IId</b> (ex-Kaiser's IId2 and IIIa1)	W 41 – W 41a - W 41g - W 42 – W 42g2 – W 43 - W 43c - W 43g – W 43g5- W 43m – W 43n- W 47m -W 53
<b>Late Naqada IId-early IIIa</b> (ex-Kaiser's IId2-IIIa1-early IIIa2)	W 47a – W 47g – W 48a
<b>Early Naqada IIIa</b> (ex-Kaiser's early IIIa2) (U-j)	W 30 – W 46 – W 48 - W 49 - W 50 – W 51- W 51g - W 56a
<b>Early/Late Naqada IIIa</b> (ex-Kaiser's IIIa2)	W 51a – W 55 - W 55a - W 56g – W 58a - W 60a - W 60g – W 61
<b>Late Naqada IIIa</b> (ex-Kaiser's late IIIa2)	W 33 – W 54 -W 62a – W 62m
<b>Naqada IIIb1-b2-c1</b> (“ <i>Horizont A-B</i> ”)	W 63 - W 64m – W 69 – W 69a – W 70 – W 70a –W 71 W 71a - W 71c – W 71d - W 80 – W 80b – W 85 – W 87m
<b>Naqada IIIc2</b> (Aha)	W 90

**Tab. 1. Relative chronological periods of the Naqada Culture highlighted by the Wavy Handled ware**

## FROM INTELLECTUAL ACQUISITIONS TO POLITICAL CHANGE: EGYPT-MESOPOTAMIA INTERACTION IN THE FOURTH MILLENNIUM BC

Luc WATRIN

### Résumé

*Les relations entre les cultures syro-mésopotamiennes et égyptiennes au IV<sup>e</sup> millénaire avant J.-C. consistent en un apparent drainage de l'héritage culturel urukéen vers la vallée du Nil. L'influence orientale se traduit successivement par la copie de formes céramiques, par l'imitation de thèmes iconographiques et par des emprunts dans le domaine de la gestion administrative des biens. La transmission, dont les modalités sont difficilement perceptibles, paraît avoir été essentiellement unilatérale : Ex Oriente Lux. Cet impact coïncide avec l'expansion de la civilisation d'Uruk au Moyen-Orient et avec l'essor des échanges commerciaux qui en résulte, les produits « made in Uruk » atteignant la périphérie dont fait partie l'Égypte. Ces transferts sont cependant plus ponctuels qu'on ne l'imagine, certains « mirages chrono-culturels », comme à Buto, parasitant un dossier déjà complexe. Les transmissions, détectées par comparaison des mobiliers archéologiques, peuvent être groupées en plusieurs phases que les récents travaux de chronologie régionale permettent de replacer dans le temps.*

### Abstract

*The relationship between the Syro-Mesopotamian and Egyptian cultures in the 4th millennium B.C. involve an apparent overflow of the Urukian cultural heritage into the Nile valley. The eastern influence is manifested successively in the copying of ceramic shapes, in the imitation of iconographic themes and by adaptations in management of goods. The transmission, the terms of which are difficult to discern, also appears to have been unidirectional: Ex Oriente Lux. This impact coincides with the expansion of the Uruk Culture into the Middle-East and the resulting intensification of trade, with "made in Uruk" products reaching outlying areas including Egypt. Yet the phenomenon is more sporadic than has been believed, and chronological mirages such as the one at Buto clutter a file that is already complex. The transmissions, scrutinized by comparing archaeological artifacts, can be classified into several phases, whose timeframes can be reassessed based on recent regional chronological work.*

### Introduction

The development of Predynastic Egyptian cultures, both in Lower and Upper-Egypt, may have been decisively influenced by neighboring Eastern cultures<sup>1</sup>. Palestine and Lebanon certainly played a major role both as a genuine independent cultural source and as a cultural transmission link for other more remote centers. From as early as the first half of the Fourth millennium and even before, Lower-Egyptian settlements present evidence of external cultural influences linked to the Chalcolithic and Early EB I Palestinian cultures. Both the Buto I and

Cal BC	Lower-Egypt	Upper Egypt	Upper and Lower Euphrates Sites	North Syria Mesopotamia
4400-4100	Merimde El-Omari	<b>Early Badarian</b>	Leilan VIb Tell Brak Area CH Uruk XVI-XIV	<b>Late Ubaid</b>  LC 1
4100-3800	Buto Ia	<b>Late Badarian</b>	Tell Brak TW 19-18 Hacinebi A Uruk XII-X	<b>Early Uruk</b> LC 2
3800-3700	Early Ma'adi Digla I - Buto Ib	<b>Naqada Ia-b</b>	Tell Brak TW 17-14 Hacinebi B1 Sheikh Hassân 8-13	Amuq F  <b>Middle Uruk (Early)</b>
3700-3550	Late Ma'adi Digla II Buto transition I-II	<b>Naqada Ic-IIa</b> Naqada 1858 Naqada 1260	Gawra VIII Susa 22-19 Uruk IX-VIII Nuzi G 50	LC 3
3550-3450	Buto IIa Tell el-Farkha Ia Tell Eswed I-III	<b>Naqada IIb</b> Naqa ed-Dêr 7501	Tell Brak TW 13 Hacinebi B2 Sheikh Hassân 5-7	Amuq F  <b>Middle Uruk (Late)</b>
3450-3300	Buto IIb Tell el-Farkha Ib Tell Eswed IV-VI Buto IIIa	<b>Naqada IIc</b> Naqada 1863 Hierakonpolis 100 <b>Naqada II d1</b>	Susa early 18 Uruk VII-VI	LC 4
3300-3150	Buto IIIb-c Minshat I-II Tell Eswed VII Abusir el-Melek 1035	<b>Late Naqada II d</b> Abydos U-127 Abydos U-134 Abydos U-503 Sayala 137 tomb 1  <b>Early Naqada IIIa</b> Abydos U-a Abydos U-j	Tell Brak TW 12 Sheikh Hassân 4 Habuba Kebira Djebel Aruda Arslan Tepe VI A Hassek Hoyük Godin Tepe V Susa late 18/early 17 Uruk V-IVc-IVb	Amuq F  <b>Late Uruk (Early)</b>  Early LC 5

**Tab. 2. Relative chronology between Egypt and Syro-Mesopotamia until early Naqada IIIa / early Late Uruk (c. 3150 BC).**

Ma'adi sites reveal local technological innovations linked to eastern trade routes. In 1995, we highlighted that the sub-rectangular stone building excavated by F. A. Badawi at Ma'adi-west featured an architectural model comparable with Early EB I architecture (in particular with the dwellings of Sidon-Dakerman in Lebanon) while being locally adapted to the needs of the population<sup>2</sup>. In Lebanon, an Egyptian rhombic palette found in the deepest layers of Byblos<sup>3</sup> could confirm the relationship between Lower-Egypt and the Lebanese coast in the first half of the 4<sup>th</sup> millennium, as it is of the same type as those found at Ma'adi<sup>4</sup>. This interaction with Palestine and Lebanon, according to our chronology, is contemporary with Late Ma'adi (Naqada Ic-IIa). Yet it is unlikely that Egypt had the kind of contacts with Mesopotamia at this early period that E. Baumgartel proposed<sup>5</sup> in attempting to link Naqada I painted ceramics (White Cross-Lined pottery) with models from Mesopotamia/Iran, an analysis rejected in a reasoned way by W. A. Ward<sup>6</sup>.

Beyond such interactions between Ma'adi and early Palestinian cultures, contacts and probably trade expanded, broadened and deepened to include Upper-Egypt to the south, and, much later, between Egypt as a whole and Syria and Mesopotamia to the east. Trade developed in both directions as Lower-Egypt and, later, Upper-Egypt became more assertive along classical core/periphery expansion patterns. This analysis will mainly focus on the second half of the fourth millennium starting around 3600 BC, ending with the reign of “king” Scorpion (U-j tomb, Abydos) around 3200 BC. The wealth of published evidence and material allows us to reassess the chronology, highlighting the significant impact of external cultural factors on local Egyptian development. It also allows us to sketch possible patterns of technological migrations leading to local cultural mutations and finally political change (unification of the Egyptian cultural sphere under Upper-Egyptian leadership and the emergence of an imperial power in the Nile valley).

### **Chrono-terminology**

The Egyptian chronological framework used for this paper is based on a minor revision of Kaiser's *Stufen* chronology (1957, 1990). It takes into account some criticism by different authors<sup>7</sup>, particularly concerning the Naqada IId-IIIa transition, which must be redefined. For instance, W. Kaiser classes a set of W-ware (W 41, W 43b, W 47g) both in *Stufe* IId2 and *Stufe* IIIa1, whereas these vases belong in a single sub-period (L. Watrin's Late Naqada IId, S. Hendrickx's Naqada IID2). Furthermore, W. Kaiser classes all the pieces of another W-ware set (W 50, W 51a, W 55, W 56g, W 61, W 62) within the *Stufe* IIIa2, whereas they should be split into two different sub-periods (L. Watrin's Early and Late Naqada IIIa, S. Hendrickx's Naqada IIIA1 and IIIA2). F. Petrie ascertained rapid evolution of the different W-ware types during the Naqada IId-IIIa periods. For this reason, despite our results on this point being coherent with those of F. Petrie (1921), T. Wilkinson (1996) and S. Hendrickx (1996), it would be going too far to entirely redefine the Naqada Culture, as did the latter author, by a new chrono-terminology (subdividing the Naqada Culture using upper case letters) that is disorienting to researchers (“IId or not IIB, that is the question”). Our revision in terms of chrono-terminology mainly proposes to replace W. Kaiser's *Stufen* IId2-IIIa1-IIIa2 by a sub-period Late Naqada IId

and two sub-periods designated Early and Late Naqada IIIa, corresponding to a very distinct range of objects. Our chronology work can be distinguished from earlier chronology systems (whose validity is based on only a few Upper-Egyptian cemeteries) in that it integrates archaeological data from both cemeteries and settlements of Lower-Egypt whose chronological position relative to the Naqada Culture and Palestine can be precisely defined (L. Watrin, 2002)<sup>8</sup>. The abstract of the afore-mentioned article shows the origin and evolution of one of the major key-fossils for understanding the relative chronology of the Naqada Culture : Wavy-Handled ware<sup>9</sup> (Tab. 1).

### **1. The “Syrian Connection”: a Supposed Relation between Uruk and Lower-Egypt around 3500 BC ?**

Thomas von der Way, field director of Buto, was the first scholar to consider a permanent connection between Syria and Northern Delta during the 4<sup>th</sup> millennium, a premise which sparked lively discussion in the archaeological community. The Buto chronology and the interpretation of findings must be carefully re-evaluated. For T. von der Way<sup>10</sup> and C. Köhler<sup>11</sup>, the earliest layer of the site (Buto I) is contemporary with Naqada IIb and the presence of so-called bowl sherds from Amuq F in this layer seemed to point to a connection with Northern Syria. However, further excavations at Buto in 1995 under the management of D. Faltings revealed complete forms of decorated bowls with flat bases and fairly thin rims, easily identifiable as locally made Palestinian Late Chalcolithic artifacts. Today a comparative analysis between the finds of various excavation campaigns is possible and shows that the bowl sherds described as Amuq F artifacts from the initial excavations in the earliest layer (Buto I) are, in fact, Palestinian Late Chalcolithic V-shaped bowls<sup>12</sup>. Nevertheless, the large and rough hollow-head “nail” (*Grubenkopfnagel*) from Buto I is not a “Chalcolithic Palestinian cornet”, as suggests D. Faltings<sup>13</sup>, since those objects from the Ghassul-Beersheva culture have a thin wall and have an entirely different shape. Because of the misidentification of some artifacts at Buto, the local chronology and classification of the unearthed artifacts has been inaccurate. According to our own research, it seems that the earliest layer of Buto (Buto Ia) should be integrated in a pre-Ma’adian phase contemporary with the Late Badarian period (c. 3900 BC)<sup>14</sup>, instead of the Naqada IIb date (c. 3550 BC) proposed by T. von der Way and C. Köhler.

#### **1.1. Was the Buto site a trading hub at the core of the relations between Egypt and the Urukian world as suggested by T. von der Way?**

One of the major unsolved problems among the many encountered with the Buto excavations is the discovery of several sets of cylindrical to conical Nile terra-cotta artifacts unearthed in the Fourth millennium dumping layers, described by T. von der Way as decorative “pegs” similar to the ones driven in thick beds of plaster spread on the face of the brick walls of Urukian public buildings<sup>15</sup>. Such possible (non-colored) wall pegs of large size have been discovered in Buto I-II layers (5). Another cluster is composed of similar items of medium size unearthed in Buto layer V (30). A third group is made up of fragments of small terra-cotta cylinders scattered across the different phases : Buto IIb (2), Buto IIIa (2), Buto IIIb-c

(3), Buto IV-V (1) and Buto V (1). The new excavations conducted by D. Faltings<sup>16</sup> have also produced another set of similar small terra-cotta cylinders that we can add to those unearthed by T. von der Way. As for the findings of T. von der Way, they were discovered scattered over several layers : Buto IIb (4) and Buto III-IV (12).

The small terra-cotta cylinders of Buto IIb, a phase which must be linked with Naqada IIc<sup>17</sup>, are fragmentary, like those of the following phases, and are morphologically very different from southern Mesopotamian wall pegs which tend to be larger. While their original shape cannot be reconstituted precisely since their ends are missing, their small size would link them to types unearthed in Northern Syria in Late Middle Uruk layers (LC 4). At Hacinebi Tepe B2<sup>18</sup>, assyriologists unearthed a series of small terra-cotta pegs with colored heads. While pegs have been found inserted in surviving walls in Mesopotamia, those from Hacinebi Tepe (like those from Buto IIb) were in secondary trash deposits. The Hacinebi Tepe and Buto artifacts at a first glance present morphological similarities, and they appear to share a single chronological window (Buto IIb/Naqada IIc/Hacinebi B2/LC 4). Nonetheless, the items at Buto (without colored heads) might have been used for other purposes than decorating buildings, since Buto phase IIb is made up of primitive huts of wood wattle and daub, and there is actually no trace of any brick architecture at all (hence there was no public building to be decorated). Mud-brick architecture at Buto, just as on other Delta sites (*e. g.* Tell el-Eswed VII<sup>19</sup>), only appears as of the following phase (Buto IIIa) contemporary with Naqada IIc.

Out of the whole collection of unearthed items the nearest ones to the Mesopotamian nails might be those discovered in the layers corresponding to the Early Dynastic period (Buto V). Some have reached us unaltered. They have the shape of clay pegs but are not glazed and decorated as are most of their Mesopotamian counterparts. Such a particularity does not by itself allow us to consider them as not being decorative nails used for architectural purposes since in some areas of Urukian culture similar undecorated nails have been found. Among the best illustrations are the 1600 nails discovered at the Hassek Hüyük site<sup>20</sup>, all of which are undecorated.

The kind of artifacts unearthed at Buto initially appeared to be a rough imitation of Mesopotamian decorative wall pegs. If this were proved to be true, then the artifacts could well be part of a brick building belonging at the earliest to Buto phase III (the first attested period for the local use of mud-bricks in architecture). According to this hypothesis, there is the possibility that a brick building decorated in the Urukian tradition was erected nearby during Buto phase IIIa-b, a period contemporary with that of Naqada IIc-early IIIa in Upper-Egypt. The excavation technique implemented at Buto (narrow surveys at widely separated points) might have missed such a brick building.

The fact that the “nails” were mixed up with materials of nearly all the layers must have an explanation. The discovery of a typical Buto layer I basalt vessel in Buto layer VII<sup>21</sup> (dating from the Saite period!) make it almost certain that the initial layers must have been disturbed at some later time. Given the contradiction between the discovery of a few “pegs” as low as Buto II and the fact that evidence of walls made of mud bricks is not found below Buto III, meaning that they were apparently no walls to be decorated by pegs in the earlier phase, it is possible

that the decorative pegs in Buto II (if that is what they are) could have migrated by gravitation from Buto III to Buto II below. The presence of such “nails” in layers as recent as Buto V from the beginning of the 3rd millennium could be explained by the existence of a building contemporary to the said layer or by the slow decay of an abandoned building belonging to an earlier period which could correspond to Buto III.

If we follow this reconstruction, it is of interest to relate all the above facts to the first graphic representations of brick buildings with recessed panels flanking the door which are engraved on bone labels from the U-j tomb at Abydos<sup>22</sup>, dating from early Naqada IIIa, a period corresponding to Buto IIIb in Lower-Egypt.

So far, Egyptologists agree that certain bone labels were used during that time to identify the geographic origin of the products put into the tombs (in the same way that some marks inscribed on pottery vessels describe the owner or the nature of their products). They also agree that the bird figure above a paneled building reminiscent of the façade of a Mesopotamian palace usually indicates a product from Buto. Such an identification might indicate that either the inhabitants of Buto were inspired by architectural motifs represented on the prints of Mesopotamian cylinder-seals that had accompanied products exported from the Uruk sphere which had reached Egypt, or else to the local existence at Buto of a building of Urukian style remarkable enough to become emblematic of the place. If such a building existed there, it might have had a facade decorated with pegs.

Likewise, the discovery of a dozen “Amuq F style” sherds recognized by C. Köhler<sup>23</sup> in Buto phase III (sub-layers IIIa-b-c) could confirm contacts with northern Syria (*infra*). If we assume that the handful of nails from Buto II and a few fragments from Buto III are linked to the same period and to the Mesopotamian cultures, then a marketplace where northern Syria and northern Egypt interacted might indeed have existed in the Nile Delta as early as Buto IIIa / Naqada IIId1 (late LC 4). The above could confirm the first intuition of T. von der Way and enable us to propose an improved timeframe. Yet this reconstruction remains very theoretical, and a more careful evaluation of the ceramic data (“decorated nails” and “Syrian ware”) shows that an archaeological misapprehension has hindered understanding of the Buto site for ten years.

### **1.1.1. The so-called “Mesopotamian architectural decoration nails” from Buto: terracotta funerary cones or items used for local salt production?**

When D. Faltings invited us to Buto in 1995 to assess the site’s ceramic sets, we confirmed both the Palestinian nature of a great portion of the archaeological items from the earliest layer (Buto Ia), implying that the site’s inception should be shifted backward several centuries, and expressed serious doubts concerning the earthen cylinders that her predecessor interpreted as “Mesopotamian architectural decoration nails”. Some of the cones that we were able to handle are well polished on the outside of the shaft, which would be surprising if they are supposed to be inserted into a wall up to the nail head. In contrast, the actual Mesopotamian models are rough on the outside of the shaft, since that part is invisible once in place. That detail was not lost on U. Hartung<sup>24</sup>, who from the beginning was also skeptical as to the function attributed to these artifacts.

The Buto pegs are not the only ones to have been found in the Nile valley, since similar objects were also discovered in Lower-Egypt<sup>25</sup> (e. g. Helwan, Tell el-Farkha) and in Upper-Egypt<sup>26</sup> (e. g. Elephantine, Abydos, Hierakonpolis). At Hierakonpolis, two examples were discovered in domestic contexts dating from Naqada IIb, corresponding to a post-Ma'adian layer (Buto II). As at Buto, the Hierakonpolis specimen is not associated with any architectural remains. The dwellings were only made of wood and reeds, which leads us to believe that they played a role other than that of architectural decoration cones imitating those found in Mesopotamian temples or palaces. Their presence in Egyptian tombs (Helwan, Abydos – tomb of the king Qa'a) strongly suggests a specific funerary role.

If their role was funerary, the cylinder/cones could be comparable to those from the XIth dynasty in Egypt which are unstamped clay cones found in funerary context<sup>27</sup>. Some models of cones, which are slightly more recent and from Thebes, were set in the brick façade of tombs and bear inscriptions<sup>28</sup>. Based on their distribution in the trash of different layers, the Buto pegs could perfectly well derive from the destroyed façade of an Egyptian tomb from the Middle Kingdom (?) rather than from a Mesopotamian temple built in the Delta, or else could represent an unidentified object which had an altogether different function from the decoration of brick edifices.

Likewise, recent research indicates that the Buto “decorative nails” could also be linked to systems used in local salt production<sup>29</sup>. The demonstration of H. Wilde and K. Behnert is as follows: the Buto clay pegs are linked to three distinct types: the “Tonstifte” (full cylinder), the “Grubenkopfnagel” (nail with small indentation in the head) and the “Tonflaschen” (bottle-shaped). Several European prehistoric sites and ethnographic examples in the Niger valley show the same three types of objects and their respective functions. Firstly, the terra-cotta cylinders (*Tonstifte*) serve as a support for holding up grills or slotted plates. The grill placed on the supports arched over a hearth where a fire is set. The nails with sunken heads (*Grubenkopfnagel*) are placed in each hole of the grill, and receive moulds (*Tonflaschen*) that can only be used once. The moulds are filled with salt-water, and the fire set under the grill makes the water evaporates, concentrating the salt into lumps. This study is convincing<sup>30</sup> and would indicate that the handful of Buto pegs were used for a purpose other than decorating the façade of a Mesopotamian temple.

In the end, we see little relationship between these objects and the Urukian decorative nails. The relationship with Syria, even entirely repositioned on a Buto III horizon, seems totally implausible, especially after the studying of ceramics that were perhaps too rapidly labeled as being of Syrian origin (*infra*).

### **1.1.2. The so-called “Amuq plain ceramics” discovered at Buto III: Are they non-Urukian?**

The ceramic studies of the Buto layer III performed by C. Köhler seem to be at least partially wrong. While C. Köhler perfectly demonstrated that the ceramics from the Lower-Egyptian tradition in phase II are progressively replaced over the phase IIIa by Upper-Egyptian ceramics<sup>31</sup>, they nonetheless erred when analyzing the “foreign pottery” from the same layer III. As U. Hartung<sup>32</sup> accurately pointed out, Buto III features Palestinian ceramics such as the types found in the tombs of cemetery U from Abydos. However, the situation is very

different when it comes to another series of sherds identified in this same layer by C. Köhler and initially interpreted as imports from the Amuq plain<sup>33</sup>, then later as imitations of pottery from the same region<sup>34</sup>. The foreign pottery (the so-called “pottery from the Amuq”) of this phase (sub-layers IIIa-b-c) is represented by a cluster of potsherds from at least 10 open-bowl vessels with inner stripes and a white slip. According to T. von der Way, these “exotic” artifacts from the Buto IIIa-b-c layers appear to be of the same type as those found in great number in the Buto Ia layer<sup>35</sup>. The latter were re-identified as kitchenware characteristic of the closing period of Chalcolithic Palestine (*supra*). Their presence in Buto III, a layer that has been significantly disturbed, may suggest that they come from earlier layers of the site, meaning from layer Ia where complete sets of them are found, some still *in situ*. These potsherds with a special ornamentation were incorrectly interpreted by C. Köhler<sup>36</sup> as so-called “spiral reserved slip” decoration characteristic of the Antioch Plain in Northern Syria (Amuq F ware), whereas they are in fact Palestinian sherds close to the Nahal Mishmar culture<sup>37</sup> that were drawn upward from the earlier layers (Buto Ia).

To summarize, T. Von der Way suggested that Buto had produced a Mesopotamian building at its earliest layer, Buto I, which he thought was contemporary with Naqada IIb, whereas the layer is really contemporary with the late Badarian, about 500 years earlier (*supra*). The question of pegs implanted in brick walls on this chronological horizon posed a problem since there are no brick constructions in the first layers of Buto (layers I-II), a construction technique that does not appear until layer III. Nor are there any Syro-Mesopotamian ceramics in these same layers I-II-III (*supra*). In Layer I, there is foreign ceramic but not of Mesopotamian origin. In layer II, there is no foreign or foreign-inspired kitchenware. In layer III, aside from what may be one “Syrian-inspired” sherd (?), a set of kitchenware sherds identified incorrectly by C. Köhler as originating on the Amuq plain was later used by T. Von der Way, after his initial identification of them as Syrian imports and a still later revision in which he re-identified them as locally made imitations of Syrian ware, to reinforce his theory of a “Syrian Connection”. In fact, both of the German team identifications are inaccurate since sherds are really locally made Palestinian ware from an earlier horizon (*supra*).

This study thus calls into question the nature of the ceramic artifacts that served to build the “Syrian Connection” thesis at Buto (pseudo-Mesopotamian decorative architectural nails and pseudo pottery from Amuq F). This reassessment weakens the hypothesis of an Urukian colony installed in the northern Delta, and the Buto “Urukian-style” building looks more and more like an archaeological mirage. Further excavation by U. Hartung on the deepest layers of the site, over a greater surface area, will probably make it possible to confirm or debunk our hypothesis that the Buto “Urukian-style” building was present essentially in the imagination of the earliest excavator and those gullible enough to follow him<sup>38</sup>.

## **2. Beyond misinterpretation, the impact of Middle Uruk Culture (LC 4) on Egyptian communities during Naqada IIb/IIc-d1 (c. 3550-3300 BC) is a reality.**

This period marks the beginning of contacts between the regions of Urukian culture and Egypt in the context of what has been labeled “the Uruk Expansion”. According to G. Algaze<sup>39</sup> the communities of Lower-Mesopotamia were involved in a process of competitive trading that

would have seen each center creating a number of successive colonies upstream in order to secure for each metropolis the supply of scarce or rare raw materials like copper, exotic stones or precious woods. The re-evaluation of internal and external chronological sequences and parameters provides a better understanding of the regional interaction process. Firstly, it enables us to more accurately date the first contacts with Egypt to a much earlier stage than had been understood previously. So far, studies addressing the problem of relative chronology between Mesopotamia and Egypt tended to be vague, and probably way off-target. Scholars have broadly proposed the following equation: Naqada II=Uruk IV (Late Uruk) and Naqada III=Uruk III (Djemdet Nasr)<sup>40</sup>. As we will see these assumptions are a kind of chronological mismatch. Similarly, other scholars have considered a direct link between Buto and Habuba Kebira on the basis of so-called reciprocal ceramic imports<sup>41</sup>, identified on the one hand as Amuq F-ware (*supra*) and on the other hand as Nubian N-ware (*infra*). In both cases the identifications are probably wrong, leaving us with a huge unexplained chronological gap of at least 500 years between the end of Buto I and the opening of Habuba Kebira. Thus, a chronological update is definitely needed prior to any further research for a better understanding of the process.

The recent excavations in Northern Syria<sup>42</sup> demonstrate that the Uruk Expansion developed progressively in several steps which start well before the Late Uruk period (Uruk IV) this means as early as the Middle Uruk period (Uruk IX-VI/LC 3-LC 4). The first villages from Northern Syria influenced by the Uruk Culture are located in the Khabour plain in a timeframe contemporary with Early Middle Uruk (LC 3), as attested by several sherds of beveled rim bowls (BRB) and other Urukian sherds at Tell Brak TW 17-14 which appear among the local chaffware<sup>43</sup>. This “Urukian style” ceramic is indeed locally-made which implies, at least, a local adaptation through technological migrations. The Northern Syrian settlements on the Upper-Euphrates, further to the west, are reached later, during the Late Middle Uruk (LC 4) as shown by the artifacts from Sheikh Hassan 5-7 and Hacinebi Tepe B2<sup>44</sup>. The phenomenon is all the more significant, since we are not just talking about a few pieces of pottery found among local ceramic sets, but of entirely locally-produced ceramic vessels of Urukian culture found side-by-side with local traditional ware. All this tends to indicate that there existed at this time a hybrid transitory culture whose processes and degrees (acculturation/migrant groups ?) certainly vary from one region/site to another. During the next phase (Late Uruk/LC 5) the Upper-Euphrates sites (*i. e.* Habuba Kebira, Djebel Aruda) demonstrate that the local culture has been completely pervaded by the Urukian culture in practically every field, so much so that we can speak of a Urukian cultural predominance. Quite logically, scholars have currently defined the Upper-Euphrates sites as Southern Mesopotamian colonies<sup>45</sup>. It is during the medium phase of this expansion (LC 4) that the first contacts with Egypt took place. They are attested by the imports to Egypt of a complete range of Urukian artifacts contemporary with Buto II and Naqada IIb-c.

In the same way, B. Abu Al-Soof deductively demonstrated the existence of a trade route between Northern Syria and Egypt via Palestine<sup>46</sup>. This could be confirmed by some archaeological facts like sherds of Amuq F discovered in the Gaza area at Tor Ikhbeineh IV<sup>47</sup>. The Early EB I (EB Ia2) village of Tor Ikhbeineh<sup>48</sup>, in the same stratum IV, also reveals some imported Egyptian sherds contemporary with Naqada IIb. It is thus possible to place the first – indirect – contacts between Mesopotamia and Egypt in the Gaza Strip around 3500 BC.

The period of Naqada IIB-c in Upper-Egypt corresponds to Buto layer IIA-b in the Delta. It is marked by deep changes in the material culture and the disappearance of the “Ma’adi trade network” which had probably previously monopolized exchanges with the East. Nonetheless, relationships with the Near-East were never interrupted, as is attested by a Palestinian decorated jar in Hammamiya tomb 1728<sup>49</sup> attributed to Naqada IIB or another Palestinian jar with ring handles in Naqada tomb 1298<sup>50</sup> dated to Naqada IIC. The activity of Lower-Egyptian and Palestinian merchants, established locally for several centuries, conveyed goods to Upper-Egypt but certainly also transmitted new ideas and concepts from Mesopotamia.

During that time, Egypt is still, like in the preceding phases, basically constituted of two distinct cultural entities. The first one is composed of a cluster of pre-Naqada Chalcolithic village communities located in the Northern Delta (*e. g.* Tell el-Farkha I, Tell el-Eswed A and Buto II). The second one is a homogeneous cluster of Naqadan rural communities located in Upper-Egypt. From Naqada IIC onward, a new expansion of the Upper-Egyptian culture, to the North of Asiut can be observed. According to W. Kaiser<sup>51</sup>, the area between Asiut and Gerza was more or less an uninhabited zone until Naqada IIB. This development towards the north concentrates on the edge of the Fayyûm and at the threshold of the Delta. From this point onward Upper-Egypt is directly in touch with the Delta cultures and their Near-Eastern trading networks. Such an expansion of the Naqada culture shares some common features with the Uruk expansion. It also provoked deep changes in the material culture of the local populations favoring technological exchanges. Simultaneously, and remarkably, the intensification of the exchanges with Northern Egypt during Naqada IIC brought a great many eastern goods into Upper-Egypt for the first time.

## **2.1. The case of Middle Uruk ceramic imports: Mesopotamian influences beyond the Nile Delta toward Upper-Egypt.**

### **2.1.1. The Four-lugged jars or how Egyptian craftsmen integrated foreign novelty.**

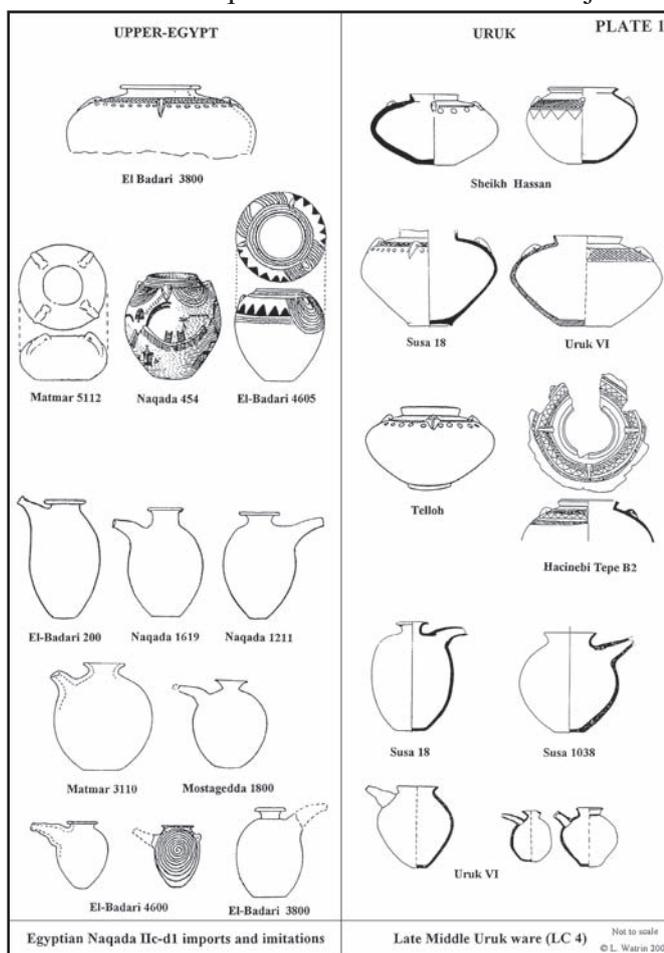
Some Syro-Mesopotamian jars were imported to Egypt, a seldom-reported detail. Such is the case of a fine four-lugged jar from El-Badari Cemetery 3800, classified by G. Brunton<sup>52</sup> in the local D-class (D 59w). This necropolis, poorly referenced, also produced a spout-jar of Urukian style (F 58q) and a set of D-class ceramics from Naqada IIC-d1: a sequence that may well be applicable to our jar.

Such a dating would also be supported by the finding of lapis lazuli (a stone originating in Afghanistan and transiting through Mesopotamia for further distribution in the Middle-East, *infra*) in the same cemetery as well as in several Naqada IIC-d1 tombs from another cemetery at El-Badari. Out of eight tombs from El-Badari containing lapis lazuli<sup>53</sup>, three are clearly attributed to Naqada IIC (El-Badari 3730-3732-3850), three to Naqada IID1 (El-Badari 3827-4602-4604), and two are not datable with certainty (El-Badari 3839 and an “unknown” tomb from cemetery 3800). It is thus probable that our four-lugged jar traveled along the same Middle Eastern exchange networks that traded lapis lazuli, which would imply a dating as of Naqada IIC at the earliest or Naqada IID1 at the latest. Their dating in Naqada IIC remains more probable, since Egyptian jars featuring a morphological detail borrowed from this type of pottery already exist during this period (*infra*).

This “D 59w” jar with a short neck, large shoulders and four triangular lug-handles, of which only the upper portion remains, is described as red polished ware with incised cord pattern and studs in relief. It is clearly interchangeable with Late Middle Uruk (LC 4) containers. For example, we find a close parallel at Sheikh Hassan 6-7<sup>54</sup> (Pl. 1), a site that radiocarbon datings place around 3600-3400 BC<sup>55</sup>. As is the case with our El-Badari jar, this fine four-lugged squat jar from Sheikh Hassan is red slipped ware with simple points or incision and applied pellets. Similar jars can also be found at Hacinebi Tepe B2<sup>56</sup> (Pl. 1), a site that radiocarbon datings place around 3500 BC<sup>57</sup>. In southern Mesopotamia we also find some four-lugged jars, made out of red-slipped ware (Uruk VI<sup>58</sup>), some of them with a similar design consisting of a row of studs underneath an incised decoration, in deposits contemporary with Uruk VI/LC 4 (Susa 18<sup>59</sup>, Telloh<sup>60</sup>) (Pl. 1). Lastly, we find this type of jar in much later context such as at Habuba Kebira (LC 5) both with a red-slipped finish or in grey earth but with a less rich decoration bearing hatched motifs between two lines<sup>61</sup>. Thus our El-Badari jar, generally confused with Egyptian red-polished type-pottery, appears rather to be a genuine LC 4 red-slipped jar.

According to H. Kantor<sup>62</sup>, another vessel, with a large base and with four triangular lug-handles could also have been imported to Egypt. This container was unearthed at Matmar in grave 5112<sup>63</sup> (Pl. 1). The grave can be attributed to Naqada IIc-d1<sup>64</sup>. However the jar has an unusual shape with no counterpart today in Mesopotamia and we do not think that it should be considered as an imported item. Thus the four-lugged jar from El-Badari remains up to now the only one of its type to be imported into Egypt during Naqada IIc-d1. It probably transited through Palestine, where another similar imported jar has been found (*i. e.* Jawa)<sup>65</sup>.

The recovery in the same cemetery (*i. e.* El-Badari) of one imported four-lugged jar as well as local D-class models bearing the same triangular handles in Naqada IIc-d1 contexts (el-Badari tombs 4604-4605)<sup>66</sup> may suggest a relationship (Pl. 1). The shape of the handles is identical on both items. The fact that such items appear at the same period or a bit later as the first imported four-lugged Urukian jars is by no means coincidental. Like S. Mark<sup>67</sup>, we think that there is a clear relationship. During the same period, the Naqada potters duplicated the wavy ledge handle of



the Palestinian jars (this will give way to a whole local pottery class : the W-class). As with Palestinian jars, local potters adopted the design of Urukian jar handles and reproduced them with local Egyptian marl clay on pre-existing D-class ware<sup>68</sup>. Hence, it looks like the Egyptian craftsmen were selective in the appropriation of imported designs and techniques, integrating them gradually into their own production. In this way, the Urukian four-handle design becomes an Egyptian standard three-handle design with some rare exceptions of D-class vessels bearing four handles (Naqada tomb 1873)<sup>69</sup>.

The handles are not only decorative but also have a function since they make it possible to close the jar with a piece of cloth or a wooden lid held in place by strings attached to them. According to R. Amiran<sup>70</sup>, this type of vessel might have been used to store honey (?). Therefore the appropriation of new designs by local potters might have been more based on practical rather than on aesthetic considerations. The modifications, which are attested by several jars from Naqada Cemetery (tombs 454, 1680, 1873)<sup>71</sup> and another one from Matmar (tomb 5130<sup>72</sup>), appear as of Naqada IIc on Upper-Egyptian D-class vessels. Two jars from Naqada Cemetery (tombs 512 and 690<sup>73</sup>) and two others from El-Amrah (tombs b 62 and b 106)<sup>74</sup> demonstrate that they were manufactured all through Naqada II d1.

The decoration of the jars, as well as their shapes, remains entirely Egyptian. In most cases the decoration is painted, whereas LC 4 Urukian jars generally bear incised and studded motifs. The themes are the same as those of the Naqada IIc-d1 period (processions of birds or boats with oars as well as a geometrical decor combining bands of wavy lines and a line of triangles, which is the most common pattern).

Both incorporations described above probably represent technical improvements prevailing over esthetic considerations. Remarkable also is the fact that the Egyptian craftsmen did not take over entire designs but rather innovated, introducing some new elements into pre-existing productions, just as was the case with the incorporation of the Palestinian ledge handles in the W-class wares in the same Naqada IIc timeframe.

### **2.1.2. Spout-jugs, another example of east-west and north-south migration of pottery types.**

Another type of Urukian pottery is also imitated in Upper-Egypt: the spout-jug (Pl. 1). As of Naqada IIc (*infra*), we notice the appearance in Upper-Egyptian tombs of a set of small ovoid jars with a high flared neck and tubular spout, without handles, in drab and red-slipped wares, including some ovoid jars that are morphologically interchangeable with those of the Late Middle Uruk (LC 4).

The relationship with Mesopotamia often goes unnoticed since spout vessels were already produced by Lower-Egyptian cultures from earlier periods<sup>75</sup> (*e. g.* Ma'adi, Naqada Ia-IIa). The Ma'adian jars have a different shape, featuring a very short oblique spout. One Upper-Egyptian tomb (Naqada 1759<sup>76</sup>) attributed to Naqada Ic-IIa has produced a ceramic piece with a spout, a small jar (D 92) in coarse brown ware bearing an incised motif (an import from Lower-Egypt or Palestine). The hypothesis of a spout-jar being a form that came to Egypt through Palestinian models might be put forward. It is true that spouts can be found in Palestine on red

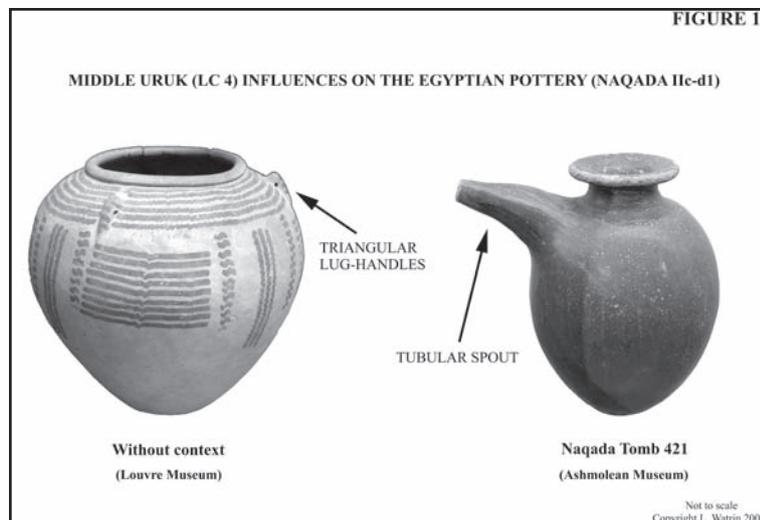
burnished juglets or medium-size jars from Middle EB I (e. g. Jericho A 94<sup>77</sup>, Azor tombs<sup>78</sup>). But distinctive shapes and spouts designs as well as multiple means for holding the jars (ring and ledge handles), seem to point toward strong local traditions, independent of Mesopotamian or Egyptian models.

Ovoid “Urukian style” spout-jars began to appear in Upper-Egyptian graves (Pl. 1) as of Naqada IIc (at the earliest) as demonstrated by one model in Polished red ware (F 58a) (Fig. 1) found in Naqada tomb 421 which is one of the richest graves from Naqada Cemetery (54 ceramic jars including four W 19 and two stone vases)<sup>79</sup>. Other spout jars of F 58a and F 58p types also come from Naqada Cemetery (tombs 1211, 1619 and 1886)<sup>80</sup>, but their chronological position remains problematic. Two other spout-jars have been unearthed at Mostagedda “1800” and in Matmar tomb 3110, two graves that we tentatively date to Naqada IIc<sup>81</sup>. The spout jar from Matmar, preserved in the Cairo Museum, is a pale red hemispherical vessel made of loess clay with organic (straw) temper, without slip. It may be a local R-class imitation.

Another set of spout-jugs comes from the El-Badari cemeteries. In El-Badari area 3800, which also features a group of D-class ceramics dated to Naqada IIc-d1, a “drab red jar” with a high spout (F 58q) was uncovered<sup>82</sup>. This jar has close equivalents<sup>83</sup> at Susa 18 and Uruk V, and might well be an imported jar or a local imitation. Another jar with a spout in the shape of an “elephant trunk” in “dark polished red” (F 58L) was unearthed in another tomb from el-Badari area 4600<sup>84</sup> (Pl. 1) that we date to Naqada IIc-d1 (*supra*). This kind of jar with a crooked spout is unique in Egypt, but finds direct parallels at Uruk VI<sup>85</sup> (Pl. 1). It may be an Urukian import. Another dark polished red spout-jug from “El-Badari 200” (F 58b2)<sup>86</sup> finds a close parallel at Uruk VII<sup>87</sup>. It is also probably an import<sup>88</sup>.

The finding of spout-jars identical to Late Middle Uruk models (Uruk VI, Susa 18) in Upper-Egyptian funerary contexts (Fig. 1), datable at the earliest to Naqada IIc, allows us to deduce a link between the two alluvial plains. They prove at least that some Urukian spout-jars reached the Nile valley before serving as models for local P (Polished-red) and R (Rough) class spout-ware. Another type of container (four-lugged jar) was - with certainty - already imported from Mesopotamia at the same times and places (El-Badari, *supra*).

Spout-jars appear at Uruk-Warka from Early Uruk (Uruk-Warka XIII) onward, then continue to be produced throughout the Middle Uruk (Uruk-Warka VIII-VII-VI) and Late Uruk (Uruk-Warka V)<sup>89</sup>. The distribution of that type of jar in the Urukian sphere during the Late Middle Uruk (LC 4) involves both the north and south of Iraq, southern Iran, Syria and south-eastern Anatolia. The presence in Egypt of such items could be explained by the nature of the goods carried in this type of container (exotic products), as well as by morphological characteristics defining it as a liquid-container. Recent chemical analysis on the content of a spout-ware jar unearthed at Uruk-Warka VI-V revealed the presence of wine residues<sup>90</sup>. This analysis testifies to the existence of a wine trade inside the Uruk sphere originating from wine-producing regions (Iran or Anatolia) and to the notion that spouted jars were the favored container for this product<sup>91</sup>. “Uruk VI style” spout-jars appear in Egypt during Naqada IIc-d1 and then disappear during late Naqada II-d-early IIIa at a point when Egyptian tombs reveal major quantities of “Palestinian style” wine jars (e. g. Abydos U-a and U-j tombs<sup>92</sup>).



these vases to be sub-products of the P-class (Polished red), and of totally local design<sup>93</sup>. This opinion may stem from a lack of awareness concerning the types and especially the finishes (slips and burnishing) of Mesopotamian ceramics produced with techniques similar to those used in making Egyptian P-class ceramics.

A detailed and careful analysis of the spout-jars made in redware and with a red slip shows that such ceramics are indeed rare in Mesopotamia during Late Middle Uruk (Susa, Uruk-Warka). Most of the Uruk spout-jugs are made of brown clay with mineral temper and a yellowish slip. However during Uruk-Warka VI we find some spout-jars described by Al-Soof<sup>94</sup> as “red wares with a dark-red slip with well smoothed surface(s)”, which could just as well describe Egyptian P-class spout-jars. In any case, if we were to consider that all the Uruk VI style jars unearthed in Egypt in Naqada IIc-d1 tombs were local imitations of Urukian models, they would be remarkably close even in shape and size. Such a consideration would stand in full contradiction with the adaptation that was encountered before, since the usual appropriation is not a straight copy but rather an innovative, selective introduction of foreign design element to improve existing local shapes.

While it is difficult to distinguish the Egyptian and Mesopotamian redware jars with a red slip, Egypt imported at least one Mesopotamian-type spouted jar – an example in brown clay with mineral temper and a yellow slip. A jar of this type was discovered in a Nubian tomb. This tomb, currently reconstituted in the Aswan Museum (n°59), contained a light-beige spouted jar associated with a funerary deposit containing 3 D-class Egyptian vases, including one D 43a and D 67d, which establish a Naqada IIc chronology. The shape, clay, and finishing of this spouted jar are interchangeable with the most common Susa examples<sup>95</sup>. This discovery clearly shows that Egyptians from Naqada IIc imported spouted jars from Uruk.

The way that the Egyptians incorporated a foreign shape into their ceramic set can range from a faithful copy to only a few morphological elements. Most of the time Egyptian potters only picked up a few elements from Urukian-style ceramics. We have to keep that in mind when considering a small spout-jug unearthed in a tomb from El-Badari area 4600 in a Naqada IIc-d1 context<sup>96</sup> (Pl. 1). By its shape and decor (a large spiral taking up the entire surface of the vase),

Egyptologists such as H. Kantor see these vessels as being locally made and possibly inspired by Uruk pottery, but without going into further details. The absence of petrographic analyses on Egyptian spout-jars helps little in making any distinction between imported items and Egyptian-made ones. L. Bavay and S. Hendrickx even consider that there is no relationship between the spout-jugs from the F 58 class and the Urukian ware, instead considering

this vase is similar to productions of the D-class found on the same cemetery (small ovoid jars with two lug-handles of types D 31t and D 35n2). But while such vases typically bear a handle on each side, this vase features a handle on one side and a spout on the other. This hybrid vase is the best illustration of foreign stylistic adaptations made by Egyptian craftsmen.

We think that, just as in the case of the four-lugged jar from El-Badari, some spout-jars were imported from Mesopotamia to Egypt during Uruk VI/Susa early 18. Likewise, the presence of oval-shaped jars with spouts on the shoulder from Megiddo tomb 1128<sup>97</sup> or from Azor tomb 4<sup>98</sup>, jars imported from Mesopotamian spheres or imitated locally, could indicate that a trade route between Egypt and Mesopotamia passed through Palestine. Future petrographic analyses may contribute further insights to our hypothesis. In the greater scheme of things, it might not matter whether they are imports or copies: the point is that they unequivocally establish the presence of Uruk VI/Susa early 18 style ceramics in Egypt. That fact, in turn, highlights the dynamics of the trade networks, since the shape could only have been adopted from imported products. That does not mean that the “Urukian Expansion” reached Egypt. It simply testifies that the Middle Uruk expansion led to the distribution of ceramic models and techniques from a source in southern Mesopotamia to peripheral regions of the Middle-East. This is true both for fine ceramics and crude ones (Beveled Rim Bowls/BRB) linked to traders or to groups of emigrants. The presence of some Urukian imported containers in Egypt (four-lugged jar, spout-jug), combined with the absence of any BRB in Egypt so far<sup>99</sup>, seems to demonstrate that the introduction of new ceramic forms to Egypt resulted from the dynamic nature of the Near-East trade network, whose traders managed to ship goods all the way to the Upper Nile valley.

The introduction in Upper-Egyptian ceramic designs of clearly identifiable morphological details resulting from contacts with the Palestinian sphere (wavy handled ware) and the Urukian world (four-lugged jar, spout-jug) are not the only external factors affecting local ceramic making. Occasional findings of vessels with a ring base in the D-class, certainly derived from Lower-Egyptian pottery, should also be considered<sup>100</sup>. It would point to a third source of inspiration, this time from the Nile Delta itself during the Naqada IIc period.

It is therefore possible to conclude that pottery production clearly illustrates the existence of very dynamic local Middle Eastern trade routes. It shows that exchanges benefited the Delta initially but later probably also accelerated Upper-Egyptian development. All along the way Egyptians appropriated foreign novelty in a gradual and selective way, *merging* foreign design elements with *existing* local shapes to create innovative pottery.

## **2.2. Early globalization: lapis and obsidian imported into Egypt during Middle Uruk (LC 3/LC 4).**

Obsidian and lapis lazuli artifacts are two other key items testifying to the dynamism of the Middle-Eastern trade networks which included the Nile valley.

### **2.2.1. Obsidian.**

Obsidian is a volcanic glass traded in Mesopotamia and the Levant since the Early Neolithic period through a “down-the-line trade” model (without any real demand from the

community, and without well-established trade routes). Its traffic from Anatolia to Cyprus, Syria and the Upper-Euphrates is well documented starting in the 9th millennium (*e.g.* Mureybet IIIb<sup>101</sup>) until the 6th millennium (*e.g.* Tell Sabi Abyad VI<sup>102</sup>). In Palestine, analyses demonstrate that obsidian was imported from Anatolia in the PPNA, then in PPNB<sup>103</sup>. In northern Mesopotamia, imports of obsidian carry on in Late Ubaid and during the Middle Uruk (c. 4300-3500 BC), reoccurring in the tombs of Gawra XIII to VIII<sup>104</sup>. In Palestine, obsidian is found on pre-ghassoulian sites<sup>105</sup> (Wadi-Rabah Culture, c. 4900-4500 BC), then on the ghassoulian sites at Gilat, Gaza, and in northern Sinai<sup>106</sup> (c. 4500-3900 BC). Analyses made on Gilat obsidian indicate Anatolia as the origin<sup>107</sup>. As such, Anatolia is a major source of obsidian for both the Palestinian and Egyptian regions (*infra*), but it is not the only one. J. Zarins states that Predynastic Egypt had another source of obsidian located in the regions around the south of the Red Sea<sup>108</sup>. More precisely, some indications (*infra*) would suggest that Yemen, where obsidian was used for making hunting equipment (arrowheads) from at least the 7th millennium<sup>109</sup> (*e.g.* Ash-Shumah, Al-Gahabah), was possibly another major source of obsidian for Egypt in the 4th millennium.

In the Nile Valley, the first obsidian imports appear in Upper-Egypt at a period contemporary with Late Ma'adi EB Ia1 and LC 3 as attested by the presence of an obsidian blade in a Naqada tomb dating from Naqada Ic (tomb 1260<sup>110</sup>). It is then found at Naqada I Ib-c at Hammamiya (tomb 1629<sup>111</sup>) then at Naqada I Id1 at Mostagedda (tomb 1631)<sup>112</sup> and El-Badari (tomb 4602)<sup>113</sup>.

Obsidian artifacts from tombs in the Naqada I Ic-d/IIa period from Upper-Egypt (Hammamiya 1629, Naqada 743, Abydos U-j) have recently been compared with samples from Ethiopia and Anatolia. These analyses concluded that the obsidian discovered in those tombs<sup>114</sup> was not of Anatolian origin. While the analyses tend to suggest an Abyssinian origin, the obsidian in question could also be from Yemen (a region which has the same geological formations as Abyssinia and where a stone industry using obsidian had existed at least since the Neolithic<sup>115</sup>). Obsidian, despite what some researchers claim<sup>116</sup>, remains an exotic product that is clearly a raw material exchanged between Egypt and the East. Favoring an "Ethiopian Connection" put forward without any substantial basis, these authors don't appear to take into account some indications (*i. e.* according to G. L. Harding<sup>117</sup> a fragment of a flint knife discovered in the Aden region might have affinities with the Naqada rippleflake knives) which may indicate that seafaring and land networks connected Yemen and Hedjaz to Egypt directly or through Palestine. They also seem to neglect analyses performed on other obsidian objects from Lower-Egypt which reveal an Anatolian origin demonstrating the existence of a variety of sources (*infra*).

The first evidence of Anatolian obsidian being imported to Egypt is currently attributed to the northeastern Delta at Buto IIa<sup>118</sup>, a post-Ma'adian village contemporary with Naqada I Ib (tab. 1)<sup>119</sup>. It is illustrated by a small obsidian blade whose petrographic analysis confirmed a Taurus origin (Bingöl, Turkey). The second finding of Anatolian obsidian also concerns the northeastern Delta, this time at Tell el-Eswed IVa<sup>120</sup>, during a phase contemporary with Naqada I Ic (tab. 1). It is a bifacial obsidian knife originating from Eastern Anatolia (Nemrud Dag, Kurdistan). Other findings also include obsidian artifacts (beads and a blade) at Gerzeh

graves 133 and 185 datable to Naqada IIc-d<sup>121</sup>. We do not have any petrographic analysis for these artifacts. Nonetheless, their location south of the Delta on the edge of the Fayyûm puts them directly on the route of the Lower-Egyptian trade networks. The presence of some imported exotic artifacts in the same tombs (lapis beads in Gerzeh 133<sup>122</sup> and a Palestinian jar in Gerzeh 185<sup>123</sup>), suggests that the obsidian from these graves came from the East (Anatolia or Arabia). Anatolian obsidian imported into Egypt certainly transited through centers of Urukian culture in Upper Syria where it is attested in the layers contemporary with the Middle Uruk (LC 3) (*e. g.* Hacinebi B1<sup>124</sup>).

### **2.2.2. Lapis lazuli.**

Another mineral sought after by the Egyptians was lapis lazuli. Since there are geologically, and to date, no lapis lazuli sources in Egypt<sup>125</sup>, we must look beyond it to find its source. The most probable source of this mineral would be in the Hindu Kush Range in the province of Badakhshan in northeastern Afghanistan<sup>126</sup> where we know through the Mehrgarh<sup>127</sup> excavations that lapis was traded from the 7<sup>th</sup> millennium then in the 6<sup>th</sup>, 5<sup>th</sup>, and 4<sup>th</sup> millennia. More recently an additional source was identified in southern Afghanistan in the Chagai Hills<sup>128</sup>. This “Quetta lapis” is said to be greenish-blue, thus distinguishing it from the dark-blue lapis with white veins found in the north of the Panshir valley (Badakhstan) which appears to be the type found imported into the Middle-East and Egypt. In Mesopotamia, this mineral is reported to have been imported for the first time around 4000 BC. At this period, it is found exclusively in the regions of the Upper-Tigris, in tombs dating from the transition of the Late Ubaid/Early Uruk to Qalinj Agha (near Erbil)<sup>129</sup> and at Tepe Gawra<sup>130</sup> (north-east of Mosul). At Gawra<sup>131</sup> lapis occurs in the Early Uruk tombs (LC 2) of layer X as in later ones from Gawra VIII dating from Early Middle Uruk (LC 3)<sup>132</sup>.

#### **2.2.2.1. The first lapis lazuli imports in Egypt (Naqada Ic-IIId1 / Middle Uruk).**

The earliest finds of lapis lazuli in the Nile valley<sup>133</sup> are sporadic and, like obsidian, start in Naqada Ic-IIa onward (c. 3700-3550 BC). For instance, we find a lapis lazuli pendant in a Naqada Ic-IIa grave (Naqada 1858<sup>134</sup>) and lapis lazuli beads in a Naqada Ic-IIa (?) grave (Abadiya B 75<sup>135</sup>). During the same Naqada Ic-IIa periods, this opaque blue stone is sometimes encrusted in fine ivory sculptures as is the case of an anthropomorphic figurine preserved in the British Museum whose eyes are decorated with squares of lapis lazuli<sup>136</sup>. Trading of this stone was uninterrupted since it is found in Naqada IIb-c in four Upper-Egyptian tombs at El-Badari, Hammamiya and Naqada<sup>137</sup>. At Naqada IIc-d1, lapis lazuli is generally found in the form of beads or small artifacts (pendants, discs) in almost every Naqadan necropolis (we find lapis lazuli in about 41 tombs from 11 sites dating to Naqada IIc-d1<sup>138</sup>). The Naqada IIc-d1 period is thus relatively rich in lapis and marks a peak for imports of this precious stone into Egypt.

#### **2.2.2.2. Lapis lazuli sociology: a semi-precious stone imported for the Elite ?**

Like in Mesopotamia, the mineral appears generally in the richest graves, which may be an indication of the emergence of local elites distinguishing themselves by acquiring local or exotic prestige items. A rapid overview of the Naqada cemeteries confirms that this stone is

also found in the small T cemetery of Naqada (38 tombs recorded) which belonged to a local elite<sup>139</sup>. Tomb T 5 is by far the largest and richest burial of the necropolis. The presence of W 14 pots can safely date the tomb to Naqada IIc<sup>140</sup>. Tomb T 5, in addition to lapis, gold and carnelian beads, contained some 42 pottery vessels and 5 stone vases in basalt, breccia and porphyry. Lapis beads were most often associated with golden and carnelian beads to form precious necklaces. Such composite necklaces were found at El-Amrah near Abydos. Among four Naqada IIc graves (El-Amrah a 96, a 118, a 139, b 40)<sup>141</sup> with lapis beads, three of them also included gold and carnelian beads<sup>142</sup>. The use of lapis in composite necklaces was also true for Naqada II d1 in the same cemetery where lapis was associated with gold in both El-Amrah tombs b 62, b 104 and b 106<sup>143</sup>. Lapis would thus have been introduced to Egypt to complete precious necklaces for the local “Elite”.

Many tombs containing lapis also contain other foreign elements such as in grave T 29 at Naqada where the lapis lazuli beads were strung together with an imported Middle-Urukian cylinder seal<sup>144</sup>. The position of these rich personages can sometimes be guessed, as in the case of El-Amrah grave a 96. Dated to Naqada IIc, this grave reveals a necklace made of lapis, gold and carnelian beads, nineteen pottery vessels and two schist palettes, as well as three pear-maceheads made of various hard-stones and five fish-tail flint blades, a set of military equipment placed facing the dead, clearly indicating the owner’s warrior status. In another grave, dated Naqada IIb-c (Naqada tomb 836)<sup>145</sup>, lapis beads were found with associated material that could provide insight into the long-distance trade of this period. The buried person had a necklace made of lapis, carnelian and various stone beads placed around his head and neck. The fact that this tomb also belonged to a warrior was indicated by a copper dagger that the deceased wore on his belt. This copper riveted blade is very similar to EB I models forged in Palestine<sup>146</sup> and Lebanon (Byblos<sup>147</sup>) during the same period, and the presence of conifer resin lumps in the same grave might confirm the origin of this weapon. The trading of lapis lazuli and obsidian (that can be found associated in the same tombs at Hammamiya 1629 and Hierakonpolis tomb 11) reveals the gradual development of wealth and an Elite in Upper-Egypt, sometimes of a military nature<sup>148</sup>.

### **2.2.2.3. Lapis lazuli trade routes : a Dead Sea connection?**

The significant distance between the source and the destination suggests a “down-the-line trade” which would have linked the Badakhstan villages to the Mesopotamian centers located more than 2000 km away to the west across Afghanistan and the Iranian plateau. Logically, Mesopotamia, located halfway between Afghanistan and Egypt would have been the mandatory pivot point between the two regions. Yet in the Middle Uruk (LC 3/LC 4, between 3800 and 3300 BC) – which is the period corresponding to a peak in the importation of lapis into Egypt – this stone (leaving Tepe Gawra aside) is missing in Mesopotamia and, more specifically, missing in the Lower-Iraq centers<sup>149</sup>. This observation raises the question of the trade routes and the relay stations, making credible the hypothesis of a route that did not cross through central and southern Mesopotamia but rather transited through the Iranian plateau, the region of Tepe Gawra on the Upper Tigris, then via the north of the Syrian Jazira, before reaching the Mediterranean coast, then Palestine and Egypt.

Indeed, a few beads discovered at Nahal Mishmar<sup>150</sup> in the Dead Sea region (c. 3800 BC) seem to testify that lapis lazuli reached Palestine before Egypt in the course of the Early Uruk (LC 2). Nahal Mishmar was in connection with Egypt, as can be deduced from artifacts that were clearly imported, such as *Aspatharia Nilotica* shells<sup>151</sup>. During the Early EB I period, the large Bâb edh-Dhrâ' village on the Jordan side of the Dead Sea also seems to have been involved in trade with the Middle-East and with Egypt, as reflected in funerary artifacts which include lapis lazuli beads and objects made of stones imported from the Nile Valley (*i. e.* alabaster maceheads and carnelian beads)<sup>152</sup>.

In Palestine, no trace of lapis has been discovered in Early EB I contexts, meaning in a period contemporary with Naqada I-IIb and the early Middle Uruk cultures (LC 3). The same is true for the Nile Delta, where no contemporary site has revealed any lapis lazuli, including Ma'adi which was the main trade-hub of Lower-Egypt. The earliest lapis is only found in the Upper Nile Valley in Naqada I tombs (*supra*).

This schema – which may only be due to the random nature of archaeological finds – would suggest that the earliest trade route for lapis did not transit across the Palestinian coastal plain, the North Sinai or the Nile Delta before reaching Upper-Egypt. Thus we can put forward the hypothesis of a lapis route transiting through Tepe Gawra, then reaching the Dead Sea region. From this point, caravans would have traversed the Wadi Araba, crossing the Aqaba Gulf to reach the shores of Upper-Egypt.

### **2.3. “Mesopotamian style” seals and cylinder seals in Egypt during Naqada IIb / IIc-d1 (late Middle Uruk / LC 4).**

Glyptics are an innovation that appears in the Upper-Euphrates during the ceramic Neolithic period. They already appearing in the shape of hemispheroid seals with geometric, zoomorphic and phytomorphic symbols (caprids, ears of wheat) in the excavations of P. M. Akkermans<sup>153</sup> at Tell Sabi Abyad VI in northern Syria (c. 6000-5700 BC)<sup>154</sup>. These “proto-Halafian” stamp seals can be considered as the archaeological evidence of an authority linked to notions of property and control within the growing complexity of a Neolithic society. Starting in the Uruk period, the use of seals is continuous in some regions but disappears in others, where they are replaced by a new tool meant for identifying goods and more generally for signatures: the cylinder seal. From a chronological point of view, the emergence of cylinder seals took place during Early Middle Uruk/LC 3 as indicated by R. J. Matthews' discoveries at Tell Brak 16-14 (HS 1)<sup>155</sup>, those of J. Boese at Tell Sheikh Hassan 10<sup>156</sup>, and those of A. Le Brun at Susa 21-20<sup>157</sup>. This happened while Upper-Egypt was being gradually integrated into the Middle Eastern trade route network.

#### **2.3.1. The earliest glyptic discovered in Egypt: imports from Uruk ?**

The earliest glyptic elements found in Egypt are associated with Naqada IIb-c artifacts (c. 3550-3400 BC). The glyptics found in the Upper-Egyptian tombs are essentially made up of hard stone cylinder seals and a few stone stamp seals whose similarity with Middle Uruk types is striking. The chronological position of the graves in which glyptics (10 tombs) were found can be detailed as follows: Naqada IIb (1), Naqada IIc (1), Naqada IIc-d1 (3), Naqada IId1 (3),

late Naqada IId (1)<sup>158</sup> and Naqada IIb<sup>159</sup> (1). Along with such seals there are at least the same amount of examples from plundered tombs (6) or surface findings<sup>160</sup> (2). Out of the 18 seals found in Egypt, only 11 can be linked to Middle Uruk / Naqada IIb-IId1. Generally, basing their interpretations upon stylistic criteria that tend by definition to be subjective, Egyptologists divide the above-mentioned glyptics into two groups : imported cylinder seals and local imitations<sup>161</sup>. Other researchers, while putting an accent on external influence concerning the motifs, think that Egyptians developed cylinder stamps independently starting from decorated tubular beads<sup>162</sup>.

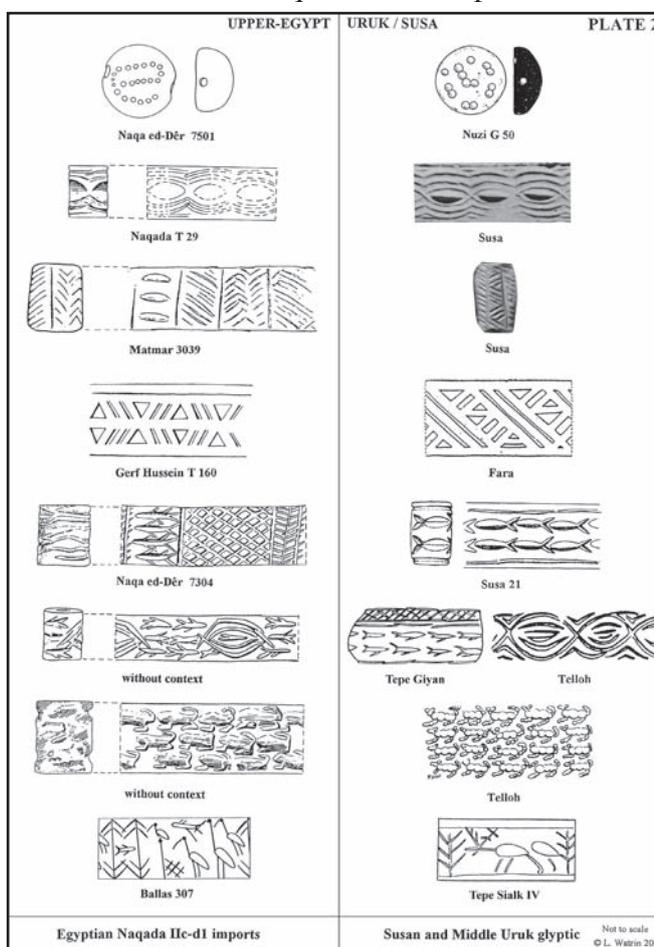
The patterns of this glyptic assembly are clearly of “Urukian style”. Moreover, the lack of cylinder seal impressions or stamp seal impressions - which could have showed their primary function - strongly suggest that all the glyptic elements found in Egypt in Naqada IIb/IIc-d1 contexts were probably imported. To date nothing indicates that the use of the cylinder seals in Egypt was established as early as Naqada IIc as suggested by U. Hartung<sup>163</sup>. Likewise, it appears that the use of glyptic elements was linked to the emergence of complex chiefdoms in Egypt, and becomes common only as of late Naqada IId, a period for which we find the earliest seal impressions in the tombs of the Abydos area (*infra*). We also notice that most of the Egyptian cylinder seals from later periods are generally made out of wood or ivory and not out of hard stone (the ones that we are most concerned with). Furthermore, this type of seal has precise parallels in Mesopotamia in earlier or contemporary periods (*infra*). For these reasons, in contrast to R. M. Boehmer we do not see evidence for the idea of two distinct groups (imported seals and local copies) of glyptics during the timeframe of Naqada IIb/IIc-d1 periods (c. 3550-3300 BC).

The earliest glyptic found in Egypt is a limestone stamp seal of hemispheroid shape from Naqada ed-Dêr tomb 7501<sup>164</sup> (Pl. 2). Beyond any doubt, the tomb is datable to the Naqada IIb period as witnessed by its B-class ceramics<sup>165</sup>. This seal is decorated with an “e”-shape pattern composed of 22 small circular holes made with a drill point. Close parallels can be found in shape, material (stone), manufacturing technique (drilling) and decoration (with a backwards “e” pattern) in Middle Uruk contexts, for example at Nuzi G 50 (Yorgan Tepe near Kirkuk) in the Upper Tigris region<sup>166</sup> (Pl. 2).

The earliest cylinder seal unearthed in Egypt could be the one found in Naqada tomb 1863<sup>167</sup>, which we can tentatively date to Naqada IIc<sup>168</sup>. This limestone cylinder seal bears two “oval” patterns (fish?) inside deep irregular lines, representing a rough design similar to the Middle Uruk glyptic (*i. e.* Telloh)<sup>169</sup>. Another limestone cylinder seal from Naqada tomb T 29<sup>170</sup>, that we tentatively date to Naqada IIc-d1<sup>171</sup>, features a geometrical pattern with three ovals enclosed in irregular borders (Pl. 2). This motif is common in Mesopotamia on the Middle Uruk cylinders from Telloh<sup>172</sup> and Susa<sup>173</sup>. This grave also contains a lapis bead (another artifact which may have been imported through the Urukian trade network). A cylinder seal bought on the Luxor market in 1901 bears the same pattern of several “oval” designs occurring together with three rows of fishes swimming in two different directions<sup>174</sup> (Pl. 2). This pattern is very common in Mesopotamia and it appears as of the Early Middle Uruk (LC 3). Good examples have been found in southern Mesopotamia at Susa 21-20<sup>175</sup>, and Telloh<sup>176</sup> (Pl. 2). At Harageh, a blood-stone lentoid stamp seal with animalistic motifs was unearthed in grave 470, traceable

to Naqada IIc-d1<sup>177</sup>. According to P. R. S. Moorey, this seal is of Near-Eastern origin<sup>178</sup>. At Ballas, a limestone cylinder seal was discovered in a tomb from the Naqada IIc-d1 period (tomb 307)<sup>179</sup>. The design shows wading birds and fishes among aquatic plants. This type of long-billed wading bird is totally dissimilar to the birds painted on contemporary Egyptian D-ware pots which are recurrently ostriches<sup>180</sup> and has no equivalent in Egypt. On the other hand this representation of animals among plants finds parallels in Mesopotamia and in Iran (*i. e.* Tepe Sialk IV<sup>181</sup>) confirming its importation into Egypt<sup>182</sup> during the Middle Uruk period. At Naqa ed-Dêr, a yellowish limestone cylinder seal was uncovered in grave 7304<sup>183</sup> datable to Naqada II d1 as indicated by the material<sup>184</sup>. Its decoration is made up of four fishes, a net, a herringbone pattern and a line of crosses (Pl. 2). This kind of pattern with net and fish is again very common in Mesopotamia during the Middle Uruk period as well as in the peripheral areas (*e. g.* Tepe Giyan<sup>185</sup>). The relationship with Mesopotamia in this case could be reinforced as well by the finding of lapis beads and discs in the same grave. One more cylinder of this style, associating fish/oval/net motifs<sup>186</sup>, was found in Egypt but out of context. There is thus no reason to think that most of these cylinder seals were “made in Egypt” imitating Mesopotamian glyptics, as supposed by H. Kantor<sup>187</sup>. However, the fish and net motif could have been imitated later by Egyptians, as shown by seal impressions from the late Naqada II d-III c1 periods but the theme was treated in a local style (*infra*).

At Matmar, a stone cylinder seal was found in grave 3039, dating to the Naqada II d1<sup>188</sup>. The pattern displays three columns with oval motifs (fish?), slashes and herringbone patterns (Pl. 2). We find close parallels in Mesopotamia (*e. g.* Susa<sup>189</sup>) (Pl. 2). This cylinder, like all the others mentioned above, is an import. In Nubia at Gerf Hussein<sup>190</sup>, a “green glazed” ceramic cylinder seal was found in grave T 160, datable to Naqada II d1 thanks to the typical pottery of the period (D 10k and W 24). This seal bears a triangular alternative design and double-slash motifs (Pl. 2). We can find this kind of pattern in Mesopotamia, for example at Fara<sup>191</sup> (Pl. 2). Lastly, among cylinders with no known context is a “blue glazed” clay cylinder seal representing three rows of felines with tails above their backs (Pl. 2). It is part of the series labeled the “baggy style” which can be found in Middle Uruk sites (*e. g.* Telloh<sup>192</sup>) (Pl. 2). Concerning this seal, we reject R. M. Boehmer’s



argument, which considered it as being locally-made in Egypt due to the middle row of felines being staggered rather than aligned with respect to the upper and lower rows (R. M. Boehmer suggested that this was an “artistic touch made by an Egyptian hand”). As of the Early Middle Uruk (LC 3), Mesopotamian glyptics clearly show that rows of animals on the seals can be totally unaligned, as we can see on a Middle Uruk seal from Telloh featuring a school of fish<sup>193</sup>. Like H. Frankfort<sup>194</sup>, we believe that this seal should be considered as an import from Mesopotamia.

All of those seals appear to be artifacts imported from Mesopotamia during the Middle Uruk period. It is not surprising to note a concentration of glyptic material in the Naqada/Ballas region (around 40% of the cylinders discovered in archaeological contexts). This chiefdom would have controlled the gold-producing region of the Wadi-Hammamât, the source of its prosperity<sup>195</sup>, and appears as the main trading hub of Upper-Egypt as well as the greatest consumer of exotic products in the Nile Valley at Naqada IIc-d1.

### **2.3.2. What was the real function of the earliest glyptics discovered in the Egyptian tombs: accounting tools or luxury beads ?**

Another issue is the precise function of the mentioned and presumably imported glyptics found in Upper-Egyptian graves, between Naqada IIb and Naqada II d1, because such items would not have been used as signing devices by Egyptian officials before the following phase (late Naqada II d-early IIIa) (*infra*). The discovery of an ivory cylinder seal suspended on a string around the owner’s neck in tomb 1035 at Abusir el-Melek<sup>196</sup> (dated late Naqada II d<sup>197</sup>) could mean that it also had an ornamental function (for A. Scharff it was intended to make the hunt fruitful for the bearer). That notion is echoed by the earliest seal unearthed in Egypt, the hemispheroid model from Naqa ed-Dêr grave 7501, which was also found in association with a Red Sea shell as part of a bracelet. Likewise, the cylinder seal from another tomb from Naqa ed-Dêr (grave 7304) was placed near the face in a bowl among other adorning artifacts (ivory hair-pin, end-scraper, beads, bits of copper). Likewise, in Ballas tomb 307, the cylinder seal was associated with an eggshell disk pierced for suspension at one end and both objects were placed in front of the deceased’s head. In all these cases it seems that Egyptians first adopted the Urukian seals and cylinder seals as distinctive and adorning artifacts rather than as means for identifying goods and/or their owners.

According to our analysis the glyptic set unearthed in Egypt that is related to the mid-Naqada II is of Mesopotamian origin, probably in its entirety. It consists of stone seals and cylinder seals of similar aspect, material, and decoration to those made in the Uruk sphere. The Egyptians were certainly aware of the existence of the artifacts but we have no evidence that they used them immediately for what they had been created for in Mesopotamia, namely as signature tools. Such a hypothesis is bolstered by the fact that no clay seal impressions have been found for that period in Egypt, indicating that there were no locally-established organized legal or commercial authorities who used seals as was the case in Mesopotamia. The seals we have described have so far only been found in burial places among other distinctive adorning items like the lapis beads. It is possible thus that Egyptians first used imported seals to show the power and wealth of local elites. Noticing that they were used by the scribes, wealthy merchants and powerful dignitaries of more advanced Mesopotamia and its surrounding cultures, Egyptians

might have appropriated glyptics as jewelry at first, then as symbols later on. Having developed their own social and political structure, they would finally have used them as the tools they were meant to be (see *infra*, part 3).

In contrast, certain mythological themes conveyed by the Urukian glyptic, were perfectly understood by the earliest Nile valley elite, as can be seen in what is at least an imitation of the eastern “Master of the beasts” theme in a Hierakonpolis tomb. This motif is common on seal impressions in Eastern Anatolia (e. g. Degirmentepe<sup>198</sup>) and in Southern Mesopotamia (e. g. Susa 25<sup>199</sup>) in Late Ubaid layers (c. 4400-4100 BC). In these 5<sup>th</sup> millennium Mesopotamian seals, a common motif is a man clutching two ophidians, probably a forerunner of the “Master of the beasts” theme which appears for the first time in the 4th millennium in the Urukian layers of Susa. In Egypt the “master of the beasts” motif appears for the first time at Hierakonpolis<sup>200</sup>, painted on the brick walls of a large rectangular tomb belonging to a local chief (tomb 100). The artifacts, particularly the presence of a W 14<sup>201</sup> - pot characteristic of the Naqada IIc period only (tab. 1) - dates the famous tomb in this phase<sup>202</sup>. The hunting and warfare wall paintings show a man standing between two felines and grasping them by their throats. It is noteworthy that the theme of the “hero” between two felines was dealt with by the Egyptians in their own style. The motif would later on be extensively duplicated in Egypt.

The seals and cylinder seals we have described bear witness to an early link between Mesopotamia and Egypt. It should be noted, however, that the relationship between Egypt of the Naqada IIb / IIc-d1 periods and Mesopotamia of the late Middle Uruk period (LC 4) was one-way. To date, no trace has been found of any contemporaneous Egyptian artifacts in the regions of the Euphrates and Tigris rivers and their tributaries. On the other hand, the imported artifacts and Mesopotamian influences in Egypt are manifold. In that light, it is certainly of interest to investigate the means of cultural transmission from Mesopotamia to Egypt. Since communications at the time did not include warfare, transactions were based on the trade of goods. Yet, in the present case, we only have evidence of the Mesopotamian contribution, but no apparent reciprocity. This seemingly one way relationship might raise the existence of “invisible” counterparts, such as textiles or grain, which either left no archaeologically definable evidence or very few traces, such as with gold. A second issue to look at more closely involves the middlemen who were familiar with Egyptian and Mesopotamian trade networks, namely Palestinian and Lebanese merchants.

### **3. Ideological and economic impact of the imagery of Late Uruk culture (LC 5) and of Uruk record-keeping technologies on Upper-Egyptian society during the late Naqada II-d-early IIIa (c. 3300-3150 BC).**

In the last third of the Fourth millennium, the Late Uruk and late Naqada II-d-IIIa cultures became involved in new expansion toward regions located further north along their river valleys. The reasons for this expansion are complex and based on demographic (overpopulation of the southern centers of the two regions) and political factors (competitions between chiefdoms). It can also be explained by the drive by local elites to acquire exotic goods through the implementation of trade networks. All this results in the installation of colonial enclaves and outposts involving cultural changes in regions which were militarily powerless.

The “Urukian colonization” area in Late Uruk (LC 5) is located in Northern Syria on the banks of the Upper-Euphrates. From this position, Urukian enclaves (*e. g.* Habuba Kebira) controlled the trade routes leading to the north (Anatolia) and to the southwest (the Levant). To the East of Mesopotamia we also have evidence of a series of isolated Urukian outposts (*e. g.* Godin Tepe) settled on the Iranian plateau. The Naqada colonization area during late Naqada IId-IIIa develops mainly in the eastern Delta. Through enclaves (*e. g.* Minshat Abu Omar) and outposts, the Upper-Egyptian centers had direct access to the trade routes leading to the western Delta and Palestine.

We find some Egyptian artifacts from the Naqada IId period<sup>203</sup> in Palestine in several Middle EB I tombs of Azor. These artifacts include weapons (a pear-shaped stone macehead and a rippleflake blade), golden tubular beads, and possibly an Urukian spout-jug in red clay (?)<sup>204</sup>: this may point to the existence of a land trade route linking Mesopotamia to Egypt via the Southern Levant.

In Egypt, the period of late Naqada IId-early IIIa is a phase of intense competition between chiefdoms, and involves the expansion of the Naqada Culture toward both the north and south of the Nile valley. The expansion of the Naqada Culture in the north of Middle Egypt at Naqada IId-d1, was followed by its taking roots in the Delta itself. The most powerful chiefdom at that time was Abydos, which completely took over Naqada. These chiefdoms clashed militarily, as suggests the decoration featured on a group of carved ivory rippleflake knife handles. The battle scenes clearly depict killed or captured enemies. A piece of a carved ivory knife from Abydos U-127<sup>205</sup>, a tomb dating to late Naqada IId, features tribute bearers carrying vases and offerings from Lower-Egypt and Palestine, as well as bearded prisoners with their hands tied behind their backs (Fig. 2). These same bearded enemies appear in relief with raised and crossed arms on a stone vase (the only known vase of its kind), the “Bally vase”, that can be linked to the period of late Naqada IId<sup>206</sup>. The period of Naqada IIIa experienced the rise to power of leaders from the El-Amrah/Abydos area, as illustrated by a rock-cut tableau from Djebel Tjauti<sup>207</sup> recounting military victories over neighboring chiefdoms, and once again, the variety and richness of the offerings unearthed in the Abydos U-j tomb are those of a powerful local warlord dominating major expanses of the Nile valley.

Although one finds an iconography directly inspired by the Mesopotamian mythological pictures of Late Uruk (LC 5) mainly on the ivory handles of the chiefs’ knives or on knife handle’s gilt with gold leaf, it is also to be found on later commemorative slate palettes (which are not dealt with in this paper<sup>208</sup>).

### **3.1. Were Egyptian ceramics found in Northern Syria at Habuba-Kebira ?**

In Northern Syria, D. Sürenhagen reports the discovery of a N-class Nile ceramic on a Late Uruk (LC 5) site at Habuba Kebira<sup>209</sup>. It is described as a “rim fragment of an anthracite-colored unburnished, handmade bowl or beaker with white incrustated punctuation inside and outside”. N-ware is a pottery from the Nubian sphere (also named “Black Incised ware”), and is distinguished by specific shapes and burnished surfaces, frequently featuring incised or stamped decoration with a filling of white gypsum. Its appearance in Egyptian graves is rare. For example, it is found only in 1% of the graves on the large cemetery of Naqada in a timeframe spanning

from Naqada Ic to Naqada IId1: a chronology corresponding in Northern Syria to Middle Uruk layers (LC 3/LC 4). The absence of any slip on this vase fragment, and the presence of very similar black-incised ware in many peripheral prehistoric societies including ones in Anatolia, leads us to reject the notion of an Egyptian origin. The significant chronological gap between the period of the appearance of the Black-Incised ware in Egypt and Habuba Kebira's activity phase (LC 5) makes such a relationship impossible. In contrast, D. Sürenhagen accurately reports the finding of a Palestinian jar sherd at Habuba Kebira. It is a wavy ledge-handle typical of Middle EB I testifying to a link between Palestine and Northern Syria at this period.

In Egypt, on the other hand, as in the preceding period, we do find a few "Urukian style" spout-jugs in some late Naqada IId-early IIIa graves<sup>210</sup> (*e. g.* Mahasna H 131a and H 123, Salmany tomb 49), but they appear to mostly belong to the local red polished ware class. The few spout-jugs found at Minshat I<sup>211</sup> or at Abydos (U-j tomb)<sup>212</sup> according to clay analyses are imported wares from Palestine. On the other hand, we find a small four-lugged imported jar made of a fine light brown clay with a whitish slip and an incised decoration connecting the lugs at el-Mostagedda (tomb 1837<sup>213</sup>, *c.* late Naqada IId ?) comparable to Late Uruk (LC 5) jars that we find, for instance, at Habuba Kebira<sup>214</sup> or Susa.

### **3.2 The lucrative commerce of lapis lazuli and obsidian in Egypt during the Late Uruk (LC 5): a Syrian connection ?**

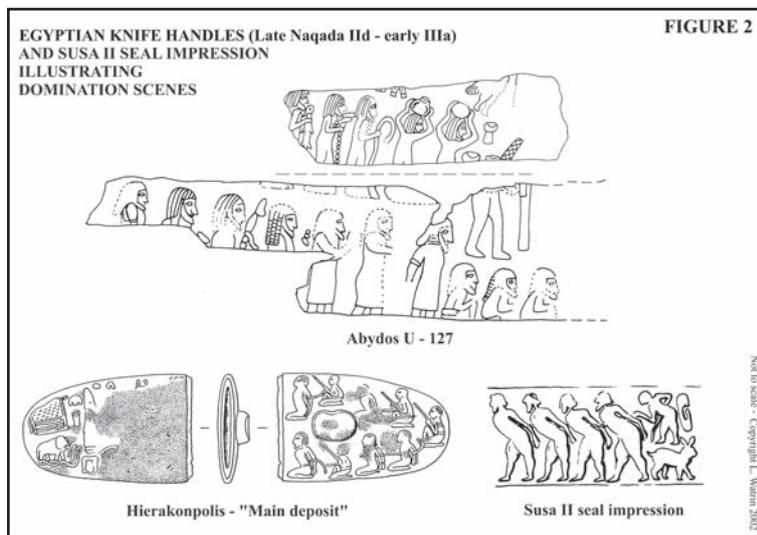
Lapis continued to be imported into Egypt in late Naqada IId/IIIa but on a smaller scale. It is found in 21 tombs located on 11 sites<sup>215</sup> (compared to 41 tombs for Naqada IId-IIIa). It occurs in Upper-Egypt, but also in the Nile Delta at Minshat Abu Omar<sup>216</sup> in four tombs dating from late Naqada IId and in funerary deposits from Tell Samara dated to Naqada IIIa<sup>217</sup>. In Upper-Egypt this blue stone is present in 16 tombs in the late Naqada IId-IIIa period tombs located on 9 sites<sup>218</sup>. We note a concentration of lapis lazuli artifacts (*c.* 40%) in the area of Abydos/El-Amrah (8 tombs) where this exotic material is found in particularly wealthy tombs that also contain gold (*e. g.* Abydos Uqq<sup>219</sup>, El-Amrah b 17<sup>220</sup>). It always appears in the form of beads and small pendants, sometimes in naturalistic shapes (shell and lapis flies at Hierakonpolis tomb 11<sup>221</sup> dated to late Naqada IIIa). The Urukian centers of Northern Syria may have served as a hub for the transport of lapis lazuli, as some unworked chunks of lapis lazuli imported to the Late Uruk/LC 5 site of Djebel Aruda might indicate<sup>222</sup>.

Inventories in Upper-Egypt demonstrate that obsidian is found in at least 13 tombs from the late Naqada IId-IIIa period<sup>223</sup>. Obsidian artifacts are concentrated at Abydos, the main center of Upper-Egyptian chiefdoms (9 tombs). Most of them are very rich in offerings and belong to powerful individuals (Abydos E 381, U-j, U-503, Naqada 140, Hierakonpolis tomb 11). A third of these Upper-Egyptian tombs also contain lapis (Abydos U-545, U-qq, U-g, Hierakonpolis tomb 11). No analysis is available concerning the origin of the obsidian found in these tombs. In the preceding period of Naqada IId-IIIa, analyses of obsidian samples from the Delta show that the source was clearly Anatolian (*supra*). While we have no such sample for the Lower-Egyptian sites at the late Naqada IId-IIIa periods, it is likely that the same circuits continued to function during the Late Uruk (LC 5), with obsidian transiting through the Upper-Mesopotamian sites (*i. e.* Tell Brak TW phase 12<sup>224</sup>).

Likewise, a concentration of obsidian in the form of 19 blades distributed in 11 tombs contemporary with late Naqada IId-IIIa<sup>225</sup> is reported from Abusir el-Melek, the southernmost site of Lower-Egypt. The presence of four obsidian blades in tomb 1035<sup>226</sup> of Abusir el-Melek in association with a cylinder seal that was most likely imported from a region strongly influenced by Uruk, suggests that obsidian is one of the exotic products (along with lapis and Levantine wine jars<sup>227</sup>) that the Eastern trade networks brought into Lower-Egypt in the second part of the 4th millennium.

### 3.3. A Mesopotamian iconography on the weapons of the Upper-Egyptian Elite ?

The earliest carved knives have a “mushroom”-shaped hilt and appear in Egypt around Naqada IId1. Some of them are particularly exquisite : one specimen from the area of Gebelein<sup>228</sup>



features a golden handle decorated with three women’s silhouettes on one side and a boat on the other side, with a V-shaped flint blade. Its decoration is wholly Egyptian, reproducing patterns usually found on D-class pottery of the Naqada IId-IIIa periods. A second knife, datable to Naqada IId1 (El Amra tomb b 230<sup>229</sup>), with a similar but undecorated ivory handle, and a copper blade may allow us to confirm the same chronology for the Gebelein knife.

At late Naqada IId1, the shape of the knife hilt changes as does the decoration of knife handles. They move to a “spatula” shape with a central small oval bump with a hole for attachment to the belt on one of the two sides and support a rippleflake-type flint blade. R. M. Boehmer<sup>230</sup> was the first to attempt a chronological classification of the knives, basing them on a set of decorated knives purchased on the market, and proposing to identify three distinct chronological series. An ancient series made up of animal parades is placed at the end of Naqada IId (*e. g.* Abu Zeidan and Pitt Rivers knives), a middle series made up of more restrained groups of animals (*e.g.* Gebel el-Tarif knife) and a recent series involving human figures, boats and buildings (*e.g.* Gebel El-Arak knife) (Pl. 3). These two later series were placed in Naqada IIIa. Recent excavations at Abydos conducted by the DAI demonstrate that it is risky to apply such a classification because decorated knives showing animal processions (Abydos U-503<sup>231</sup>) and tribute-bearers and prisoners (Abydos U-127<sup>232</sup>) have been discovered in tombs of the same period (Naqada IId).

Consequently, nothing disproves the notion that the knives bearing motifs of Mesopotamian inspiration date back to Naqada IId, including the well-known Djebel el-Arak knife, which until now was assigned to a much later period (*infra*). In Abu-Zeidan tomb 32<sup>233</sup>, J. de Morgan unearthed a carved knife with a rippleflake blade in a set of weapons placed next to

a fallen warrior whose artifacts are datable to late Naqada IId<sup>234</sup>. Its decoration features a series of seven elephants treading on an intertwined pair of snakes in the top register of the object, while several animal processions are shown below. We again find the theme of the elephant treading on a pair of snakes on a carved ivory knife handle from Hierakonpolis<sup>235</sup> (Fig. 2) and on the “Carnavon knife”<sup>236</sup>, which are clearly contemporary with the same period, as well as on the gold-leaf gilt handle of a pear-macehead belonging to a high dignitary discovered in Nubia in Sayala cemetery 137 (tomb 1)<sup>237</sup>.

On each of these ceremonial objects, the elephants treading on a pair of twisted snakes are placed at the summit of a pyramidal composition, heading the animal processions (herons, felids, bovids, caprids, etc.), placing them in a dominant position. On the Carnavon knife preserved at the MMA, only one elephant is represented, separately from the other animals and placed in the leading position. The theme of an animal trampling on snakes is a familiar Mesopotamian theme, as E. Teissier demonstrates in displaying an Uruk IV seal impression featuring two opposing bovines walking on a pair of twisted snakes, or another seal impression from Susa 17 featuring a row of birds appearing above and below a pair of twisted serpents<sup>238</sup>. The Egyptians seem to have adapted this eastern image by introducing local animal life. Featuring the image of an elephant treading on a pair of snakes, they created, through this warlike image, a strong symbol that would serve the emerging power elites. In this respect, the elephant treading on a pair of snakes at the head of animals on the Carnavon knife might represent the leader of his people.

Another Mesopotamian theme carved on two rippleflake knives, the first one being preserved at the Cairo Museum (the “Djebel el-Tarif knife”<sup>239</sup>) and the second one at the University College (the “Petrie Museum knife”<sup>240</sup>) is that of two intertwined snake bodies enclosing two or three florettes. The so-called Djebel el-Tarif knife (Pl. 3), according to E. Amélineau, was discovered in 1896 at the El-Amrah cemetery near Abydos then stolen by one of his workers<sup>241</sup>. The same year, the piece was bought in Cairo by J. De Morgan<sup>242</sup> and later called the “Djebel el-Tarif knife”.

According to R. M. Boehmer<sup>243</sup> this knife must be dated to Naqada IIIa, but a date in late Naqada IId is much more appropriate<sup>244</sup>. The handle of the so-called “Djebel el-Tarif” knife is made of two sewn golden leaves bearing decoration engraved with a point which features three “florettes” entwined by two snakes on one side. On the other side, carnivores attacking herbivores from behind, and a supernatural animal with splayed wings (a griffin) seems to be following a herbivore. The “Petrie Museum” knife<sup>245</sup> also features an ivory handle carved on one side with two six-petal florettes entwined by two serpents, and, on the other side, with an animal procession (felids and one shell). This imagery of the three “florettes” entwined by two serpents appears at Susa II (= Susa 18-17) on a *bullae* bearing seal impressions<sup>246</sup> (Louvre Sb 1967) (Pl. 3, Fig. 3).

The other side of the “Djebel el-Tarif” knife shows other Mesopotamian imagery including several florettes and felids jumping on the rear of herbivorous animals as well as by the presence of a griffin with a felid body and splayed wings. The theme of the felids attacking herbivorous animals is recurrent in Mesopotamia (Pl. 3) during the second half of the fourth millennium since it is found on cylinder seal impressions on *bullae*<sup>247</sup> (e. g. Susa II, Louvre

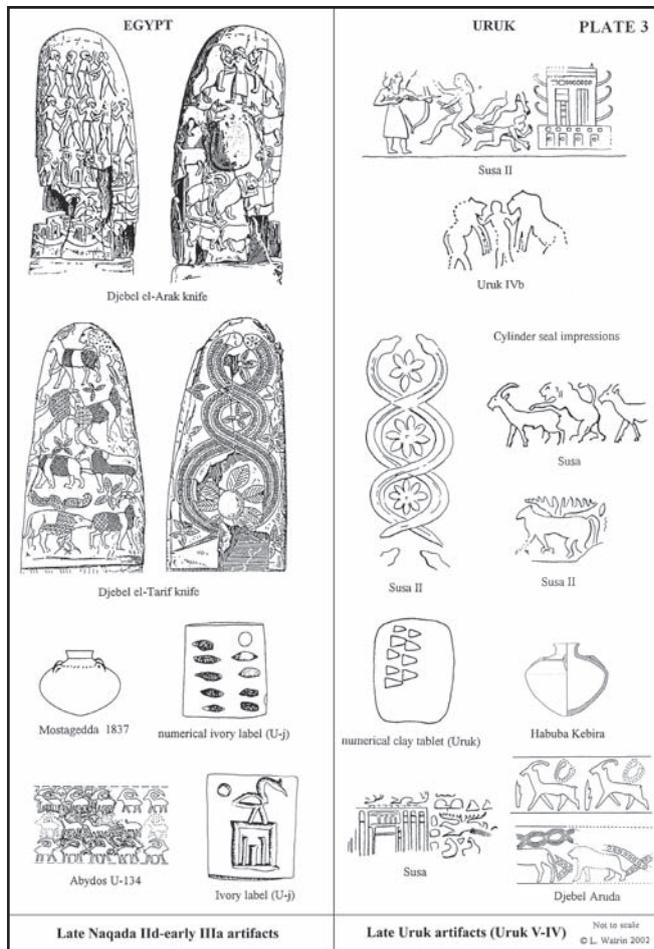
Sb 6949). The griffin with a felid body and splayed wings also has close parallels with cylinder seal impressions from the Uruk sphere<sup>248</sup> (e. g. Susa II, Louvre Sb 2186) (Pl. 3).

Another knife of unknown provenance now in the Louvre Museum is also famous : the “Djebel el-Arak” knife<sup>249</sup> (Pl. 3). The chronology of this object has been questioned (modern copy, Naqada IId or Naqada IIIa). While we have no reservations concerning the authenticity of this object (agreement on this point with R. M. Boehmer), its accurate chronology and its original context are unknown to us. The recent digs at Abydos unearthed several fragments of ivory knife handles in tombs contemporary with Naqada IId. One of them, discovered in Abydos tomb U-503<sup>250</sup> that we date tentatively in late Naqada IId<sup>251</sup>, features, on one side, two men holding a kind of “lasso” and, on the other side, a series of various animals (caprids, bird) and a male lion bearing a mane. The felid and caprid have a similar arrangement on both knives. Besides that, the style of the lion on knife U-503 is strikingly similar to that of the lions’ situated on the top register of the Djebel el-Arak knife. Consequently, this would indicate that the Djebel el-Arak knife might be more or less contemporary with late Naqada IId.

On one face, the Djebel el-Arak knife shows a summary of military conflicts between Egyptian chiefdoms (Pl. 3). A tall and majestic bearded and turbaned personage wearing a long tunic, mastering two male lions with manes, is represented on the other face of the dagger’s handle. The image of a “hero” mastering two lions is attested to by Susa 18<sup>252</sup> and Uruk-Warka IVb cylinder seal impressions<sup>253</sup> (Pl. 3). The bearded and turbaned personage with a long tunic is also well known through a cylinder seal impression found on a fragment of a clay ball from Susa II (Louvre Sb 2125) showing this personage shooting arrows at enemies in front of a palace building<sup>254</sup> (Pl. 3). The scene of the winner of combats that appears on the Djebel el-Arak knife thus borrows from one of Mesopotamia’s strongest symbols: the victorious warlord, leader of the city-state. There can be no doubt that the lions are symbols for beaten enemies.

Another strong power-symbol borrowed from Mesopotamia is the “florette” carved on the Djebel el-Tarif and Petrie Museum knives associated with snakes (*supra*). We again find the florette, this time as an isolated motif carved on the oval boss of the Carnavon knife<sup>255</sup> or incised on a decorated incense-burner from tomb 24 in Cemetery L at Qustul<sup>256</sup> (Nubia). We also find a star on a carved ivory knife of unknown provenance now in the MMA<sup>257</sup>. These three objects are datable to late Naqada IId-IIIa<sup>258</sup>. The florette in the form of an isolated motif also appears later (Naqada IIIb-c1) in association with the Egyptian leader on the ceremonial maceheads of King Scorpion and King Narmer unearthed at Hierakonpolis<sup>259</sup>. In Mesopotamia, the florette or the star is frequently shown placed above an animal in association with other natural forces that can dominate animals (felid, raptors) or humans. The Egyptian and Nubian elites seem to have perfectly understood the power of these foreign symbols, since as early as late Naqada IId-early IIIa they appropriated these symbols for themselves and associate them with the image of their leader wearing a crown as seen on the MMA knife (star) or on the Qustul incense burner (florette). It is noteworthy that the star would go on to become the determinative preceding names of divinities (*dingir/ilu*, God) in Mesopotamia.

The representation of a building with “palace-façade paneling” (another emblem expressing Mesopotamian elite status) appears in Egypt on carved ivory knives. This motif is adopted under the form of *serekh* which is the specific “branding” (signature) designating

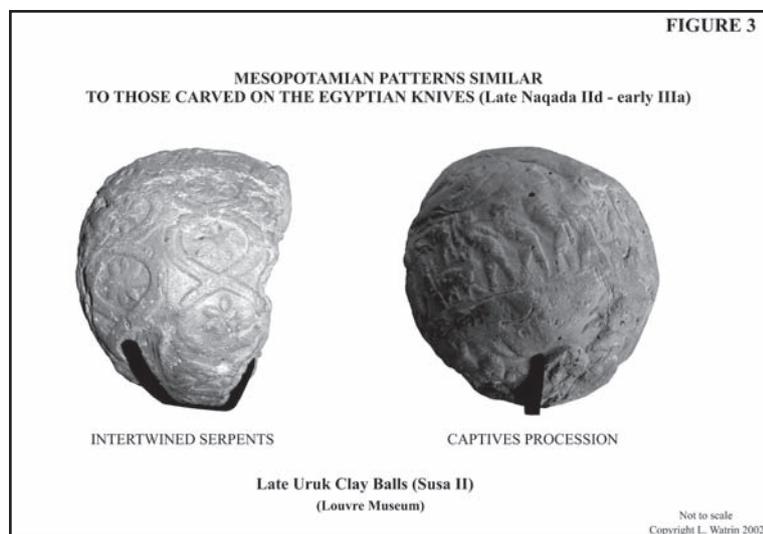


the Egyptian leader. A *serekh* is made up of a main rectangular element that is the representation of a section of the façade of the leader’s palace, surmounted or not by an animal (generally a falcon) with or without an inscription of the leader/king’s name. The earliest of these representations appears on a MMA carved ivory knife<sup>260</sup>. On one side the knife features a probable military marine campaign against the Delta (suggested by a motif referring to this region), and on the other side, the knife features kneeling prisoners facing a paneled façade structure. Beyond the prisoners, men with crooks and throwsticks like those on the carved handle from Abydos tomb U-127<sup>261</sup> (Fig. 2) that we date in late Naqada IId might suggest a chronology in the same period. The first representation of a *serekh*, meaning a rectangular building with paneled façade surmounted by a bird appears slightly later on ivory jar labels from Abydos tomb U-j<sup>262</sup> datable in early Naqada IIIa (Pl. 3). This representation of a rectangular,

paneled building with a flat roof, surmounted by a long-beaked bird (possibly a heron?) could also represent the sanctuary of the locality of Buto<sup>263</sup>.

The origin of this building with “palace-façade paneling”, one of the earliest symbols of Egyptian kingship, is once again borrowed from Mesopotamia. Indeed, Susa II and Uruk IV glyptics frequently feature niched brick architecture, which represent the Mesopotamian leaders’ palaces of this period. Its similarity with the Egyptian *serekh* is striking. Our own work on the relative chronology between Egypt and Mesopotamia (tab.1) establishes a chronological correlation between Uruk V-IVc-b and late Naqada IId-early IIIa, which makes the relation all the more plausible. Furthermore, a Susan seal impression<sup>264</sup> featuring a façade of a Mesopotamian palace crowned by a pair of animals could be a direct prototype of the Egyptian *serekh* crowned by a bird (Pl. 3). Lastly, H. Smith’s works<sup>265</sup> show that the association of a boat and niched brick architecture, that are found on the Uruk IV seal impressions, also appears on the MMA carved ivory knife handle which already incorporates other symbols borrowed directly from Mesopotamia (*supra*).

Lastly the parading of prisoners, very common on Egyptian knives (*e. g.* U-127) is also a theme common to the two cultures, with similarities both in the choice of the theme (*e. g.* a clay ball from Susa II<sup>266</sup>) and in the realistic rendering that is new to Egypt in this period. The



theme of domination of prisoners is known in Upper-Egypt from the Naqada Ic period (*e. g.* C-class ware from Abydos U-239) then is found during Naqada IId (*e. g.* wall painting from Hierakonpolis tomb 100) but the rendering of the animated creatures (human and animals) is radically different, with a graphical and abstract treatment. The Naqada IId knife handles signaled a change in the motif, which became realistic and similar to Mesopotamian glyptics. We can thus put forward the hypothesis

that these realistic motifs on the handles of Egyptian knives, without precedent, were inspired directly from realist Urukian art, passed on by the imprints of seal-cylinders accompanying imported goods. This would explain the presence of the major themes of Urukian civilization on objects belonging to the Egyptian Elite like the beastmaster theme, florette, and intertwined snakes (*supra*).

### 3.4. The origins of the Egyptian glyptic and numerical notation ivory labels: a Mesopotamian link?

In the period preceding Naqada IId-d1, facts indicate that there were no imprints of cylinder seals and that the few cylinders placed in Egyptian tombs – which all have parallels in Mesopotamia – were really imported from the Uruk sphere (*supra*). As opposed to Mesopotamia where early glyptic innovations in the form of stamp seals led to the invention of the cylinder seal at the beginning of Middle Uruk –corresponding to the Naqada I period in Egypt (tab. 1) - the Nile Valley has revealed no prototypes preceding the application of full-fledged cylinder seals<sup>267</sup>.

Lacking any trace of an administrative organization comparable to that of Uruk in Palestine or in Lebanon in the EB I (the few seals impressions with crude patterns discovered in these regions (*i. e.* Megiddo V, Byblos)<sup>268</sup> were rolled on jars before firing, suggesting a decorative function), we suppose that there might have been a direct transmission mode involving a maritime route between the Syrian shore and the Delta<sup>269</sup>. It is clear that the Ras-Shamra/Ugarit port was likely a major relay between the sites of the Upper-Euphrates and those of the Nile Delta. As shown by the Obeid pottery found on the site, the port had maintained close ties with the Mesopotamian world since the Neolithic period. Its later contact with Mesopotamia is proved by the presence there of Uruk cylinders and stamps adorned with a caprid-motif<sup>270</sup> (comparable to those found in Egypt, *infra*) (Fig. 4A).

The earliest evidence for the use of cylinder seals in Egypt comes from the impressed mud sealings found at Abydos Cemetery U in tombs dating to the late Naqada IId-IIIa periods<sup>271</sup>.

We note a concentration of clay seals in this location since a dozen tombs have produced small elliptical clay *bullae* covered by seal impressions as a primitive means of stringing sacks or boxes. According to U. Hartung, these seals are made of Nile alluvial clay. The horizontal stratigraphy of the cemetery, the architecture of the tombs, the ceramic (mainly W and L classes) and the seal impressions allow the establishment of a relative chronology of the tombs containing glyptics. The tombs U-127, U-133, U-134, U-153, U-170 and U-210 date to late Naqada IId<sup>272</sup>, U-j tomb dates to early Naqada IIIa and the U-h and U-g tombs date to late Naqada IIIa<sup>273</sup>. Such glyptics on clay *bullae* are often found in tombs associated with ceramic imports from Palestine (*e. g.* U-134, U-j), which raises the question of the administrative control of Upper-Egypt to its borders as of late Naqada IId.

#### 3.4.1. Mesopotamian influences transiting through the Nile Delta ?

The glyptics of the U-j tomb were found in rooms containing Palestinian jars (about 400 pots containing wine), while the rooms containing Egyptian ware (about 200 pots of the W 50 and W 51 types containing oil or fat) did not feature any glyptics. As such there is clearly a connection between the Palestinian ceramics and the glyptics that are associated with them. Despite having cylinder seal impressions at Abydos, no locally-made cylinder seals have been found in Upper-Egypt for the late Naqada IId-early IIIa periods. That may suggest that the products were stamped far away from this region. We have already advanced the idea that while a portion of the Palestinian jars from U-j tomb were clearly imported from the Judean hills (confirmed by petrographic analyses<sup>274</sup>), another portion may have been made in Lower-Egypt (rather than in the Abydos region as proposed by N. Porat and G. Goren<sup>275</sup>). In the U-j tomb, a series of atypical Palestinian jars without exact counterparts in Palestine (mainly bottles without handles of 35 - 40cm high) raises the question as to the location of their manufacture. Upper-Egypt in Naqada IId-IIIa apparently had no wine industry, which contrasts with probable viticulture in Lower-Egypt as of Naqada IId-c (as demonstrated by remains of *vitis vinifera* at Buto I<sup>276</sup>). Likewise, Buto III features sherds of Palestinian ceramics of the same type as that imported in the U-j tomb<sup>277</sup>. These two phenomena suggest that the jars may have come from Lower-Egypt. The particular make of these jars strongly suggest a “Palestinian touch” which might have resulted from the presence of Palestinian groups continuing to live in the Delta after the fall of Ma’adi (*i. e.* Naqada IId). If that was in fact true, then some of the “Palestinian” wine jars from the Abydos tombs might have been a tribute levied on a Lower-Egypt region (Western Delta ?). In which case it would still be hard to determine which authority stamped these jars. Was it the authority that processed the tribute or the one that received it? The Delta traditionally being the entry-point for technological innovations from the East (*i. e.* the potter’s wheel at Buto I, stone architecture and copper metallurgy at Ma’adi) it is likely that Lower-Egypt adapted a system of goods-management derived from Mesopotamia some time before Upper-Egypt.

The only cylinder seal that is clearly Egyptian and contemporary with Late Naqada IId is a model in ivory discovered in a Lower-Egypt tomb (Abu-Sir el-Melek 1035) (Fig. 4B). Like some cylinder seal impressions from the U-j tomb, it presents a rather disorganized animal motif that fills the entire space; the Eastern influence can be seen in the carnivore chasing

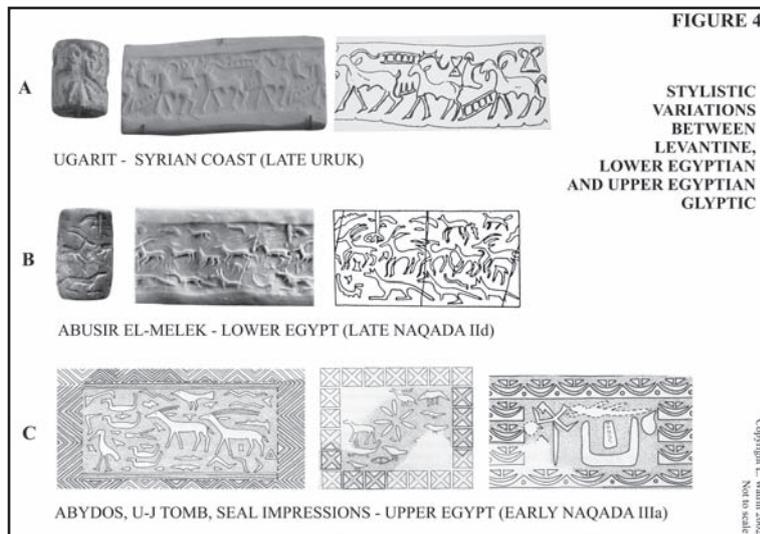
a caprid, a theme also found on the Djebel el-Tarif knife (*supra*, Pl. 3). The themes of the Abydos glyptics in late Naqada IId tombs are nets and fishes, insects and a register of animals alternating fish and caprids (U-127). We also find caprid processions with a felid in the middle of the composition (U-134), an isolated animal (a canid or a bird) in the center of a geometric composition (U-153, U-210), and exclusively geometric compositions whose most frequent motif is in the form of a crown or mountain range (?) with three or four peaks (U-134, U-210). In tomb U-j (early Naqada IIIa) the seal impressions are made up of groups of animals (caprids, birds, scorpions) with an occasional floral motif recalling the “florette” in the middle of various animals (Fig. 4C). These scenes are systematically surrounded by a geometrical band that is specific to this glyptic. Another seal impression unearthed in tomb U-j, made up of an emblem and a building, may be the earliest attestation of the shrine of the goddess Neith in the Western Delta<sup>278</sup> (Fig. 4C), another indication that some of the products originated in the Delta.

### 3.4.2. A glyptic illustrating the emergence of a State ?

The Abydos glyptics illustrate a structuring phase of Egyptian society. In comparison to the Mesopotamian glyptics, the Abydos assemblage is very small (two to five times smaller<sup>279</sup>). However, the source of inspiration of this innovation and to a great extent of the imagery is, once again, the Uruk sphere. The theme of the net and fish that already appeared in Egypt during the preceding period through imported glyptics is clearly adopted by the Egyptian bureaucracy. Also imitated on the Abydos seal impressions are the old Mesopotamian motif of the caprid processions, the motif of a felid following a caprid and the motif of a school of fish (see the example at Djebel Aruda<sup>280</sup> for parallels in a contemporary context) (Pl. 3).

P. Amiet, A. Lebrun, F. Vallat and D. Schmandt-Besserat<sup>281</sup> made a whole survey of the evolution of the Urukian record-keeping system, which at the outset was based on *calculi*, small earthen objects in geometrical shapes symbolizing quantities of certain goods (*e. g.* an ovoid token for one jar of oil, a cone for a small measure of grain). As of the Middle Uruk we see an evolution of this system with the appearance of tokens sealed in clay *bullae* on which a cylinder seal has been rolled (*e. g.* Hacinebi Tepe B2<sup>282</sup>), and sometimes also geometrical impressions made by pressing tokens into the surface (*e. g.* Susa 18). These envelopes were used to keep tokens in archives. The last stage is the appearance of small flat impressed clay tablets (4 – 5 cm in maximum size) bearing both numerical signs that closely resemble impressions of tokens and frequent seal impressions (*e. g.* Godin Tepe V). This evolution toward a flat and solid medium, uniting numerical notation information and public or private administration labeling, is a major landmark in the implementation of the first known system of writing.

In Egypt, at a time slightly later than the emergence of numerical notation clay tablets in Mesopotamia (Susa late 18-early 17/LC 5), we observe the appearance “ex-nihilo” of small bone or ivory labels in the U-j tomb (early Naqada IIIa) with engraved numerical notation marks<sup>283</sup>. These accounting artifacts closely resemble those used in Mesopotamia or in Iran (*i. e.* Godin Tepe V) at the same period (*i. e.* Susa early 17). They are small, flat and rectangular like some Late Urukian impressed clay tablets bearing numerical notation signs. These similarities strongly suggest that Egypt adopted the numerical notation system current in the Uruk world during the early LC 5, while changing the medium (ivory labels rather than clay tablets).



The Egyptian Elite sought precious objects to complement and reinforce its new power, giving rise to exquisite decorated objects based on Mesopotamian mythological themes while adapting them to the local Nilotic context. The resulting weapons and symbols depicted the power of men. It was the desire for such luxury items that drove the importation of essentially decorative and non-practical goods, whose possession ensured

the owner a boost in status within the group. The Egyptian and Urukian societies became much more complex than before, and the development of luxury arts and crafts allowed the respective elites to distinguish themselves through the display of ostentatious items. In Egypt, the Mesopotamian motifs appears to respond perfectly to the necessity of an ideology and of an administration seeking to guarantee a social order that would mainly benefit the elite. The theme of the king mastering felids or of the elephant treading on serpents is an indication of the power of the leader, and are some of the spectacular elements issuing from Uruk mythology which were adapted for the benefit of the Egyptian Elite who then appear to have formed powerful military castes. The Egyptians thus perfectly understood the power of the symbols from the Euphrates areas, and used them to develop their own hierarchical model.

In this respect, the widespread use of the cylinder seal as of late Naqada IId, then the appearance of numerical accounting devices on engraved ivory labels for jars linked to specific products intended for the leader of the U-j tomb (called the “Scorpion King”) during early Naqada IIIa is part of the same kind of system for controlling goods as the one used during the same period in Late Uruk areas (LC 5). The administrative system implemented in the Urukian sphere seems literally to have been extended to Egypt as of late Naqada IId-early IIIa. The system seems to have been adapted rapidly compared to the long development in Mesopotamia, with certain changes making it all the more useful for the Egyptian elite. A tantalizing hypothesis is the physical presence of Urukian traders at Abydos itself, as might be suggested by a group of three B-ware sherds dating from the start of Naqada IId that were found on the surface of the Abydos necropolis, and which feature graffiti which, according to G. Dreyer<sup>284</sup>, could be Proto-Elamite inscriptions.

## Conclusion

This study demonstrates that the first phase of Egypt-Mesopotamian relations took place in the course of Naqada IIb/IIc-d1 (Late Chalcolithic 4). Evidence of that relationship in Egypt includes the importation of exotic minerals (obsidian, lapis lazuli), which in all

probability transited through Urukian networks, typically found among funerary objects such as necklaces for the local elites. We also find Mesopotamian-made ceramic containers typical of the Uruk VI/early Susa 18 period (four-lugged handle, spout jug), which were either partially or totally locally imitated. Lastly, we note imported glyptics consisting of stone seals and cylinder seals, that were re-used in tombs as simple ornaments. The impact of this early meeting with Mesopotamia, through its goods, seems to be confined to the imitation of simple objects (Urukian pottery). In contrast, Urukian glyptics, which only penetrate Egypt as of Naqada IIb-c, represent a more complex element of economic organization, so their equivalents, do not seem to be locally reproduced until later.

The second phase of these relations takes place during the first half of late Naqada II-early IIIa (early Late Chalcolithic 5). This period involves a series of Mesopotamian themes appearing on weapons (knives and maceheads) of Upper-Egyptian leaders. These chiefs, who were also warriors, needed strong symbols to consolidate their ideological power over the Nile population they had recently incorporated at that time. In this respect, the themes of the Mesopotamian elite suited the new social order established at Abydos. The emergence of a central administration at Abydos led to the adoption of a record-keeping system for goods, as illustrated by local glyptic elements and ivory accounting labels. This system appears to be “tailor made”, and it is integrated for reckoning the goods set in the tombs of the earliest Abydos lords, without any of the prerequisite steps leading up to the development of the accounting system, which had taken a much longer time to evolve and be fully implemented by the Uruk culture. The impact of a record-keeping system (numerical notation labels, identification of goods by the means of glyptics), which certainly derives from the Uruk system and shows the evolution of Egypt toward a more complex society, is considerable. This new means allowed the elite to control the inhabitants of the Nile valley in a more effective way, imposing a taxation system under the form of tributes as shown by some scenes represented on the U-127 knife handle.

Both phases of the relationship between the two river-valley cultures are unidirectional, from Mesopotamia toward Egypt. The Nile valley as J. D. Forest<sup>285</sup> noted would be the most distant branch of the Urukian network, an additional source for products lacking in Mesopotamia (metals?). This unidirectional movement raises the question of intermediaries. Levantine merchants would have been strategically located to transmit Urukian cultural elements to Egypt, given their longstanding relations with the Nile valley, but there could feasibly have been some Urukian merchants in contact with the Abydos region, since the administrative communication channels were similar.

This analysis also shows that the relative chronology between Mesopotamia and Egypt established so far is not appropriate and is a source of confusion. For R. M. Boehmer<sup>286</sup>, G. Dreyer and B. Kromer<sup>287</sup>, the Naqada IIb-early IIc periods must be linked to the Uruk phase IV and that of late Naqada IIc / Naqada II-IIIa periods to the Uruk phase III<sup>288</sup> (Djemdet Nasr period). Similarly, P. Miroschedji<sup>289</sup> on the basis of incorrect ceramic analyses performed by D. Sürenhagen at Habuba-Kebira (the so-called « Nubian-ware ») and by T. von der Way and K. Köhler at Buto (the so-called « Urukian nails » and « Amuq F-ware ») established ill-founded comparative chronologies (Naqada IIc-d = Uruk IVa). The interactions with Egypt

that we have considered (from Naqada IIb / IIc-d1 to late Naqada IIId / early IIIa) started and ended well before the final phase of the Late Uruk (Uruk IVa). Our own work (tab. 1), based on precise dating of Egyptian tombs and cross-referencing of Egyptian, Syrian, Palestinian, and Mesopotamian archaeological data, demonstrates that the Naqada IIb/IIc-d1 periods should be linked to Uruk phases VII-VI (Late Middle Uruk/LC 4), whereas the late Naqada IIId-early IIIa periods are contemporary with the Uruk phase V and Uruk phases IVc and IVb (early Late Uruk / early LC 5).

## Notes

<sup>1</sup> The major lines of this article were presented during the Third International Congress on the Archaeology of the Ancient Near-East (L. Watrin, "Cultural Siphoning : 4<sup>th</sup> millennium transmissions from Uruk to the Nile Valley", 3 *ICAANE, Paper Abstracts*, Paris, April 15th-19th, 2002, p. 89). I thank Roger Matthews from the University College of London for proofreading this manuscript during the summer 2002. Thanks also go out to Duncan Caldwell, Nicholas Collins, Pierrick Brihaye and Pierre Henri-Eulert for their proofreading. A copy of the comparative chronology table between Egypt and Mesopotamia which appears at the beginning of the article (tab. 2) was also sent in May 2002 to Frédéric Guyot (University of Paris I) upon request to be included in his future M. A. dissertation directed by J. D. Forest, P. Miroshedji and supported by B. Midant-Reynes.

<sup>2</sup> L. WATRIN, "Copper Drops and Buried Buildings: Ma'adi's Legacy as a Predynastic Delta Trade Capital", in *Bulletin of the Egyptian Geographical Society* 73, Le Caire, 2000, pp. 173-180.

<sup>3</sup> H. KANTOR, "The Early Relations of Egypt with Asia", *JNES* 1, 1942, pp. 196-197, 211. Unfortunately the chrono-stratigraphic position of the find is unclear.

<sup>4</sup> I. RIZKANA and J. SEEHER, *Maadi II*, Mainz, 1988, p. 103, pl. 83, n°2; pl. V, n°2.

<sup>5</sup> E. J. BAUMGARTEL, *The Cultures of Prehistoric Egypt I*, London, 1955, pp. 70-71.

<sup>6</sup> W. A. WARD, "Relations between Egypt and Mesopotamia from Prehistoric Times to the end of the Middle Kingdom", *JESHO* 7, 1964, pp. 3-5.

<sup>7</sup> B. MORTENSEN, "Change in the Settlement Pattern and Population in the beginning of the Historical Period", *Ägypten und Levante* 2, 1991, pp. 11-37; T. WILKINSON, *State Formation in Egypt: Chronology and Society*, London, 1996; S. HENDRICKX, "The Relative Chronology of the Naqada Culture: Problems and Priorities", in *Aspects of Early Egypt*, London, 1996, pp. 36-69.

<sup>8</sup> L. WATRIN, "The Ma'adian Timeframe, A Relational Interpretation of Lower Egyptian Prehistory", *Journal of the Ancient Chronology Forum* 9, Oxon, 2002, pp. 38-50.

<sup>9</sup> The first jar of Petrie's W-class (W 1), bought on the market (!), cannot be dated precisely. This Palestinian jar was imported into Egypt as are the first six jars of the W-class. We observe that these two sets of W-jars, imported and local, sometime appear together (e. g. a W 1g jar was found alongside a W 25 at El-Amrah, tomb b 224, Naqada IIId1).

<sup>10</sup> T. VON DER WAY, "Die Grabungen in Buto und die Reichseinigung", *MDAIK* 47, Mainz, 1991, p. 420. *Ibid.*, *Untersuchungen zu Spätvor- und Frühgeschichte Unterägyptens*, Heildelberg, 1993, p. 5.

<sup>11</sup> C. KÖHLER, *Tell el-Fara'in – Buto III, Die Keramik von der späten Naqada-Kultur bis zum frühen Alten Reich (Schichten III bis VI)*, Mainz, 1998, p. 61, tab. 36.

<sup>12</sup> L. WATRIN, "The Relationship between the Nile Delta and Palestine during the IVth millennium: from Early Exchanges (Naqada I-II) to the Colonisation of Southern Palestine (Naqada III)", p. 1215, in C. J. Eyre (ed.), *Proceedings of the Seventh International Congress of Egyptologists, Cambridge, 3-9 September 1995. Orientalia Lovaniensia Analecta* 82, Leuven, 1998.

<sup>13</sup> D. FALTINGS, "Recent Excavations in Tell El-Fara'in/Buto: News Finds and their Chronological Implications", in C. J. Eyre (ed.), *Proceedings of the Seventh International Congress of Egyptologists, (Cambridge,*

3-9 September 1995), Leuven, 1998, pp. 374-375.

<sup>14</sup> L. WATRIN, "The Ma'adian Timeframe, A Relational Interpretation of Lower Egyptian Prehistory", *Journal of the Ancient Chronology Forum* 9, Oxon, 2002, pp. 49-53.

<sup>15</sup> T. VON DER WAY, *Untersuchungen zu Spätvor- und Frühgeschichte Unterägyptens*, Heidelberg, 1993, pp. 59-73, fig. 20, 141.

<sup>16</sup> D. FALTINGS, C. KÖHLER, "Vorbericht über die Ausgrabungen des DAI in Tell el-Fara'in/Buto 1993 bis 1995", *MDAIK* 52, 1996, p. 95, pl. 4: 1-4.

<sup>17</sup> And not Naqada IId1 as thought by D. Faltings.

<sup>18</sup> G. J. STEIN, *Rethinking World-Systems: Diaspora, Colonies, and Interaction in Uruk Mesopotamia*, Tucson, 1999, pp. 138-145, fig. 7.11.

<sup>19</sup> E. VAN DEN BRINK, "A Transitional Late Predynastic - Early Dynastic Settlement Site in the Northeastern Nile Delta (Tell es-Iswid), Egypt", *MDAIK* 45, p. 64.

<sup>20</sup> M. BEHM-BLANKE, "Mosaikstifte aus der Uruk-Zeit am Oberen Euphrat", *Instanbuler Mitteilungen* 39, 1989, pp. 79-83.

<sup>21</sup> T. VON DER WAY, *Tell el-Fara'in - Buto I, Ergebnisse zum frühen Kontext Kampagnen der Jahre 1983-1989*, Mainz, 1997, p. 194, fig. 49: 1; pl. XXI: 1.

<sup>22</sup> G. DREYER, *Umm el-Qaab I, Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse*, Mainz, 1998, fig. 80 and pl. 33 : 127-128-129.

<sup>23</sup> C. KÖHLER, "The pre- and early dynastic Pottery of Tell el-Fara'in (Buto)", in ECM Van den Brink (ed.), *The Nile Delta in Transition*, Jerusalem, 1992, pp. 20-21.

<sup>24</sup> U. HARTUNG, "Importkeramik aus dem Friedhof U in Abydos (Umm el-Qaab) und die Beziehungen Ägyptens zu Vorderasien im 4. Jahrtausend v. Chr.", unpublished PH. D., Hamburg, 1996, p. 315.

<sup>25</sup> Helwan (Z. Y. SAAD, *The Excavations at Helwan, Art and Civilization in the First and Second Egyptian Dynasties*, Oklahoma, 1969, p. 146, pl. 66). Tell el Farkha (M. CHLODNICKI, K. CIALOWICZ, "Tell el-Farkha (Ghazala)", *PAM XII*, Warsaw, 2001, p. 96, fig. 12).

<sup>26</sup> Elephantine (H. WILDE and K. BEHNERT, "Salzherstellung im vor- und früdynastischen Ägypten? Überlegungen zur Funktion der sogenannten Grubenkopfnägel in Buto", in *MDAIK* 58, 2002, p. 451, fig. 3). Abydos (F. PETRIE, *The Royal Tombs of the First Dynasty*, (I), London, 1900, pl. XLIII, n° 127-128-129). Hierakonpolis (R. F. FRIEDMAN, "Ceramic nails", *Nekhen News* 12, 2000, p. 13).

<sup>27</sup> I. SHAW and P. NICOLSON, *BM Dictionary of Ancient-Egypt*, Cairo, 1995, pp. 104-105.

<sup>28</sup> S. D'AURIA et al., *Mummies and Magic*, Boston, 1988, p. 148, n° 88, fig. 79.

<sup>29</sup> H. WILDE and K. BEHNERT, "Salzherstellung im vor- und früdynastischen Ägypten? Überlegungen zur Funktion der sogenannten Grubenkopfnägel in Buto", *MDAIK* 58, 2002, pp. 447-460, pl. 49-50-51.

<sup>30</sup> This study would confirm our hypothesis that salt was an important resource at Buto, part of its trade with southern Delta (L. WATRIN, « The Ma'adian Timeframe, A Relational Interpretation of Lower Egyptian Prehistory », *JACF* 9, Oxon, 2002, p. 45).

<sup>31</sup> C. KÖHLER, "The pre- and early dynastic Pottery of Tell el-Fara'in (Buto)", in ECM van den Brink (ed.), *The Nile Delta in Transition*, Jerusalem, 1992, p. 17, tab. 1.

<sup>32</sup> U. HARTUNG, "Importkeramik aus dem Friedhof U in Abydos (Umm el-Qaab) und die Beziehungen Ägyptens zu Vorderasien im 4. Jahrtausend v. Chr.", Hamburg, 1996, p. 170.

<sup>33</sup> C. KÖHLER, "The pre- and early dynastic Pottery of Tell el-Fara'in (Buto)", in ECM Van den Brink (ed.), *The Nile Delta in Transition*, Jerusalem, 1992, pp. 20-21.

<sup>34</sup> C. KÖHLER, *Tell el-Fara'in - Buto III, Die Keramik von der späten Naqada-Kultur bis zum frühen Alten Reich (Schichten III bis VI)*, Mainz, 1998, pl. 68: 1-7.

<sup>35</sup> T. Von der Way, *Untersuchungen zu Spätvor- und Frühgeschichte Unterägyptens*, Heidelberg, 1993, p. 34, note 249.

<sup>36</sup> Only one fragment of pottery found in Buto IIIa consisting of a large semispherical bowl with a flat base and a slightly expanded rim might be link with the smooth-faced ware typical of the Amuq plain (C. KÖHLER, "The Pre- and Early Dynastic Pottery of Tell el-Fara'in (Buto)", in *The Nile Delta in Transition*, Jerusalem, 1992, p. 20, fig. 8: 2) that doesn't change our general interpretation of the so-called "Syrian artifacts" from

this layer.

<sup>37</sup> P. BAR-ADON, *The Cave of the Treasure*, Jerusalem, 1980, p. 142, n°1 to 6.

<sup>38</sup> e.g. R. J. WENKE, "Egypt: Origins of Complex Societies", *Annual Review of Anthropology* 18, 1989, p. 141; B. MIDANT-REYNES, *Préhistoire de l'Égypte, des Premiers Hommes aux Premiers Pharaons*. Paris, 1992, p. 205. F. GUYOT (*pers. comm.*, 2002) remains the champion for the Mesopotamian temple of Buto theory.

<sup>39</sup> G. ALGAZE, *The Uruk World System, the Dynamics of Expansion of Early Mesopotamian Civilization*, Chicago, 1993.

<sup>40</sup> R. M. BOEHMER, "Gebel el-Arak und Gebel el-Tarif Griff: keine Fälschungen", *MDAIK* 47, 1991, 59-60. R. M. BOEHMER, G. DREYER, and B. KROMER, "Einige frühzeitliche 14C-Datierungen aus Abydos und Uruk", *MDAIK* 49, 1993, 68.

<sup>41</sup> E.g. P. R. S. MOOREY, "From Gulf to Delta in the Fourth millennium BCE: The Syrian Connection", *Eretz Israel* 21, 1990, pp. 62.

<sup>42</sup> G. ALGAZE, T. N. D'ALTROY, M. FRANGIPANE, H. J. NISSEN, H. PITTMAN, S. POLLOCK, M. S. ROTHMAN, G. M. SCHWARTZ, G. J. STEIN, H. T. WRIGHT, *Uruk Mesopotamia & Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, (Rothman ed.), Santa-Fe, 2001.

<sup>43</sup> G. M. SCHWARTZ, "Syria and the Uruk Expansion", in G. Algaze et al., *Uruk Mesopotamia & Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, (Rothman ed.), Santa-Fe, 2001, p.239.

<sup>44</sup> G. J. STEIN, "Indigenous Social Complexity at Hacinebi (Turkey) and the Organization of Uruk Colonial Contact", in G. Algaze et al., *Uruk Mesopotamia & Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, (Rothman ed.), Santa-Fe, 2001, pp. 285-286.

<sup>45</sup> G. ALGAZE, "The Uruk Expansion: Cross-Cultural Exchange in Early Mesopotamian Civilization", *Current Anthropology* 30, n°5, 1989, pp. 571-608.

<sup>46</sup> B. ABU AL-SOOF, *Uruk Pottery*, Baghdad, 1985, p. 133.

<sup>47</sup> E. OREN and Y. YEKUTIELI, "Taur-Ikhbeineh : Earliest Evidence for Egyptian Interconnections", in ECM Van den Brink (ed.), *The Nile Delta in Transition*, Jerusalem, 1992, p. 371, pl. 9.

<sup>48</sup> Y. YEKUTIELI, "Early Bronze Age I Pottery in Southwestern Canaan", in G. Philip and D. Baird (eds.), *Ceramics and Change in the Early Bronze Age of the Southern Levant*, 2000, 129, tab 8.1.

<sup>49</sup> G. BRUNTON, G. CATON-THOMPSON, *The Badarian Civilisation*, London, 1928, pl. 40, D 67p.

<sup>50</sup> W. M. F. PETRIE, J. E. QUIBELL, *Naqada and Ballas*, London, 1896, pl. 31, W2b.

<sup>51</sup> W. KAISER, "Zur inneren Chronologie der Naqadakultur", *AG* 6, 1957, pp. 69-77.

<sup>52</sup> G. BRUNTON et al., *The Badarian Civilisation*, London, 1928, pl. XL: 59w.

<sup>53</sup> *Ibidem*, pls. XXXII-XXXIII-L.

<sup>54</sup> G. M. SCHWARTZ, "Syria and the Uruk Expansion", in M. S. Rothman (ed.), *Uruk Mesopotamia and its Neighbors*, Santa Fe, 2001, p. 240, fig. 7.5a.

<sup>55</sup> H. T. WRIGHT and E. S. A. RUPLEY, "Calibrated Radiocarbon Determinations of Uruk-Related Assemblages", in M. S. Rothman (ed.), *Uruk Mesopotamia and its Neighbors*, 2001, pp. 104-105.

<sup>56</sup> J. PEARCE, "The Late Chalcolithic Sequence at Hacinebi Tepe, Turkey", in C. Maro and H. Hauptmann (eds), *Chronologies des Pays du Caucase et de l'Euphrate aux IV<sup>e</sup> – III<sup>e</sup> Millénaires, Actes du colloques d'Istanbul, (16-19 décembre 1998)*, Paris, 2000, p. 141, fig. 17.

<sup>57</sup> H. T. WRIGHT and E. S. A. RUPLEY, "Calibrated Radiocarbon Determinations of Uruk-Related Assemblages", in M. S. Rothman (ed.), *Uruk Mesopotamia and its Neighbors*, 2001, pp. 108-110.

<sup>58</sup> J. JORDAN, *Erster vorläufiger Bericht über die von der Notgemeinschaft der deutschen Wissenschaft Uruk-Warka unternommenen Ausgrabungen*, Berlin, 1930, Pl. 19, D: b W12036 M.1.

<sup>59</sup> P. AMIET, *L'âge des échanges inter-iraniens*, Paris, 1986, pp. 55, 243, fig. 17, n°5.

<sup>60</sup> H. DE GENOUILLAC, *Fouilles de Telloh*, Paris, 1934, pp. 34-35 pl. 24 : 2-3, pl. 25 : 2.

<sup>61</sup> D. SÜRENHAGEN, *Keramik-production in Habûba Kebira-Süd*, 1975, pl. 7, n° 66-67.

<sup>62</sup> H. KANTOR, "The Early Relations of Egypt with Asia", *JNES* 1, 1942, pp. 189-191. *Ibidem*, "The Relative Chronology of Egypt and Its Foreign Correlations before the Late Bronze Age", in Ehrich R. (ed.), *Chronology in Old World Archaeology*, 1965, p. 10, fig. 4b.

<sup>63</sup> G. BRUNTON, *Matmar*, London, 1948, pl. XII, D22.

<sup>64</sup> Matmar tomb 5112 can be equally dated in Naqada IIc or IId1. It also contains lapis beads (G. BRUNTON, *Matmar*, London, 1948, pl. XII, D, n° 22).

<sup>65</sup> S. W. HELMS, "Tell Um Hammad and the EB I/Late Chalcolithic Landscape", *Levant* 19, 1987, p. 65, fig. 8, n°6.

<sup>66</sup> G. BRUNTON *et al.*, *The Badarian Civilisation and Predynastic Remains near Badari*, London, 1928, pl. XL, D59d, D 59q. A third jar (D 47d) comes from area 3800.

<sup>67</sup> S. MARK, *From Egypt to Mesopotamia*, London, 1997, p. 27, fig. 13.

<sup>68</sup> At Naqada Cemetery imitations of Uruk jars with a triangular handle begin as of Naqada IIc and not at Naqada IId1 as suggest J. Crowfoot Payne (J. CROWFOOT PAYNE, "The Chronology of Predynastic Egyptian Decorated Ware", *Eretz Israel* 21, 1990, p. 81).

<sup>69</sup> J. C. PAYNE, *Catalogue of the Predynastic Egyptian Collection in the Ashmolean Museum*, Oxford, 2000, pp. 107, n° 864. Another sample of a D-class pot with four lugged handles is preserved in Cairo Museum (Predynastic room/Showcase 4).

<sup>70</sup> R. AMIRAN, in ECM Van den Brink (ed.), *The Nile Delta in Transition*, Jerusalem, 1992, p. 427.

<sup>71</sup> J. C. PAYNE, *Catalogue of the Predynastic Egyptian Collection in the Ashmolean Museum*, Oxford, 2000, pp. 107-108, n° 864-866 (type D 45B).

<sup>72</sup> G. BRUNTON, *Matmar*, London, 1948, pl. XII, D, n°11.

<sup>73</sup> E. J. BAUMGARTEL *et al.*, *Petrie's Naqada Excavation: A Supplement*, London, 1970, XXI, XXVII, (types D 57 and D 50).

<sup>74</sup> D. RANDALL-MACIVER, M.A. and A. C. MACE, *El Amrah and Abydos 1899-1901*, London, 1902, pp. 20, 22, Pl. VIII, D; pl. XIV, (type D 50B).

<sup>75</sup> I. RIZKANA and J. SEEHER, *Ma'adi I: Pottery of the Predynastic Settlement*, 1987, p. 50, pl. 58.

<sup>76</sup> Dating based on the presence of P 13 and P 66 (E. BAUMGARTEL, *The Cultures of Prehistoric Egypt I*, London, 1955, pp. 92-93, fig. 37, 4) typical of Naqada Ic-IIa.

<sup>77</sup> K. KENYON, *Archaeology in the Holy Land*, London, 1960, p. 87, fig. 11, n° 22.

<sup>78</sup> Spouted vessels constitute about 8% of all the vessels in Azor tombs (A. BEN TOR, *Two Burial Caves of the Proto-Urban Period at Azor*. Qedem I, Jerusalem, 1975, pp. 12, 31, 37, 39).

<sup>79</sup> F. PETRIE and J. E. QUIBELL, *Naqada and Ballas*, London, 1896, p. 22.

<sup>80</sup> The material from tombs Naqada 1619 and 1886 tombs is datable in Naqada IIb/IIc-d1. The material from tomb 1211 is only made up of F 58a. E. BAUMGARTEL (*Petrie's Naqada Excavations: A Supplement*, London, 1970) did not register the F 58b found by Petrie in tomb 1619 (F. PETRIE, *Corpus of Prehistoric Pottery and Palettes*, London, 1921, pl. XVIII: 58b.). On the other hand, there are spout-vessels from other tombs in Naqada, but not registered (F 58r, F 58c, F58d). F. PETRIE, *Naqada and Ballas*, London, 1896, pl. XXVI: F 58b (classified later as F 58r (see Corpus, pl. XVIII), F 58c, F 58d).

<sup>81</sup> Mostagedda: the context is unclear: Mostagedda "1800" (G. BRUNTON, *Mostagedda and the Tasian Culture*, London, 1937, pl. XXXIV: 17). However, the Mostagedda necropolis is more a Naqada IIc necropolis (up to 40% of the tombs) than a Naqada IId1 necropolis (up to 20% of the tombs are datable). The relative chronology of the other tombs shows the following classification: Ic-IIa (7%), IIb (8%), IId2 (15%), IIIa (10%). We also note that lapis lazuli appears in two Naqada IIc graves (1759 and 1831). All this suggests that our spouted jar could be dated in Naqada IIc.

Matmar: The relative chronology of Matmar tomb 3110 is difficult to establish so far (see G. BRUNTON, *Matmar*, London, 1948). However, lapis lazuli can only be found in seven Naqada IIc Matmar tombs (2645, 2661, 3005, 3126, 3134, 5112, 5131) and in one Naqada IId1 tomb (3067). As a result, Matmar tomb 3110 could be indirectly dated to Naqada IIc.

<sup>82</sup> G. BRUNTON, and G. CATON-THOMPSON, *The Badarian Civilisation and Predynastic Remains near Badari*, London, 1928, pl. XXXVIII: F 58q.

<sup>83</sup> Susa (P. AMIET, *L'âge des échanges inter-iraniens (3500- 1700 avant J.-C.)*, Paris, 1986, p. 243, pl. 17: 1). Uruk (J. JORDAN, *Erster vorläufiger Bericht über die von der Notgemeinschaft der deutschen Wissenschaft Uruk-Warka unternommenen Ausgrabungen*, Berlin, 1930, pl. 19, Dc).

<sup>84</sup> G. BRUNTON *et al.*, *The Badarian Civilisation*, London, 1928, pl. XXXVIII : F 58l.

<sup>85</sup> J. JORDAN, *Erster vorläufiger Bericht über die von der Notgemeinschaft der deutschen Wissenschaft Uruk-Warka*

*unternommenen Ausgrabungen*, Berlin, 1930, pl. 19, Bz.

<sup>86</sup> G. BRUNTON *et al.*, *The Badarian Civilisation*, London, 1928, pl. XXXVIII : F 58b2.

<sup>87</sup> F. S. A. SETON LLOYD, "Uruk Pottery: A Comparative Study in Relation to Recent Finds at Eridu", *Sumer IV (n°1)*, Baghdad, 1948, table n° 3, n°26.

<sup>88</sup> W. A. GRISWOLD, *Imports and Social Status: The Role of Long-Distance Trade in Predynastic Egyptian State Formation*, UMI, Ann Arbor, 1992, pp. 76, 101, fig. 4-16: 5.

<sup>89</sup> B. ABU AL-SOOF, *Uruk Pottery: Origin and Distribution*, (Ph. D), Baghdad, 1980, pp. 30-31.

<sup>90</sup> V. R. BADLER *et al.* "Chemical Evidence for a Wine Residue from Warka (Uruk) inside a Late Uruk Period Spouted Jar". *Baghdader Mitteilungen band 27*, DAIO, 1996, pp. 39-43.

<sup>91</sup> G. ALGAZE, "Fourth Millennium B. C. Trade in Greater Mesopotamia: Did it Include Wine?", in P. E. McGovern, S. J. Fleming and Katz (eds), *The Origins and Ancient History of Wine*, 1995, p. 95.

<sup>92</sup> P. MCGOVERN, U. HARTUNG, V. R. BADLER, D. L. GLUSKER and L. J. EXNER, "Beginnings of Winemaking and Viniculture in the Ancient Near East and Egypt", *Expedition 39*, 1997, p. 10.

<sup>93</sup> S. HENDRICKX and L. BAVAY, "The Relative Chronological Position of Egyptian Predynastic and Early Dynastic Tombs with Objects Imported from the Near-East and the Nature of Interregional Contacts", in E.C.M. van den Brink and T. Levy (eds), *Egypt and the Levant: Interrelations from the 4<sup>th</sup> through the Early 3<sup>rd</sup> Millennium B.C.E.*, London/New-York, 2002, p. 70.

<sup>94</sup> B. ABU AL-SOOF, *Uruk Pottery: Origin and Distribution*, (Ph. D), Baghdad, 1980, p. 22.

<sup>95</sup> A direct parallel exists in the Louvre museum. Example of light-beige spouted jar in P. MIROSCHEJLI, "Un four de potier du IV<sup>e</sup> millénaire sur le tell de l'Apadana à Suse", *Cahiers de la DAFI n°6*, Paris, 1976, pp. 34-35, fig. 7, n° 8 (Susa 1038) and pl. II, n°9.

<sup>96</sup> This decorated spout-jug discovered in El-Badari area 4600 (G. BRUNTON *et al.* *The Badarian Civilisation*, 1928, pl. XXXIX, 32) is included in a large timeframe of Naqada IIB-c-d1. Similar vessels bearing the same decoration but without a spout can be found in other tombs from El-Badari (tomb 3801 datable in Naqada IIB and tomb 4610 datable in Naqada IID1). We can also note that another vase bearing no decoration but characterised by a spout in the shape of an "elephant trunk" (an Urukian style jar) was discovered in the same sector (El-Badari area 4600).

<sup>97</sup> J. B. HENNESSY, *The Foreign Relations of Palestine during the Early Bronze Age*, London, 1967, p. 30, pl. XXII : 6.

<sup>98</sup> Context: Middle EB I. A. BEN TOR, *Two Burial Caves of the Proto-Urban Period at Azor*, Qedem I, Jerusalem, 1975, p. 39, fig. 9, n° 18; pl. 17, n° 5.

<sup>99</sup> M. E. L. Mallowan had tried to link the Mesopotamian BRB to crude Egyptian ceramic bowls from the Naqada II period, but that's a hazardous connection (W. A. WARD, "Relations between Egypt and Mesopotamia from Prehistoric Times to the end of the Middle Kingdom", *JESHO* 7, 1964, p. 6).

<sup>100</sup> L. WATRIN, *in press*.

<sup>101</sup> M. C. CAUVIN *et al.*, *L'obsidienne au Proche et au Moyen-Orient*, BAR 738, Oxford, 1998. O. AURENCHE *et al.*, *Naissance du Néolithique au Proche-Orient*, Paris, 1999, pp. 87, 134, 184 ; fig. 11.

<sup>102</sup> M. MAKINSON, *Architecture et glyptique en Syrie du nord et en Anatolie aux VI<sup>e</sup> et Ve millénaires*, M. A. Dissertation, Paris I –Sorbonne, 1996, vol. I, p. 86.

<sup>103</sup> I. PERLMAN *et al.*, "Provenience of Obsidian from Neolithic Sites in Israel", *IEJ* 30, 1980, p. 85

<sup>104</sup> M. S. ROTHMAN, "The Tigris Piedmont, Eastern Jazira, and Highland Western Iran in the Fourth Millennium BC, in *Uruk Mesopotamia & Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, (M. S. Rothman ed.), Santa-Fe/Oxford, 2001, p. 379.

<sup>105</sup> A. GOPHER, "Early Pottery-Bearing Groups in Israel –The Pottery Neolithic Period", in T. Levy (ed.), *The Archaeology of Society in the Holy Land*, London, 1998, p. 211.

<sup>106</sup> Gilat, Site Y2 and Site A 301 (references in L. WATRIN, *Les échanges entre la Palestine et l'Égypte au IV<sup>e</sup> millénaire: Etat de la question*, (Unpublished M.A. Dissertation), University of Paris I-Sorbonne, 1995, Vol. I, p. 81).

<sup>107</sup> T. LEVY and D. ALON, "Gilat", in E. Stern (ed.), *NEAEHL*, vol. 2, 1993, p. 517.

<sup>108</sup> J. ZARINS, "Ancient Egypt and the Red Sea Trade : The Case for Obsidian in the Predynastic and

Archaic Periods”, *SAOC 47*, Chicago, 1989, p. 368.

<sup>109</sup> Ash-Shumah (M. TOSI, “Archaeological Activities in the Yemen Arab Republic, Survey and Excavations on the Coastal Plain (Tihamah)”, *East and West 36/4*, 1986, pp. 400-414). Al-Gahabah (M. CATTANI and S. BÖKÖNYI, “Ash-Shumah, an Early Holocene Settlement of Desert Hunters and Mangrove Foragers in the Yemeni Tihamah”, in S. Cleuziou, M. Tosi and J. Zarins (dir.), *Essays in the Late Prehistory of the Arabian Peninsula*, Roma, 2002, pp. 31-53).

<sup>110</sup> Petrie’s SD 34. F. PETRIE, *Prehistoric Egypt*, London, 1920, pl. LI.

<sup>111</sup> Petrie’s SD 44-60. Date ascertained by the presence of an R 23f typical of the IIb and IIc periods. G. BRUNTON, *Qau and Badari*, London, 1927, p. 3, pl. L, n°89.

<sup>112</sup> Presence of R 24 typical of early Naqada II. G. BRUNTON, *Mostagedda*, 1937, pp. 70, 86, pl. 31.

<sup>113</sup> Presence of two D 8r, D 61d decorated ware vases, typical of early Naqada II. G. BRUNTON, G. CATON-THOMPSON, *The Badarian Civilisation*, London, 1928, p. 56, pl. XXXIII.

<sup>114</sup> L. BAVAY, T. DE PUTTER, B. ADAMS, J. NAVEZ, and L. ANDRE, “The Origins of Obsidian in Predynastic and Early Dynastic Upper-Egypt”, *MDAIK 56*, 2000, pp. 15 to 17.

<sup>115</sup> M. TOSI, “Archaeological Activities in the Yemen Arab Republic, Survey and Excavations on the Coastal Plain (Tihamah)”, *East and West 36/4*, 1986, pp. 400-414.

<sup>116</sup> A. LUCAS and J. R. HARRIS, *Ancient Egyptian Materials and Industries*, London, 1989, p. 416. B. ADAMS, “Elite Tombs at Hierakonpolis”, in *Aspects of Early Egypt*, (J. Spencer ed.), London, 1996, p. 13. S. HENDRICKX and L. BAVAY, “The Relative Chronological Position of Egyptian Predynastic and Early Dynastic Tombs with Objects Imported from the Near-East and the Nature of Interregional Contacts”, in E.C.M. van den Brink and T. Levy (eds), *Egypt and the Levant*, 2002, p. 60.

<sup>117</sup> G. L. HARDING, *Archaeology in the Aden Protectorate*, London, 1964. J. MAYER, “The Eastern Desert and the Egyptian Prehistory”, in R. Friedman and B. Adams (eds.), *The Followers of Horus*, Oxbow, 1992, p. 230.

<sup>118</sup> D. FALTINGS *et al.*, “Zweiter Vorbericht über die Arbeiten in Buto von 1996 bis 1999”, *MDAIK 56*, 2000, pp. 138-139, pl. 2: n°1.

<sup>119</sup> For the chronology of Buto IIa and Tell el-Eswed IVa, see L. WATRIN, “Pottery as an Economical Parameter between Palestine and Egypt During the Fourth Millennium BC: From the Palestinian Presence in the Nile Delta (c. 3900-3300 BC) to the Egyptian Rule of Southern Palestine (c. 3300-3000 BC)”, in P. Matthiae *et al.* (eds.), *Proceedings of the First International Congress on the Archaeology of the Ancient Near-East, (Rome, May 18<sup>th</sup>-23<sup>rd</sup> 1998)*, Roma, 2000, pp. 1760-1763, tab. 1 and 2.

<sup>120</sup> E. VANDENBRINK, “A Transitional Late Predynastic - Early Dynastic Settlement Site in the Northeastern Nile Delta (Tell es-Iswid, Egypt)”. *MDAIK 45*, 1989, pp. 83-84-88, pl. 15, n°11. E. PERNICKA, “Analyse eines prädynastischen Obsidianmessers aus Unterägypten”, in *Interregional Contacts in the Later Prehistory of Northeastern Africa*, Poznan, 1996, p. 286.

<sup>121</sup> Presence of a W 19 in tomb 133 and an R 75 in tomb 185, artifacts typical of Naqada IIc-d.

<sup>122</sup> F. PETRIE *et al.*, *The Labyrinth, Gerzeh and Mazghuneh*, BSAE 21, London, 1912, p. 16.

<sup>123</sup> *Ibidem*, pl. XI, W 2c.

<sup>124</sup> C. EDENS, “The Chipped Stone Industry at Hacinebi”, *Paleorient 25.1*, Paris, 1999, p. 15. G. J. STEIN, “Indigenous Social Complexity at Hacinebi (Turkey) and the Organization of Uruk Colonial Contact”, in G. Algaze *et al.*, *Uruk Mesopotamia & Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, (Rothman ed.), Santa-Fe, 2001, pp. 276-277.

<sup>125</sup> L. BAVAY, “Matières premières et commerce à longue distance : le lapis-lazuli et l’Égypte prédynastique”, *Archéo-Nil n° 7*, Paris, 1997, p. 80-81. J. Vercoutter thinks that this raw material might be existed in Egypt but that lodes have gone unfound (J. VERCOUTTER, *L’Égypte et la Vallée du Nil*, Paris, 1992, p. 59).

<sup>126</sup> G. HERRMANN, “Lapis lazuli: the Early Phases of its Trade”, *IRAQ 30*, 1968, pp. 21-29.

<sup>127</sup> T. POTTS, *Mesopotamia and the East*, Oxford, 1994, p. 207.

<sup>128</sup> J. J. JARRIGE, in *Les Cités Oubliées de l’Indus: Archéologie du Pakistan*, Paris, 1989, p. 18.

<sup>129</sup> R. MATTHEWS, “Traces of Early Complexity, Late Fifth- to Early Fourth-millennia Investigations: The Early Northern Uruk Period”, in *Excavations at Tell Brak, vol. 4: Exploring an Upper Mesopotamian regional Centre*, 1994-1996, London, 2002, p. 34.

- <sup>130</sup> Lapis at Tepe Gawra is supposed to appear as of the Late Ubaid period (layer XIII) then in the layer XI (Early Uruk/LC 2) but it is very uncertain before Gawra X (see G. HERRMANN, "Lapis lazuli: the Early Phases of its Trade", *IRAQ* 30, 1968, pp. 29-30).
- <sup>131</sup> G. HERRMANN, "Lapis lazuli : the Early Phases of its Trade", *IRAQ* 30, 1968, pp. 30-31.
- <sup>132</sup> H. PITTMAN, "Mesopotamian Intraregional Relations Reflected through Glyptic Evidence in the Late Chalcolithic 1-5 Periods", in *Uruk Mesopotamia & Its Neighbors : Cross-Cultural Interactions in the Era of State Formation*, (M. S. Rothman ed.), Santa-Fé/Oxford, 2001, p. 409.
- <sup>133</sup> J. Crowfoot Payne is the first person to have gathered together all the data concerning lapis lazuli present in Egyptian tombs (J. CROWFOOT PAYNE, "Lapis lazuli in Early Egypt", *IRAQ* 30, 1968, pp. 58-61). Two other works also include lists of tombs in Egypt containing lapis (see U. HARTUNG, *Importkeramik aus dem Friedhof U in Abydos (Umm el-Qaab) und die Beziehungen Ägyptens zu Vorderasien im 4. Jahrtausend v. Chr.*, Hamburg, 1996, pp. 222-244 ; L. BAVAY, "Matières premières et commerce à longue distance : le lapis-lazuli et l'Égypte pré-dynastique", *Archéo-Nil* n° 7, Paris, 1997, pp. 79-100).
- <sup>134</sup> Dating based on the presence of B 18k, B 26c, and B 26d (E. BAUMGARTEL, *Petrie's Naqada Excavations: A Supplement*, 1970, LX) typical of Naqada Ic-IIa.
- <sup>135</sup> The only information provided by the excavator is "SD 36-42" which might correspond to Naqada Ic-IIa (?) (F. PETRIE, *Prehistoric Egypt*, London, 1920, p. 44, pl. LII).
- <sup>136</sup> A. J. SPENCER, *Early Egypt: the Rise of Civilisation in the Nile Valley*, London, 1993, p. 2. The authenticity of this statuette is currently being evaluated (L. Watrin, *in prep.*).
- <sup>137</sup> El-Badari 3732 and Hammamiya 1629 (dating ensured by the presence of R 23f typical of the Naqada IIb-c period). Naqada 822 and 836 .
- <sup>138</sup> Naqada (tombs 690, T 5, T 29), Matmar (tombs 2645, 3005, 3067, 3126, 3134, 5112, 5131), Naqa ed-Dhêr (tombs 7290, 7338, 7461, 7534, 7538, 7546), El-Amra (tombs a96, a118, a139, b40, b62, b 104, b 106, b 230), Mahasna (tomb H 107), El-Badari (tombs 3730, 3827, 3839, 3850, 4602, 4604, "cemetery 3800"), Qaw el-Kebir (tomb 102), Hammamiya (tombs 1513, 1756), Mostagedda (tombs 1759, 1831), Abydos (tombs E 169, E 203, U 176), Gerza (tomb 133).
- <sup>139</sup> W. DAVIES, "Cemetery T at Nagada", *MDAIK* 39, 1983, pp. 17-28.
- <sup>140</sup> The dating of Naqada T 5 in Naqada IIc is confirmed by the presence of a W 14 pot which can only be linked to that period (see tab. 1). W. Kaiser dated the tomb in *Stufe* II d1 (W. KAISER, "Zur inneren Chronologie der Naqadakultur", *A. G.* 6, 1957, p. 73). Naqada tombs 822 and 836 in which lapis was found display archaeological artifacts which can either date them to Naqada IIb or IIc.
- <sup>141</sup> D. RANDALL-MACIVER *et al.*, *El Amrah and Abydos*, London, 1902, pp. 17-18, 19, 22.
- <sup>142</sup> Gold beads in El-Amrah tombs a 96, a 139 and b 40. Carnelian beads in tombs a 118, a 96 and b 40.
- <sup>143</sup> D. RANDALL-MACIVER *et al.*, *El Amrah and Abydos*, London, 1902, pp. 20, 22, 24.
- <sup>144</sup> J. CROWFOOT PAYNE, "Lapis Lazuli in Early Egypt", *IRAQ* 30, 1968, p. 58.
- <sup>145</sup> Naqada tomb 836 is dated by Kaiser in Naqada IIb but it can also be dated to Naqada IIc as shown by the artifacts. See F. PETRIE, *Naqada and Ballas*, London, 1896, pl. LXXXIII.
- <sup>146</sup> W. DAVIES, "The Foreign Relations of Predynastic Egypt", *JSSEA* XI, n°1, 1981, p. 24.
- <sup>147</sup> K. PRAG, "Byblos and Egypt in the Fourth Millennium BC", *Levant* 18, 1986, p. 72.
- <sup>148</sup> On this subject see : L. WATRIN, "Tributes and the Rise of a Predatory Power: Unraveling the Intrigue of EB I Palestinian Jars Found By E. Amelineau at Abydos", in E.C.M. van den Brink and T. Levy (eds), *Egypt and the Levant: Interrelations from the 4<sup>th</sup> through the Early 3<sup>rd</sup> Millennium B.C.E.*, London/New-York, 2002, pp. 450-463.
- <sup>149</sup> As in Early Uruk, lapis is found in Middle Uruk at Tepe Gawra alone. In Late Uruk it only appears at Djebel Aruda. According to G. Herrmann, it is only during the Djemdet Nasr period – meaning at the closing of the 4<sup>th</sup> millennium – that lapis appeared for the first time in Mesopotamia (e. g. Uruk-Warka, Ur, Khafadjeh, Tello, Tell Brak) (G. HERRMANN, "Lapis lazuli: the Early Phases of its Trade", *IRAQ* 30, 1968, p. 31).
- <sup>150</sup> P. BAR-ADON, *The Cave of the Treasure*, Jerusalem, 1980, p. 150.
- <sup>151</sup> F. J. De CREE, "Mutatis Mutandis , Egyptian Relations with Palestine in the Chalcolithic and Early Bronze Age I-IV ", *GM* 124, 1991, p. 23.

- <sup>152</sup> R. T. SCHAUB and W. E. RAST, *Bâb edh-Drah : Excavations in the Cemetery directed by P. Lapp (1965-67)*, Winona Lake, pp. 293; 303-311.
- <sup>153</sup> P. M. AKKERMANS and K. DUISTERMAAT, *Of Storage and Nomads : The Sealings from Late Neolithic Sabi Abyad, Syria*, *Paléorient* 22, n° 2, 1996, pp. 17-32.
- <sup>154</sup> M. MAKINSON, *Architecture et glyptique en Syrie du nord et en Anatolie aux VIe et Ve millénaires*, M. A. Dissertation, Paris I – Sorbonne, 1996, vol. I, pp. 84-92 ; vol. II, fig. 40-69.
- <sup>155</sup> R. J. MATTHEWS *et al.*, “Excavations at Tell Brak”, *IRAQ* 56, 1994, fig. 4, n° 2-4.
- <sup>156</sup> J. BOESE, “Excavations at Tell Sheikh Hassan, Preliminary report on the 1987 campaign in the Euphrates Valley”, *Annales Archéologiques Arabes Syriennes* 36-37, 1989, fig. 36-39.
- <sup>157</sup> A. LEBRUN, “Recherches stratigraphiques à l’acropole de Suse”, *C. DAFI n°1*, 1971, fig. 43, n° 10.
- <sup>158</sup> Cylinder from Abousir el-Melek (tomb 1035). Boehmer n° 9.
- <sup>159</sup> Cylinder from Zawiyet el-Aryan (tomb Z 367). Boehmer n° 5.
- <sup>160</sup> Two “Nubian cylinder seals. Boehmer n° 7 and 8.
- <sup>161</sup> R. M. BOEHMER, “Das Rollsiegel im prädynastischen Ägypten”, *Archäologischer Anzeiger* 4, 1974, pp. 496-514. P. V. PODZORSKI, “Predynastic Egyptian Seals of Known Provenience in the R. H. Lowie Museum of Anthropology”, *JNES* 47, 1988, pp. 259-268.
- <sup>162</sup> E. MASSOULARD, *Préhistoire et Protohistoire d’Égypte*, Paris, 1949, pp. 217, 308.
- <sup>163</sup> U. HARTUNG, “Zur Entwicklung des Handels und zum Beginn wirtschaftlicher Administration im Prädynastischen Ägypten”, *Studien zur altägyptischen Kultur* 26, 1998, pp. 41-42.
- <sup>164</sup> P. V. PODZORSKI, “Predynastic Egyptian Seals of Known Provenience in the R. H. Lowie Museum of Anthropology”, *JNES* 47, 1988, pp. 262-263, fig. 3.
- <sup>165</sup> Presence of two bowls of the types B 11c and B 11k, types disappearing after Naqada IIB. Podzorski dated Naqa ed-Dêr tomb 7501 in Naqada IIB as well.
- <sup>166</sup> R. STARR, *Nuzi*, Cambridge MA, 1939, pp. 39-40, pl. 40, A1, K1.
- <sup>167</sup> E. J. BAUMGARTEL, *The Cultures of Prehistoric Egypt I*, Oxford, 1955, pp. 47-48, pl. VI, 10a.
- <sup>168</sup> SD 46-50. The analysis of the artifacts gives a large timeframe (Naqada IIB/IIC-d1). The nearest tomb to grave 1863 being dated to Naqada IIC (Naqada 1723), they could belong to the same period.
- <sup>169</sup> H. DE GENOUILLAC, *Fouilles de Telloh*, Paris, 1934, pl. 40, f. q
- <sup>170</sup> H. KANTOR, “The Relative Chronology of Egypt and Its Foreign Correlations”, in R. Ehrich (ed.), *Chronology in Old World Archaeology*, 1965, p. 31, fig. 8A.
- <sup>171</sup> SD 48-66. Most of the graves from Naqada Cemetery T are placed in a timeframe Naqada IIC-IIIa. The only relevant clue leading to a chronology in Naqada IIC may be the presence of lapis in grave T 5 (dated Naqada IIC) since it was also discovered in T 29 grave.
- <sup>172</sup> A. PARROT, *Tello, vingt campagnes de fouilles (1877-1933)*, Paris, 1948, pl. II.
- <sup>173</sup> P. AMIET, *Glyptique Susienne*, Paris, 1972, vol. II, pl. 93, n°801. Stratigraphic context unclear.
- <sup>174</sup> H. KANTOR, “The Relative Chronology of Egypt and Its Foreign Correlations”, in R. Ehrich (ed.), *Chronology in Old World Archaeology*, 1965, p. 31, fig. 8C.
- <sup>175</sup> A. LEBRUN, “Recherches stratigraphiques à l’acropole de Suse”, *C. DAFI n°1*, 1971, fig. 43, n°10.
- <sup>176</sup> A. PARROT, *Tello, vingt campagnes de fouilles (1877-1933)*, Paris, 1948, pl. II.
- <sup>177</sup> R. ENGELBACH, *Harageh*, London, 1923, 14, pl. VI: 3. This cemetery consists of around 30 tombs which have all been dated by Kaiser in Naqada IIC-d1 (W. KAISER, “Zum Friedhof der Naqadakultur von Minshat Abu Omar”, *ASAE* 71, Cairo, 1987, 119, note 3).
- <sup>178</sup> P. R. S. MOOREY, “From Gulf to Delta in the Fourth millennium BCE: The Syrian Connection”, *Eretz Israel* 21, 1990, p. 63, fig. III.2.
- <sup>179</sup> P. V. PODZORSKI, “Predynastic Egyptian Seals of Known Provenience in the R. H. Lowie Museum of Anthropology”, *JNES* 47, 1988, p. 265, fig. 4.
- <sup>180</sup> S. HENDRICKX, “Autruches et Flamands – les oiseaux représentés sur la céramique prédynastique de la catégorie Decorated”, *Cahiers Caribéens d’Égyptologie n°1*, 2000, pp. 21-52.
- <sup>181</sup> R. GHIRSHMAN, *Fouilles de Sialk près de Kashan*, Paris, 1938, Pl. XCIV, S. 54.
- <sup>182</sup> It is in no case an Egyptian-manufactured seal as advanced by Podzorski (P. V. PODZORSKI, “Predynastic Egyptian Seals of Known Provenience in the R. H. Lowie Museum of Anthropology”, *JNES*

47, 1988, p. 266).

<sup>183</sup> H. KANTOR, "The Relative Chronology of Egypt and Its Foreign Correlations", in R. Ehrich (ed.), *Chronology in Old World Archaeology*, 1965, p. 31, fig. 8B.

<sup>184</sup> All the artifacts give a Naqada IIc-d timeframe. The presence of a fragment of a W 24 pot (type emerging at Naqada II, see *tab. 1*), but also of stone vases and of an ivory pin similar to that of El-Amrah grave b 62 dated to Naqada II1, could allow us to give a more accurate period. PODZORSKI (in *JNES* 47, 1988, 261) also comes to the conclusion that Naq ed-Dêr tomb 7304 must be dated in Naqada II (see also H. KANTOR, "Further Evidence for Early Mesopotamian Relations with Egypt", *JNES* XI, 1952, 240, 247).

<sup>185</sup> R. GHIRSHMAN, *Fouilles de Tépé – Giyan près de Néhavend*, Paris, 1935, p. 50, pl. 38, n°2.

<sup>186</sup> R. M. BOEHMER, « Das Rollsiegel im prädynastischen Ägypten », *AA* 4, 1974, p. 501, n°11.

<sup>187</sup> H. KANTOR, "The Relative Chronology of Egypt and Its Foreign Correlations before the First Intermediate Period", in Ehrich R. (ed.), *Chronologies in Old World Archaeology (I)*, 1992, p. 15.

<sup>188</sup> J. C. PAYNE, *Catalogue of the Predynastic Egyptian Collection in the Ashmolean Museum*, Oxford, 2000, p. 203, fig. 72, n° 1681.

<sup>189</sup> P. AMIET, *Glyptique Susienne*, Paris, 1972, vol. II, pl. 122, n° 1239. Stratigraphic context unclear.

<sup>190</sup> C. M. FIRTH, *Archaeological Survey of Nubia 1908-1909*, Cairo, 1912, vol. II, p. 6, pl. 37a, 2.

<sup>191</sup> H. P. MARTIN, *Fara : A Reconstruction of the Ancient Mesopotamia City of Shuruppak*, Birmingham, 1988, p. 230, n° 69. Stratigraphical context unclear.

<sup>192</sup> A. PARROT, *Tello, vingt campagnes de fouilles (1877-1933)*, Paris, 1948, pl. II.

<sup>193</sup> H. DE GENOUILLAC, *Fouilles de Telloh*, Paris, 1934, pl. 40, e.

<sup>194</sup> H. FRANKFORT, *Cylinders Seals*, 1939, p. 293.

<sup>195</sup> S. HENDRICKX, *Antiquités préhistoriques et protodynastiques d’Égypte*, Bruxelles, 1994, p. 9.

<sup>196</sup> E. MASSOULARD, *Préhistoire et Protobistoire d’Égypte*, Paris, 1949, p. 308.

<sup>197</sup> W. Kaiser dates the tomb 1035 in Stufe IIIa1 (W. KAISER, "Zur Entstehung des gesamtägyptischen Staates", *MDAIK* 46, 1990, p. 296, note 52).

<sup>198</sup> M. MAKINSON, *Architecture et glyptique en Syrie du nord et en Anatolie aux VIe et Ve millénaires*, M. A. Dissertation, Paris I – Sorbonne, 1996, vol. I, pp. 104-10 ; vol. II, fig. 71-73.

<sup>199</sup> A. LEBRUN, "Recherches stratigraphiques à l’Acropole de Suse", *C. DAFI* n°1, 1971, fig. 35, n°2.

<sup>200</sup> B. J. KEMP, *Ancient Egypt : Anatomy of a Civilization*, London, 1991, p. 48, fig. 14.

<sup>201</sup> H. CASE *et al.*, "Tomb 100: The Decorated tomb at Hierakonpolis", *JEA* 48, 1962, p. 8-11.

<sup>202</sup> This tomb is dated Naqada IIc by W. Kaiser and Naqada II1 by C. Köhler.

<sup>203</sup> The Egyptian material from Azor tombs is similar to the funerary deposits of Minshat I, whose earliest tombs can be traced to Naqada II.

<sup>204</sup> A. BEN-TOR, *Two Burials Cave at Azor*, Jerusalem, 1975, pp. 12, 39, pl. 9: 18 ; pl. XVII: 5.

<sup>205</sup> G. DREYER, "Reichseinigung und Schriftentwicklung", in A. Grimm and S. Schoske, *Am Beginn de Zeit: Ägypten in der Vor- und Frühzeit*, München, 2000, p. 7, fig. 6a-b.

<sup>206</sup> The shape of this stone vase, cylindrical, is very close of the ceramic pots of the W 24-class. H. WILD, "Choix d’objets pré-pharaoniques appartenant à des collections de Suisse", *BIFAO* XLVII, Le Caire, 1948, pp. 47-51, pls III-IV.

<sup>207</sup> T. WILKINSON, "Political Unification: towards a Reconstruction", *MDAIK* 56, 2000, p. 386.

<sup>208</sup> The present work ends at the early Naqada IIIa period (U-j tomb), which excludes most of the Egyptian palettes with a Mesopotamian-styled motif dating from Naqada IIIb-c1.

<sup>209</sup> D. SÜRENHAGEN, "The Dry Farming Belt: The Uruk Period and Subsequent Development", in W. H. Guilford ed., *The Origins of the City in Dry Farming Syria and Mesopotamia in the Third Millennium BC*, Four Quarter, 1986, p. 22.

<sup>210</sup> Mahasna : E. R. AYRTON and W. L. S. LOAT, *Pre-Dynastic Cemetery at El Mahasna*, London, 1911, p. 24, pl. XXXVIII: 58e. Salmany : A. EL-SAYED, "A Prehistoric Cemetery in the Abydos Area", *MDAIK* 35, 1979, p. 265 and 282, fig. 14, n° 2-3 (F 58k).

<sup>211</sup> K. KROEPER, "The Excavations of the Munich East Delta Expedition in Minshat Abu Omar", in ECM Van den Brink (ed.), *The Archaeology of the Nile Delta*, Amsterdam, 1988, p. 13, fig. 37-38.

<sup>212</sup> G. DREYER, *Umm el-Qaab I*, Mainz, 1998, p. 100, fig. 63 (U-j 10/69), p. 103, fig. 66 (U-j 10/158); pl.

25g (U-j 10/69).

<sup>213</sup> G. BRUNTON, *Mostagedda and the Tasian Culture*, London, 1937, pl. XXXII, 1837; XXXV, n°24.

<sup>214</sup> D. SÜRENHAGEN, *Keramik-production in Habûba Kebira-Süd*, 1975, pl. 18, n°124.

<sup>215</sup> Minshat Abu Omar I (tombs 699, 761, 815 and 833). Abydos (tombs E 7, U 153, U-545, U-546, U-c, U-g, U-qq). El-Amrah (tomb b17). Hierakonpolis (Locality 6: tomb 11). Mostagedda (tomb 11757). Naqada (tomb 624). Kubaniya (tomb 2014). Khor Bahan Cemetery 17 (tomb 15). Gerza (tomb 142). Abusir el-Melek (22h2, 1052).

<sup>216</sup> Minshat tombs 699, 761, 815 and 833. K. KROEPER, D. WILDUNG, *Minshat Abu Omar I: Gräber 1-114*, Mainz, 1994, pp. 103, 152. *Ibid.*, *Minshat Abu Omar I: Gräber 115-204*. Mainz, 2000, p. 25.

<sup>217</sup> Tell Samara: information collected by Renee Friedman and Paul Buck (1992).

<sup>218</sup> Abydos (tombs E 7, U 153, U-545, U-546, U-c, U-g, U-qq). El-Amra (tomb b17). Hierakonpolis (Locality 6: tomb 11). Mostagedda (tomb 11757). Naqada (tomb 624). Kubaniya (tomb 2014). Khor Bahan Cemetery 17 (tomb 15). Gerza (tomb 142). Abusir el-Melek (22h2, 1052).

<sup>219</sup> G. DREYER *et al.*, "Umm el-Qaab", *MDAIK* 52, 1996, p. 27-28.

<sup>220</sup> Tomb b 17 (D. RANDALL-MACIVER *et al.*, *El Amrah and Abydos 1899-1901*, London, 1902, 20).

<sup>221</sup> B. ADAMS, *Excavations in the Locality 6 Cemetery at Hierakonpolis 1979-1985*, BAR 903, London, 2000, pp. 102-104, 265, pl. XXVIa-d-e.

<sup>222</sup> S. MARK, *From Egypt to Mesopotamia*, London, 1997, p. 39.

<sup>223</sup> Late Naqada IId (Naqada 743, Abydos E 381, 1606, U 134, U-135, U 503, U 545). Naqada IId-early IIIa (Abydos U 200). Early Naqada IIIa (Abydos U-j, U-qq). Late Naqada IIIa (Naqada 140, Abydos U-g, Hierakonpolis tomb 11).

<sup>224</sup> P. COLLINS, *The Uruk Phenomenon, The Role of Social Ideology in the Expansion of the Uruk Culture during the Fourth Millennium BC*, BAR 900, Oxford, 2000, p. 58.

<sup>225</sup> Graves 36a2, 1017, 1070, 1066, 1035, 1036, 56c7, 60a1, 46c1, 51e3, 13a2 (A. SCHARFF, *Die Archaeologischen ergebnisse des vorgeschichtlichen gräberfeldes von Abusir el-Meleq*, Leipzig, 1926).

<sup>226</sup> A. SCHARFF, *Die Archaeologischen ergebnisse des vorgeschichtlichen gräberfeldes von Abusir el-Meleq*, Leipzig, 1926, p. 58, fig. 22.

<sup>227</sup> Tomb 41a2, early Naqada IIIa (A. SCHARFF, *Die Archaeologischen ergebnisse des vorgeschichtlichen gräberfeldes von Abusir el-Meleq*, Leipzig, 1926, p. 17, pl. IX, n°5).

<sup>228</sup> W. F. HUME, *Geology of Egypt*, vol. II, part III, Cairo, 1937, p. 700, Pl. CLXI.

<sup>229</sup> D. RANDALL-MACIVER, *et al.*, *El Amrah and Abydos 1899-1901*, 1902, p. 23, pl. VI, n°1-2.

<sup>230</sup> R. M. BOEHMER, "Orientalische Einflüsse auf verzierten Messergriffen aus dem Prädynastischen Ägypten", *Achaeologische Mitteilungen aus Iran* 7, Berlin, 1974, pp. 15-40.

<sup>231</sup> G. DREYER, "Umm el-Qaab", *MDAIK* 54, 1998, pp. 92, 99, pl. 7.

<sup>232</sup> G. DREYER, "Reichseinigung und Schriftentwicklung", in A. Grimm and S. Schoske, *Am Beginn de Zeit: Ägypten in der Vor- und Frühzeit*, München, 2000, p. 7, fig. 6a-b.

<sup>233</sup> W. NEEDLER, *Predynastic and Archaic Egypt in the Brooklyn Museum*, New-York, 1984, p. 154.

<sup>234</sup> The presence of W 41 in Abou-Zeidan tomb 32 places it in this period.

<sup>235</sup> H. WHITEHOUSE, "A Decorated Knife Handle from the "Main Deposit" at Hierakonpolis", *MDAIK* 58, 2002, p. 429, fig. 1.

<sup>236</sup> P. F. DORMAN *et al.*, *The Metropolitan Museum of Art, Egypt and the Ancient Near-East*, New-York, 1987, p. 12.

<sup>237</sup> C. M. FIRTH, *The Archaeological Survey of Nubia*, Cairo, 1927, p. 205, pl. 18a-b-c.

<sup>238</sup> B. TEISSIER, "Glyptic Evidence for a Connection between Iran, Syro-Palestine and Egypt in the Fourth and Third Millennia", *IRAN* 25, 1987, pp. 33-34.

<sup>239</sup> J. de MORGAN, *La Préhistoire Orientale*, vol. II, Paris, 1926, p. 144, fig. 186.

<sup>240</sup> H. S. SMITH, "The Making of Egypt: A Review of the influence of Susa and Sumer on Upper Egypt and Lower Nubia in the 4<sup>th</sup> Millennium B.C.", in R. Friedman and B. Adams (eds.), *The Followers of Horus*, Oxbow, 1992, p. 243, fig. 37.

<sup>241</sup> E. AMELINEAU, *The New Abydos Excavations, 1895-96*, Paris, 1899, p. 267.

- <sup>242</sup> J. de MORGAN, *La Préhistoire Orientale*, vol. II, Paris, 1926, pp. 142-144.
- <sup>243</sup> R. M. BOEHMER, "Orientalische Einflüsse auf verzierten Messergriffen aus dem Prädynastischen Ägypten", *Achaologische Mitteilungen aus Iran* 7, Berlin, 1974, pp. 27, 37.
- <sup>244</sup> However, we know from Amélineau (E. AMELINEAU, *The New Abydos Excavations, 1895-96*, Paris, 1899, p. 267) that the "Djebel el-Tarif" knife was unearthed at El-Amrah. Yet the Randall-Maciver and Mace excavations at El-Amrah necropolis (150 tombs) show that it was abandoned at Naqada IIIa. El-Amrah thus was active from Naqada Ia to Naqada IId1 with the apex of activity at Naqada IId-c1 (one third of the tombs belong to this period), the number of tombs diminishes at late Naqada IId to thrive again at Naqada IIIb. The drastic drop in the number of tombs in late Naqada IId (-70%), and the absence of tombs in Naqada IIIa corresponding to the emergence of a great number of late Naqada IId-IIIa graves at Abydos cemetery U (after abandonment of the cemetery U at Naqada IId and reopening in Naqada IId1 ?) could suggest the shifting of the local elite from El-Amrah toward Abydos. In conclusion, the so-called "Djebel el-Tarif" knife, in fact unearthed at El-Amrah, cannot be datable to Naqada IIIa. Its chronology in late Naqada IId is much more likely.
- <sup>245</sup> H. S. SMITH, "The Making of Egypt: A Review of the influence of Susa and Sumer on Upper Egypt and Lower Nubia in the 4<sup>th</sup> Millennium B.C.", in R. Friedman and B. Adams (eds.), *The Followers of Horus*, Oxbow, 1992, p. 243, fig. 37.
- <sup>246</sup> P. AMIET, *Glyptique Susienne*, Paris, 1972, vols. I-II, p. 86, pl. 6, n° 488.
- <sup>247</sup> *Ibidem*, p. 88, pl. 7, n° 509.
- <sup>248</sup> *Ibid.*, p. 95, pl. 12, n° 587.
- <sup>249</sup> J. de MORGAN, *La Préhistoire Orientale*, vol. II, Paris, 1926, p. 283, fig. 326.
- <sup>250</sup> G. DREYER, U. HARTUNG *et al.*, "Umm el-Qaab, Nachuntersuchungen im frühzeitlichen Königsfriedhof 9/10, Vorbericht", *MDAIK* 54, 1998, pp. 98-99, pl. 7.
- <sup>251</sup> The offerings in Tomb U-503 can be linked to Naqada IId in a broad sense. In the same area a grave of the same size (U-545) and containing the same sort of exotic products (obsidian) can be dated to late Naqada IId (presence of W 41-43-47), suggesting a chronology in the same period.
- <sup>252</sup> P. AMIET, *Glyptique Susienne*, Paris, 1972, vols. I-II, p. 96, pl. 13, n° 597.
- <sup>253</sup> H. LENZEN, *Vorläufiger Bericht über die von dem Deutschen Archäologischen Institut und der Deutschen Orient-Gesellschaft aus Mitteln der Deutschen Forschungsgemeinschaft unternommenen Ausgrabungen in Uruk-Warka*, Berlin, 1956, p. 22, pl. 31d-e-f-g.
- <sup>254</sup> P. AMIET, *L'âge des échanges inter-iraniens*, Paris, 1986, p. 245, fig. 20, n° 1.
- <sup>255</sup> J. VANDIER, *Manuel d'archéologie égyptienne I*, Paris, 1952, p. 541, fig. 362.
- <sup>256</sup> B. WILLIAMS, *The University of Chicago Oriental Institute Nubian Expedition, III, part I, The A-Group Royal Cemetery at Qustul: Cemetery L*, Chicago, 1986.
- <sup>257</sup> B. WILLIAMS and T. J. LOGAN, "The Metropolitan Museum Knife Handle and Aspects of Pharaonic Imagery before Narmer", *JNES* 46, 1987, 273, fig. 1.
- <sup>258</sup> The Palestinian ceramic from Qustul tomb L 24 find some parallels in Middle EB I contexts at Azor and Jericho VI, a period contemporary with late Naqada IId-IIIa. The Egyptian ceramic imported in the others tombs from Cemetery L must be dated in Naqada IIIb. According to Wilkinson the Qustul tomb L 24 is contemporary with tomb U-j (T. WILKINSON, *Early Dynastic Egypt*, London, 1999, 194).
- <sup>259</sup> E. J. BAUMGARTEL, "Scorpion and Rosette and the Fragment of the large Hierakonpolis Mace Head", *ZAS* 93, 1960, pp. 9-13.
- <sup>260</sup> B. WILLIAMS and T. J. LOGAN, "The Metropolitan Museum Knife Handle and Aspects of Pharaonic Imagery before Narmer", *JNES* 46, 1987, p. 274, fig. 2.
- <sup>261</sup> G. DREYER, "Reichseinigung und Schriftentwicklung", in A. Grimm and S. Schoske, *Am Beginn der Zeit: Ägypten in der Vor- und Frühzeit*, München, 2000, p. 7, fig. 6a-b.
- <sup>262</sup> G. DREYER, *Umm el-Qaab I, Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse*, Mainz, 1998, pl. 33, n° 127.
- <sup>263</sup> T. WILKINSON, *Early Dynastic Egypt*, London, 1999, pp. 318-319.
- <sup>264</sup> P. AMIET, *Glyptique Susienne*, Paris, 1972, vols. I-II, p. 107, pl. 18, n° 692a.

- <sup>265</sup> H. S. SMITH, "The Making of Egypt: A Review of the influence of Susa and Sumer on Upper Egypt and Lower Nubia in the 4<sup>th</sup> Millennium B.C.", in R. Friedman and B. Adams (eds.), *The Followers of Horus*, Oxbow, 1992, p. 239.
- <sup>266</sup> P. AMIET, *Glyptique Susienne*, Paris, 1972, vols. I-II, p.106, pl. 18, n°683.
- <sup>267</sup> J. de MORGAN, *La Préhistoire Orientale*, vol. II, Paris, 1926, pp. 287-289.
- <sup>268</sup> A. BEN TOR, *The Archaeology of Ancient Israel*, Yale, 1992, p. 91, fig. 4-5.
- <sup>269</sup> P. R. S. MOOREY, *From Gulf to Delta and Beyond*, Beer-Sheva, 1995, p. 19.
- <sup>270</sup> Louvre Museum AO 28024 ; AO 18557 (F. A. Schaeffer, Ras Shamra excavations).
- <sup>271</sup> U. HARTUNG, "Prädynastische Siegelrollungen aus dem Friedhof U in Abydos (Umm el-Qaab)", *MDAIK* 54, 1998, pp. 187-217.
- <sup>272</sup> G. DREYER *et al.*, "Umm el-Qaab", *MDAIK* 49, 1993, pp. 26-27 ; *ibid.*, "Umm el-Qaab", *MDAIK* 52, 1996, pp. 15-17-18-20-21. U. HARTUNG, "Prädynastische Siegelrollungen aus dem Friedhof U in Abydos (Umm el-Qaab)", *MDAIK* 54, 1998, p. 214.
- <sup>273</sup> G. DREYER *et al.*, "Umm el-Qaab", *MDAIK* 49, 1993, pp. 28-29.
- <sup>274</sup> P. E. MCGOVERN, "The Origins of the Tomb U-j Syro-Palestinian Type Jars as Determined by Neutron Activation Analysis", in *Umm el-Qaab II: "Importkeramik aus dem Friedhof U in Abydos (Umm el-Qaab) und die Beziehungen Ägyptens zu Vorderasien im 4. Jahrtausend v. Chr."*, Mainz, 2001, pp. 407-416.
- <sup>275</sup> N. PORAT and G. GOREN, "Petrography of the Naqada IIIa Canaanite Pottery of Tomb U-j in Abydos", in E.C.M. van den Brink and T. Levy (eds), *Egypt and the Levant : Interrelations from the 4<sup>th</sup> through the Early 3<sup>rd</sup> Millennium B.C.E.*, London/New-York, 2002, pp. 265-267.
- <sup>276</sup> T. VON DER WAY, *Tell el-Fara'in-Buto I*, Mainz, 1997, p. 241.
- <sup>277</sup> U. HARTUNG, "Importkeramik aus dem Friedhof U in Abydos (Umm el-Qaab) und die Beziehungen Ägyptens zu Vorderasien im 4. Jahrtausend v. Chr.", Hamburg, 1996, p. 170.
- <sup>278</sup> U. HARTUNG, "Prädynastische Siegelrollungen aus dem Friedhof U in Abydos (Umm el-Qaab)", *MDAIK* 54, 1998, pp. 212-13, pl. 12b.
- <sup>279</sup> See U. HARTUNG, "Prädynastische Siegelrollungen aus dem Friedhof U in Abydos (Umm el-Qaab)", *MDAIK* 54, 1998, p. 209, pl. 11.
- <sup>280</sup> G. van DRIEL, "Seals and Sealing from Jebel Aruda 1974-1978", *Akkadica* 33, Bruxelles, 1983, p. 41, fig. 13a ; p. 50, fig 28-29.
- <sup>281</sup> A. le BRUN and F. VALLAT, "L'origine de l'écriture à Suse", *C. DAFI* n° 8, 1978, pp. 11-59. D. SCHMANDT-BESSERAT, *How Writing Came About*, Austin, 1996.
- <sup>282</sup> G. J. STEIN, "Material Culture and Social Identity: the Evidence for a 4th Millennium BC Mesopotamian Uruk Colony at Hacinebi, Turkey", *Paléorient* 25.1, 1999, pp. 18-19, fig. 8.
- <sup>283</sup> G. DREYER, *Umm el-Qaab I, Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse*, Mainz, 1998, pp. 113 to 117, pl. 27-28.
- <sup>284</sup> *Ibidem*, pp. 181-182, fig. 106.
- <sup>285</sup> J. D. FOREST, *Mésopotamie, l'apparition de l'Etat (VIIe-IIIe millénaires)*, Paris, 1996, p. 145.
- <sup>286</sup> R. M. BOEHMER, "Gebel el-Arak und Gebel el-Tarif Griff: keine Fälschungen", *MDAIK* 47, 1991, pp. 59-60.
- <sup>287</sup> R. M. BOEHMER, G. DREYER, and B. KROMER, "Einige frühzeitliche 14C-Datierungen aus Abydos und Uruk", *MDAIK* 49, 1993, p. 68.
- <sup>288</sup> K. Cialowicz came closer to our work by linking the late Naqada IID / early IIIa periods to Uruk IVa based on a series of radiocarbon datings from the two regions (K. CIALOWICZ, *La naissance d'un royaume*, Krakow, 2001, pp. 20-38-230-231).
- <sup>289</sup> P. MIROSCHEJJI, "De l'Uruk dans la Vallée du Nil ? ", *Orient-Express* n°1 : 2, Paris, 1991, p. 17.