

THE DEVELOPMENT OF SOCIAL COMPLEXITY IN EARLY EGYPT. A VIEW FROM THE PERSPECTIVE OF THE SETTLEMENTS AND MATERIAL CULTURE OF THE NILE VALLEY

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Abstract: *The cemeteries of the southern Egyptian Nile Valley have for a long time taken up a major role in the reconstruction of the emergence of social complexity during the 5th and 4th millennia and of the early territorial state of Pharaonic Egypt. Whilst this data is very substantial and highly important, it has overshadowed other archaeological information that is equally significant and that actually challenges certain interpretations deriving only from mortuary data. This paper aims at considering archaeological evidence primarily derived from a number of settlements and from material culture of the Neolithic, Chalcolithic and until the Early Dynastic Periods to better balance and contextualise the mortuary evidence of these periods. It will discuss and interpret these on the background of current scholarship on material culture, interregional exchange and social complexity and will especially seek to answer questions concerning the socio-economic context of institutionalised leadership and its potential links to early kingship. The paper will also address the high degree of variability in archaeological data and thereby contribute to a growing scholarly consensus that Egypt's path to civilisation and statehood followed a number of different, often unrelated, trajectories within a regionally variable cultural system in the Egyptian Nile Valley.*

Keywords: *Predynastic Egypt, social complexity, settlements, material culture, institutionalised leadership, kingship, state formation*

Introduction¹

Recent advances in research on the absolute chronology of early Egypt² would suggest that the most crucial socio-cultural transformations leading from simple prehistoric small communities or village societies to the emergence of the world's first territorial state in the Egyptian Nile Valley cover a time span of only about 700 years between c. 3800–3100 BCE (Table 1).³ As much as the relative and absolute chronologies of this development are still under investigation, the major challenge also lies in the identification and explanation of the causes and processes responsible for this unparalleled development of Egyptian civilisation. In the traditional Egyptological discourse about the pathways to Pharaonic power and kingship, the discussion tended to be guided by a historical narrative that involved – in short – the ascension to power by the king and his subsequent unification of Egypt. It has long been acknowledged by scholars⁴ that this linear approach is unhelpful, because it fails to address the complexity of the factors and processes as well as the probably multiple trajectories that actually stand behind the formation of the

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¹ This contribution is based on a paper delivered at the Oriental Institute Chicago conference *Pathways to Power* in November 2011 that was supposed to be published in the conference proceedings which, unfortunately, never materialised. I am, however, grateful to the organisers of this conference, Gil Stein, Yorke Rowan and Abbas Alizadeh for the kind invitation to participate and for encouraging a most stimulating discussion. This paper was organised and delivered in conjunction with Stan Hendrickx who himself focused on the mortuary evidence and art of the period and who subsequently published parts of his work elsewhere. This paper has been updated to acknowledge some

important research of the last six years. The author would like to thank Christian Knoblauch for helping with English language editing and Stan Hendrickx for being such a constructive and robust discussion partner during and after the conference.

² DEE *et al.* 2013.

³ For comparison, see the study summarising, among other things, the temporal dimensions in the development from settled agricultural village societies to primary state formation by FEINMAN and NICHOLAS 2016.

⁴ BAINES, in: O'CONNOR and SILVERMAN 1995; KAISER 1956–1995; KÖHLER 1995–2016; and most recently STEVENSON 2016.

early Pharaonic state. Although having been considered of significant historical value and thus the object of a large number of scholarly studies,⁵ the contemporary written and iconographic sources of this formative period offer insufficient information in order to reconstruct the emergence of the Pharaonic state alone. On the other hand, great progress has been achieved in investigating this phase with the help of relevant archaeological evidence, especially when interpreted within the framework of modern archaeological theory, although the implications are still being discussed and no consensus has been achieved thus far. This may be for a number of reasons, one being the lack of comprehensive archaeological data from prehistoric Egypt that allow for a systematic investigation and that cover more than one aspect of life or death, rural or urban, elite or non-elite, ritual or domestic, north or south, valley or desert. For example, the simple fact that the information from the entire Neolithic Period of the 5th millennium BCE burns down to only four sites in the north, a cluster of poorly published sites in Middle Egypt and a small number of isolated short-lived sites in Upper Egypt obviously prevents us from drawing general conclusions about economic, ritual, social or political developments during this period. This state of affairs changes only slightly with the 4th millennium and the period directly preceding the emergence of state society in Egypt, but has nevertheless led to a large number of studies into the emergence of political power and complex society in early Egypt. In contrast to many other ancient societies, however, there is indeed significant evidence for polities and even historical individuals who may have held a degree of regional power and thereby played a role in the political landscape of what could be reconstructed as early states during the late 4th millennium BCE, in particular in southern Egypt. However, the apparent absence of such evidence in the north has frequently led to the assumption that there were no such power structures in Lower Egypt and that, therefore, the processes leading to the emergence of social inequality, kingship or complex society originated in the south. Yet, the archaeological visibility of and the variability in the evidence of social inequality are well illustrated by a number of prehistoric

societies in the Near East and elsewhere.⁶ It will, therefore, be necessary to approach the topic in Egypt with a similarly cautious mindset.

Investigating social complexity in early Egypt

For a long time, the evaluation of social complexity in Egypt has (by necessity) been largely reliant on the rich mortuary evidence from the many cemeteries along the Nile Valley. These have produced the astonishing number of approx. 15 000 graves from the Predynastic Period alone,⁷ which certainly provided an opportunity to investigate changes in the economic and social differentiation of early Egyptian societies. Numerous studies have been published over more than 100 years since the early days of Flinders Petrie's work at Naqada and Ballas that have largely shaped our understanding of the development of complex society and the formation of the early territorial state in Egypt around c. 3100 BCE.⁸ However, this reliance on mortuary data has also caused a number of problems which are today recognised as hindrances towards a more comprehensive picture of early social complexity. Firstly, the vast majority, i.e. about 90% of graves are located along the southern part of the Nile Valley, whereas the north of Egypt, that is Lower Egypt and the Nile Delta, is represented by only 10% of the data.⁹ This means that any conclusions about social complexity derived from mortuary data in Upper Egypt can only be applied to this area and cannot be confidently tested against mortuary data from the north in order to arrive at a more comprehensive picture. It also raises the question to what extent those comparatively few Lower Egyptian graves ought to be considered representative for this region, given that their existence may well be the result of archaeological coincidence, especially when considering the severe underrepresentation of graves in the western Nile Delta. This is particularly problematic because geography and territoriality obviously play a significant role in the historical narrative of state formation in Egypt.¹⁰ Conversely, it so happens that a substantial body of archaeological data from Lower Egypt largely derives from non-mortuary contexts and settlements, which again prevents us from comparing sites

⁵ See the summary in HENDRICKX 2014.

⁶ STEIN 2010; PRICE and FEINMAN 2012; SMITH 2012.

⁷ HENDRICKX and VAN DEN BRINK 2002, 346.

⁸ E.g. CASTILLOS 1982; 1983; BARD 1994; WILKINSON 1996; STEVENSON 2016.

⁹ HENDRICKX and VAN DEN BRINK 2002.

¹⁰ E.g. KAISER 1990; SEEHER 1991; VON DER WAY 1991–1993.

across Egypt, because there are only few contemporary settlements known in the south. This problem is further exacerbated by the issue of a peculiar geomorphology in the Egyptian Nile Valley; most early settlements in the alluvial plain are buried under thick deposits of sediments and the water table restricting access on a broader scale. Explicit and representative evidence for social complexity deriving from settlements, such as through spatial analysis of household wealth or settlement hierarchy and urbanism, is more difficult to ascertain when sites are few and far between and cannot be easily investigated on a regional scale.¹¹ This overall imbalance of data may be the cause for a number of misinterpretations about early Egypt; one of them probably being that the north was less developed or less complex in comparison to Upper Egypt.¹² Finally, the largest part of archaeological work was conducted during the 19th and early 20th centuries; it is, therefore, poorly published and difficult to employ for modern scientific analysis.

On the other hand, although settlement sites are still underrepresented and archaeological evidence from outside the mortuary sphere is scarce, it is present nevertheless and can be investigated from a modern perspective. Further, even where data are incomplete or missing, the focused study of the excavated material culture itself, in spite of all the caveats and no matter if derived from cemeteries or settlements, can be very useful. For example, the evidence pertaining to and the interrelationship between manufacturing technologies, raw materials and resources, craft specialisation, socio-economic context, distribution and exchange, are most valuable sources of information. These aspects can be indicative of a society's manifold relationships with things that may bear social, ritual and political significance within a larger socio-economic framework.¹³ The archaeological data available provide at least insights into certain aspects of economic and social differentiation and allow us to better balance the heavy weight of the mortuary data and of social inequality as measured by cemetery populations.

Therefore, the point of departure in this paper will be early Egyptian settlements in the Nile Val-

ley, their material culture and the information they offer with regards to technology, raw materials, trade and exchange, craft specialisation and related aspects and on how they potentially reflect social transformations and complexity in early Egypt. A number of sites in northern and Middle Egypt (Fig. 1) will be selected to discuss certain

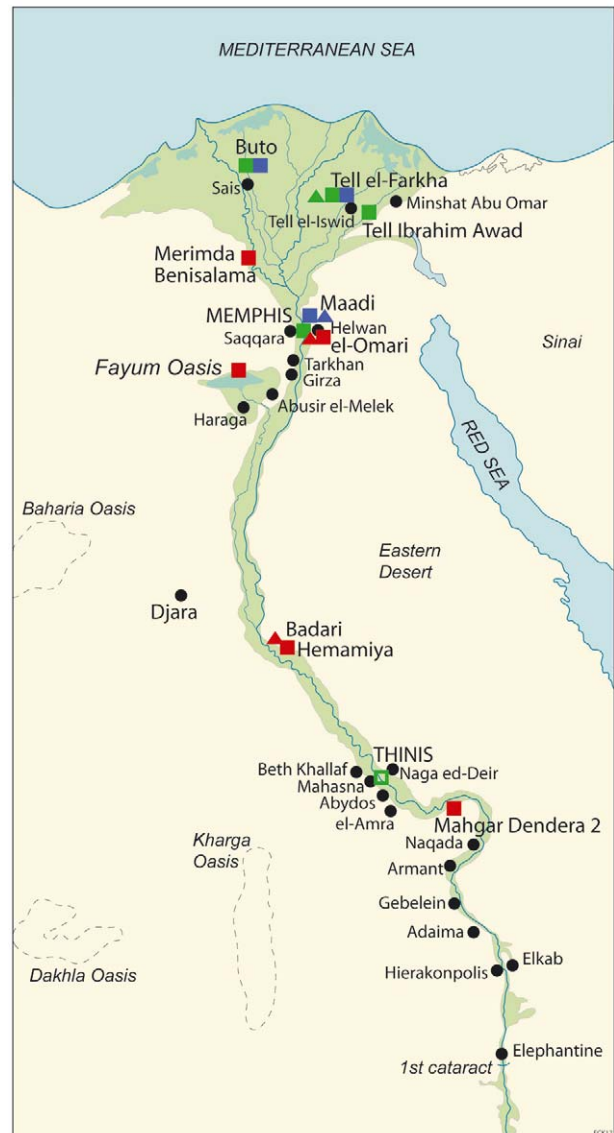


Fig. 1 Map of Egypt with sites mentioned in the text highlighted. Square: settlement; triangle: cemetery; black circle: Pre-/Early Dynastic site. Red: mainly Neolithic Period, Blue: mainly Chalcolithic Period, Green: mainly Proto- and Early Dynastic Period (© E.Ch. Köhler).

¹¹ TRISTANT 2004; GHILARDI and TRISTANT 2012.

¹² Cf. summary in KÖHLER 2008b.

¹³ BRUMFIEL and EARLE 1987; COSTIN 1991; TAKAMIYA 2004; SMITH 2004; 2012; 2016; LATOUR 2005; TILLEY *et al.* 2006; KÖHLER 2008a; HODDER 2012; 2016; SAMIDA, EGGERT and HAHN 2014; HART-SKARZYNSKI 2017.

changes and phenomena before the settlement and mortuary data will be merged in a final discussion on the possible development of social complexity in early Egypt.

Neolithic societies¹⁴

Although the Egyptian Nile Valley and its adjacent deserts have produced significant numbers of early prehistoric, especially Palaeolithic remains going back as far as hundreds of thousand years, the evidence for dwellings is very much reduced to the latest stages of the Pleistocene and in particular the Holocene era. It has frequently been noted that the transition from hunter-gatherer subsistence to food production in Egypt is ill-understood as far as relevant early Neolithic sites are concerned. Although a number of places in the southern Western Desert of Egypt, such as Bir Kiseiba, Nabta Playa and Dakhla Oasis,¹⁵ are being discussed as evidence for the herding of cattle accompanied by pottery production during the late 7th and 6th millennium BCE, there is as yet no definitive evidence for sedentism or plant cultivation at this early stage.¹⁶ Also, it has been difficult to relate these phenomena with the earliest Neolithic sites of the Nile Valley; they appear to represent independent developments even though climatic data and certain aspects of material culture might suggest a direct relationship between the desert and Neolithic sites in the Nile Valley.¹⁷ The first evidence for Neolithic occupation in the Nile Valley proper dates comparatively late and exhibits a well-developed stage of Neolithic subsistence, especially in the north of Egypt. It includes the cultivation of crops (emmer wheat and barley) and animal domestication (sheep/goat, cattle, pig), most likely

introduced from south-western Asia,¹⁸ together with the exploitation of aquatic and other wildlife resources. This regionally variable, highly adaptive subsistence strategy is combined with sedentary villages in some areas and more mobile settlement systems in other areas as well as pottery production between c. 5300–4400 BCE. While some scholars would generally label societies in Egypt for as late as the second half of the 5th millennium BCE as a ‘primary pastoral community’¹⁹ or ‘seasonally mobile agropastoralist groups’,²⁰ this interpretation appears to be largely based on evidence in southern Egypt excavated in the early 20th century and is thus difficult to validate.²¹

The main archaeological sites that can be associated with the early Neolithic are located in northern Egypt upon elevated sand *gezirahs* in the western Nile Delta,²² at the edge of the western Delta floodplain,²³ at sites near the lake in the Fayum depression,²⁴ and along a small side valley of the Nile near modern Cairo.²⁵ The settlement remains are characterised by circular or oval house structures of light, organic construction materials,²⁶ hearths and storage pits lined with basketry.

Especially at Merimde Benisalame, more than two metres of archaeological stratification indicate the existence of a continuous village in one and the same place over centuries.²⁷ Ceramics are produced in primary household production under very basic technological conditions and with little standardisation. The lithic assemblages exhibit bifacially retouched core tools, which follow a degree of standardisation, complemented by a small portion of blade and flake tools. There is very little direct evidence for economic or social differentiation, although a degree of status differentiation can probably be expected.²⁸ Occasional

¹⁴ This paper focuses on the societies of the Nile Valley and directly adjacent regions only. To the writer, the surrounding desert areas followed very different spatial, ecological and chronological trajectories and probably formed distinct cultural systems.

¹⁵ KUPER 1992; WENDORF and SCHILD 1998; 2004; HENDRICKX and VERMEERSCH 2000; HOPE and BOWEN 2002; KLEES and LINSEELE, HOLDAWAY and WENDRICH 2016; HOLDAWAY and WENDRICH 2017.

¹⁶ SHIRAI 2010; HENDRICKX and HUYGE 2014.

¹⁷ KUPER and KRÖPELIN 2006. But see WENGROW *et al.* 2014.

¹⁸ WETTERSTROM 1993; SHIRAI 2010.

¹⁹ WENGROW 2006, 26, 63–64; WENGROW *et al.*, 2014, 104.

²⁰ STEVENSON 2016.

²¹ See also the most insightful discussion in HOLDAWAY and WENDRICH 2017, 12. SMITH’s (2001) concept of ‘low-level food producers’ indeed seems very useful for describing those sites where wild species play a major role in the subsistence.

²² Sais: WILSON, GILBERT and TASSIE 2014.

²³ Merimde Benisalame: EIWANGER 1984–1992, ROWLANDS 2016.

²⁴ Fayum A or Fayumian: CATON-THOMPSON and GARDNER 1934; HOLDAWAY and WENDRICH 2017.

²⁵ El-Omari: DEBONO and MORTENSEN 1990.

²⁶ The use of large, hand-made mud slabs, which may be considered precursors of mudbricks, is attested at Merimde Benisalame, cf. JUNKER 1932, fig. 1; 1933, 64–67.

²⁷ EIWANGER 1984–1992; JUNKER 1933.

²⁸ PRICE and BAR-YOSEF, in: PRICE and FEINMAN 2012.

finds, such as sea shells or other isolated imported artefacts, suggest that there was a degree of contact with areas outside the Nile Valley.²⁹ Consistent elements in the lithic and ceramic assemblages of these early Neolithic sites in the north also indicate a connection with the slightly later Neolithic in the south, especially with the area of Middle Egypt. In the region of Badari, significant settlement and cemetery remains of the late 5th millennium were excavated during the early 20th century.³⁰ The subsistence and material culture observed here represent a continuation of the early Neolithic tradition, although there is also conspicuous evidence for contacts with regions further south and with the Eastern and Western Deserts, thus underlining the distinctly regional character of this early, yet chronologically and technologically more advanced material culture.³¹ The lithic industries exhibit bifacial hollow-based arrowheads, sickles and axes, as well as an emerging specialised blade industry for knives, complemented by growing new technologies, such as a flake-blade industry of endscrapers, perforators and the like.³² In addition to these observable technological changes in the lithic industries, also pottery manufacturing technology is improving insofar as the potters exhibit more skill in manipulating firing technologies and enhancing output quality by creating polished fine wares of very high quality, which complement the coarse domestic wares. However, although there is also increasing evidence for standardisation in the spectrum of ceramic types, the production scale appears to be at a primary household or household industry level.³³ In addition to lithics and ceram-

ics, the inhabitants of this region also begin to explore new materials, such as cold-hammered native copper for beads and pins as well as ivory for small utilitarian objects, such as figurines, spoons, combs and jewellery, where some effort is also invested in the creation of decorative arts. A study on Badarian burials has concluded that there is evidence for social inequality, although neither sex/age, knowledge nor status related differentiation ought to be excluded.³⁴ There is also some evidence for interregional exchange, e.g. siltstone palettes whose raw material was probably imported from further south, Red Sea shells, beads carved from turquoise and possibly native copper from the Eastern Desert and/or Sinai.³⁵

Because there is very little recognised and published evidence for permanent structural remains in the settlements, the state of sedentism of Neolithic societies in the Egyptian Nile Valley has been questioned and there is disagreement amongst scholars about the nature of human habitation and life-style in the Badari region during the Neolithic Period. Opinions range between doubting the existence of permanent habitations and greater emphasis on mobile pastoralism combined with ‘low level cereal farming’ in this area and beyond,³⁶ and a fully sedentary ‘village society’ with a subsistence economy based on agriculture and animal husbandry.³⁷ That the latter may be more likely³⁸ would be supported by the fact that bifacial sickles, with and without sickle gloss, were a consistent element recovered at Badarian sites, indicating systemic cereal farming,³⁹ and that Brunton and Caton-Thompson recorded over

²⁹ EIWANGER 1984.

³⁰ BRUNTON and CATON-THOMPSON 1928.

³¹ WENGROW *et al.* 2014 emphasised the cultural links between the Middle Egyptian and Sudanese Neolithic and concluded that a culture of Nubian ‘primary pastoral communities’ may have spread from south to north.

³² HOLMES 1989.

³³ FRIEDMAN 1994.

³⁴ ANDERSON 1992.

³⁵ HARTUNG 1998, 2013, fig.8.

³⁶ BRUNTON and CATON-THOMPSON 1928, 74; MIDANT-REYNES 2000, 160; WENGROW 2006, 63; WENGROW *et al.* 2014, 104; STEVENSON 2016.

³⁷ HASSAN 1988, 154; HENDRICKX and VERMEERSCH 2000, 40–42; HENDRICKX and HUYGE 2014, 247.

³⁸ This writer has suggested previously (2010a) that the stratification at Hemamiya, which is highly affected by about a dozen Old Kingdom burials, may have been too disturbed for CATON-THOMPSON to take more notice of delicate struc-

tural remains such as postholes or wall screens. She did record a mud wall of uncertain date together with a number of posts in Area G-H (BRUNTON and CATON-THOMPSON 1928, 87–88: Feature 261b). But because the section drawings in her account of the site (pl. LXIV) do not acknowledge pitting and other vertical disturbances, which must have existed due to the later burials which penetrate the stratification down to the ‘breccia’ level, they probably ought not to be taken as actual archaeological profiles. More recent excavations in the area by D. Holmes and R.F. Friedman (1994) did not report structural remains other than mud circles, either. However, they did note the existence of emmer wheat and barley remains in the early Neolithic levels, thus providing substance to the notion of regular cereal farming during the 5th millennium BCE (*contra* WENGROW *et al.* 2014).

³⁹ BRUNTON and CATON-THOMPSON 1928, 36–37; HOLMES 1989, 162–163; HOLMES and FRIEDMAN 1994, fig. 21; HART-SKARZYNSKI 2017, 242–244.

30 individual Badarian, i.e. late Neolithic, settlement remains in the region of Badari.⁴⁰ Recent excavations at a late Neolithic site in Upper Egypt (Mahgar Dendera 2) has demonstrated the difficulty of identifying structural remains due to the high degree of site deflation, but the reported post holes nevertheless suggest buildings of wattle-and-daub construction, despite its specialised, periodic character.⁴¹ The results of biomechanical and biometric analyses on Neolithic (Badari) and Chalcolithic (Predynastic Hierakonpolis) human populations indicate patterns for the Neolithic inhabitants which are relatively consistent with an agrarian sedentary life-style in general.⁴² Conversely, like the central Delta, the region of Middle Egypt has been known for its extensive areas of natural pasture and thus intensive use of animal herding throughout the Pharaonic Period, possibly because of the greater width of the alluvial plain making natural irrigation less easy to control and thus less suitable for agriculture.⁴³ It is also possible that some of those sites along the Valley where seasonality is evident, with the exception of Mahgar Dendera 2,⁴⁴ represent refuge areas for life stock during the inundation season. Although the suggestion that the permanent villages may have been located near the river⁴⁵ may appear as an *ex nihilo* argument, the few documented Neolithic settlements in the Nile Valley only underline the problem of archaeological preservation and documentation of sites in the alluvial plain. Any settlement remains present would today be covered by thick sediment deposits, making archaeological discovery and access difficult. The annual inundation would have not only contributed to the deposition of alluvial silts, but also to the potential shifting, erosion and displacement of riverine settlements.⁴⁶ Further, the nature of preserved settlement

remains only gradually becomes more solid with the progress of time and many early Chalcolithic habitation sites in the early-mid 4th millennium in low desert locations barely differ from the Neolithic.⁴⁷ It is probably only with the more continuous use of mudbrick architecture from the late Chalcolithic onwards,⁴⁸ which is obviously significantly later than in western Asia, that settlement debris could start to accumulate in one place over time, thus forming raised settlement *tells* like in the Near East.

For the 5th millennium BCE, most of the evidence points to agrarian, more or less sedentary, Neolithic transegalitarian societies with signs of incipient social and economic complexity, but little evidence for status, ranking or institutionalised leadership.

Chalcolithic societies

A similar case has recently also been made for the site of Maadi in northern Egypt, dating approx. 3700–3500 BCE,⁴⁹ which used to be labelled as the type site for Lower Egyptian Predynastic material culture. Maadi was excavated before and just after World War II by O. Menghin, M. Amer and I. Rizkana, but the material had never been comprehensively published until the 1980s. The time lag between excavation and full publication has caused variable assessments and incorrect chronological assignments.⁵⁰ Nevertheless, M. Hoffman made a very sensible observation already in 1979: “*On the surface it displays many of the typical characteristics of a Lower Egyptian Predynastic farming village, but the evidence unearthed... reveals an emphasis on trade, metallurgy and foreign contacts unknown in other northern sites like el-Omari.*”⁵¹ However, following the comprehen-

⁴⁰ HOLMES and FRIEDMAN 1994; HENDRICKX and VAN DEN BRINK 2002, 374–376.

⁴¹ HENDRICKX *et al.* 2001.

⁴² STOCK *et al.* 2011.

⁴³ EYRE 2010, 293. Interestingly, although this does not have to be related, the greatest concentration of the modern cattle population (26.2%) is also in Middle Egypt, cf. EL-NAHRAWY 2011, 8.

⁴⁴ VAN NEER, in: HENDRICKX *et al.* 2001, fig. VII, 2.

⁴⁵ HENDRICKX *et al.* 2001.

⁴⁶ HOLDAWAY and WENDRICH 2017, 238.

⁴⁷ This point has been emphasised by WENGROW 2006, 83, but it should be noted that there is indeed abundant evidence for ‘vertical *tell*-urbanisation’ throughout the Egyptian Nile Valley and Delta from at least the 4th millennium BCE onwards.

⁴⁸ CHŁODNICKI 2016.

⁴⁹ HARTUNG 2014.

⁵⁰ See, for example, the chronological tables in HOFFMAN 1979, tab. II and TRIGGER 1983, fig.1.1, where the Lower Egyptian sites are dated consistently younger in relation to Upper Egypt than what is consensus today. This incorrect relative chronological placement of Lower Egyptian sites and the comparison of sites of distinct levels of socio-economic development have probably contributed to the persistent view that the north was less developed than the south.

⁵¹ HOFFMAN 1979, 200.

⁵² RIZKANA and SEEHER 1987–1989.

sive modern analysis and publication of all the material excavated,⁵² J. Seeher concluded that Maadians “...adhered to the Neolithic way of life, while social transformations occurred in Upper Egypt” and that Maadi’s contribution to the emergence of social complexity was a rather passive one.⁵³ This more recent conclusion has been generally endorsed by numerous scholars because the mortuary data from Maadi and other Lower Egyptian sites indeed, in stark contrast to many contemporary Upper Egyptian sites, exhibit little evidence for socio-economic differentiation.⁵⁴ Nevertheless, when considering the evidence deriving from the settlement itself and the material culture found therein, a more nuanced picture is obvious, which already caused Hoffman to suggest that the “sober merchants” at Maadi “...preferred to invest their extra wealth in trade, storage and metallurgy”, i.e. production facilities and safe storage of surplus, “...rather than in fancy tombs and luxury goods” as they did in the south.⁵⁵

Maadi is a large, permanent settlement with mainly wattle-and-daub and some mudbrick and stone architecture covering an area of max. 1.5 km by 300 m or approx. 45 hectares, although activities appear to have shifted spatially over its c. 200–300 years of occupation.⁵⁶ The material culture exhibits coarse domestic ceramic wares, in particular the typical ovoid vessels on pedestals which find counterparts in vessels made of basalt. The latter are an interesting detail that warrants attention. Stone vessels have been found at Maadi in relatively large numbers, most of which are made from soft limestone, whereas the second most common material is basalt.⁵⁷ The probable source for the basalt is the area of the northern Fayum depression and the edge of the northern Egyptian Nile Valley. Although there is no definite proof that basalt vessels were produced locally, the relatively short distance between the source and Maadi as well as the close parallels in the local pottery repertoire make it at least very likely that

their place of production was nearby. Considering the skill, labour and energy involved in their manufacture, the degree of morphological standardisation and their wide distribution pattern with such vessels featuring as frequent Upper Egyptian grave goods, it seems reasonable to suggest that these basalt vessels were manufactured in specialised workshops in or near Maadi.⁵⁸

It has also been observed that the excavations in the settlement at Maadi produced an unusual number of copper objects, such as axes, pins, fish-hooks and ingots, as well as lumps of copper ore. Although the raw material and technology may have been imported from the southern Levant,⁵⁹ and although there is no archaeological evidence for metallurgical workshops on-site as yet, the extant evidence does suggest that Maadians were well acquainted with metallurgical technology and the casting of copper objects. This is further supported by the observation that there are only very few stone axes, but instead mainly copper axes in the tool assemblage.⁶⁰ This evidence for specialised, metallurgical industries is significant, as it reflects a degree of social and economic complexity.⁶¹

Apart from a proficient local flint blade and flake tool industry there are also a number of very fine bifacial knives and daggers,⁶² in particular a so-called ‘fishtail knife’ as well as a rhomboidal knife, which seem to be imported from the south, where such knives are produced in highly specialised workshops almost exclusively for the consumption by the elites. It has been suggested that these knives carry a degree of symbolism that relates to ritual use, status or other elite concepts.⁶³

Finally, Maadi exhibits rich evidence for inter-regional exchange and trade with the southern Levant, indicated by imported copper ingots, copper ore and ceramics, possibly tabular flint as well as architecture that has close parallels at southern and central Levantine sites of the late Chalcolithic and Early Bronze I periods.⁶⁴ One building, a

⁵³ SEEHER 1991, 317; 1992. This interpretation seems to be shared by the most recent excavator; cf. HARTUNG 2013; 2014, 108.

⁵⁴ MIDANT REYNES 2000, 59; HENDRICKX and VAN DEN BRINK 2002, 347.

⁵⁵ HOFFMAN 1979, 209.

⁵⁶ HARTUNG 2003.

⁵⁷ RIZKANA and SEEHER 1988, fig. 12.

⁵⁸ SEEHER 1990, 141; MALLORY-GREENOUGH 2002.

⁵⁹ HARTUNG 2014.

⁶⁰ SEEHER 1990, 148; 1991, 315. The more recent discovery of one stone axe at Maadi has, therefore, been pointed out as important, cf. HIKADE 2003a, 184.

⁶¹ GOLDEN 2002.

⁶² RIZKANA and SEEHER 1988, pl. 69; HIKADE 2003a, fig. 17.

⁶³ HIKADE 2003b. HART-SKARZYNSKI 2017 considers fish-tail knives as “symbolically significant items” (p. 229), but notes that probably only rhomboidal knives qualify as prestige status products.

⁶⁴ RIZKANA and SEEHER 1987–1989; HARTUNG *et al.* 2003; HARTUNG 2014.

semi-subterranean single-room structure with mortared stonewalls of up to 0.80 m thickness and covering an area of c. 55 m², has been interpreted as a facility for central storage.⁶⁵ The consistent presence of non-Egyptian house structures throughout the settlement's spatial and temporal development would suggest that non-Egyptians, i.e. possibly Levantine merchants, may have actually lived at Maadi and helped to organise the trade with the Levant.

Trade and exchange seems to be an activity that Maadians had engaged in frequently, not only with the Levant but also with southern Egypt. This is probably explained by its favourable geographic location at the meeting points of the Upper Egyptian Nile Valley, the Nile Delta and adjacent land routes. When also considering the size of the settlement, the evidence of craft specialisation, centralised storage, the consumption of elite products and the use of objects with symbolic significance, it seems appropriate to consider the level of economic and social organisation at Maadi in view of the emergence of political power and social complexity.

The economy had certainly moved beyond the level of organisation previously seen at the Neolithic sites of the 5th millennium. Although the graves associated with this community would not support a conclusion that the society was vertically or horizontally differentiated, the evidence from the settlement itself seems nonetheless sufficient to ascertain a degree of social differentiation and ranking and that social transformations have indeed occurred since the Neolithic Period. Maadi can, therefore, be compared to other Chalcolithic societies, where metallurgy is not only a consistent element of the tool manufacturing technologies, but also where other specialised industries as well as interregional exchange support a more complex social and economic differentiation than the definition of Neolithic village society would allow for. In this regard, Maadi is equal to the level of social and economic development of contemporary sites in the south, even if the mortuary data cannot corroborate this.⁶⁶

Chronologically a successor to Maadi in the north is Tell el-Farkha in the eastern Nile Delta,

where a team of Polish archaeologists has been working for a considerable period of time and where significant discoveries have been made that further support the conclusions derived from Maadi. Tell el-Farkha is a large multi-zone settlement with associated cemeteries.⁶⁷ The settlement itself develops continuously from rectilinear wattle-and-daub architecture to solid mudbrick architecture from c. 3600 BCE onwards. Different zones of Predynastic activities can be distinguished, such as a group of buildings interpreted as the residence of a high-status person and large breweries whose production output clearly caters for a substantial part of the community. There is also evidence for a local sanctuary where (royal?) ancestors or a male anthropomorphic deity may have been worshipped during the late 4th millennium BCE. This is particularly indicated by two statuettes of gold-sheet with lapis lazuli-inlaid eyes of late Chalcolithic style, found in a secondary context, but presumably once a ritual focus in this sanctuary. It also seems as if significant religious activities continued over a considerable period of time, as large numbers of unusual, ritually deposited ivory figurines of the Early Dynastic Period would suggest. The other artefacts coming out of the early levels at this site, such as prestigious and valuable imported goods (e.g. gold beads, objects of semiprecious stones and copper, Levantine pottery), objects of administrative function (such as cylinder seals with early hieroglyphic inscriptions) and early signs of leadership or royalty (e.g. *serekhs* = royal Horus names), exhibit an unusual wealth and high level of societal development. They indicate that Tell el-Farkha's society was not only stratified and well-embedded in complex networks of interregional trade and exchange, but that this polity later probably also played a key role. Importantly, after decades of intensive archaeological research in the eastern Nile Delta, there is scope for regional analysis in this particular area and this clearly illustrates that Tell el-Farkha stands out from most of the other contemporary sites in this region as one of central significance. The only other comparably important site in the vicinity is Tell Ibrahim Awad, about 25 km

⁶⁵ HARTUNG *et al.* 2003; HARTUNG 2006.

⁶⁶ It is interesting to note that comparable evidence for craft specialisation at Hierakonpolis (i.e. large-scale breweries, specialised pottery production, bead and flint artefacts production) is interpreted as an indication for a 'multi-tiered, complex society', cf. HENDRICKX 2014, 263. If this

logic were to be followed, society at Maadi would have to be considered a complex society as well.

⁶⁷ For summaries, cf. CHŁODNICKI 2004; 2011; CIAŁOWICZ 2004; 2011; CHŁODNICKI and CIAŁOWICZ 2007; CHŁODNICKI *et al.*, 2012.

to the east, which also houses a major early sanctuary.⁶⁸ Considering the socio-economic and political landscape of the Nile Valley and Delta at the time, it would be reasonable to conclude that Tell el-Farkha eventually developed into a primary centre of one of the early regional ‘proto-states’ that was emerging during the Proto-Dynastic Period some 200 years before the beginning of the 1st Dynasty and the formation of the territorial state of Egypt (see below).⁶⁹

Proto- and Early Dynastic societies

Tell el-Farkha and other contemporary settlement sites in the eastern Nile Delta⁷⁰ allow for drawing region-specific conclusions about centralisation and early urbanism in Egypt and document that an area of high population density existed here, but there is little evidence for comparison on an inter-regional scale and based on the settlements alone.⁷¹ It is, therefore, difficult to detect settlement systems and settlement hierarchies. Based on the quantity of excavated graves from this period, the region at the apex of the Nile Delta exhibits the greatest population density in all of Egypt, followed by the Abydos – Thinis region, and there is every indication that an urban centre was located here, probably already during the Proto-Dynastic period.⁷² Historical sources suggest that the capital city of the Pharaonic state eventually came to be located here, but there are currently no archaeological remains of the early city itself.⁷³ The archaeological evidence from the large Early Dynastic cemeteries in the direct vicinity of the later city of Memphis, or *Inebu-Hedju* as it would have been called then, especially at Helwan and Saqqara, document that this region eventually assumed the role of the primary centre within the settlement hierarchy of the early territorial state. In the course of this development, the urban settlements in the Nile Delta and southern Valley would

have adopted a secondary and tertiary role within the gradually evolving economic and administrative state system.⁷⁴ In lieu of the required settlement data, the focused investigation of material culture from the cemeteries surrounding the early primary centre provide valuable data about the level of this region’s socio-economical complexity. Especially the various raw materials from a wide spectrum of geographic origins (e.g. copper from the Eastern Desert, Sinai and southern Levant, cedar wood and ceramic containers with contents from the central and northern Levant, large quantities of pottery from southern Egypt, hard stones from the Eastern Desert and Lower Nubia) allow for wide-ranging conclusions about the high concentration of material resources and industries. The fact that also members of the middle and lower classes had access to imported commodities is indicative of the extent to which long-distance trade was an integral element in early Egyptian economy.⁷⁵ The complex technologies and the high level of craft specialisation as mirrored in the great variety and large quantity of artefacts recovered in the burials of this time further support the overarching political and economic significance of this area and the high degree of urban and social complexity in the context of the early state and political economy.⁷⁶

Conclusion: pathways to power in Early Egypt

The narrative of state formation in Egypt has undergone various reviews and modifications which is understandable considering the continuous growth of archaeological data over the past half century. Many scholars tended to largely rely on mortuary data and concluded that Pharaonic rule originated in the south and that also the development of social and economic complexity in the south occurred consistently earlier and was superior to that of the north. On the basis of this inter-

⁶⁸ BUSSMANN 2010; 2011; VAN HAARLEM 2014.

⁶⁹ CAMPAGNO 2002; KÖHLER 2004; 2010b; 2011; 2012.

⁷⁰ HENDRICKX and VAN DEN BRINK 2002, 370–371; JUCHA 2016.

⁷¹ Because of the greater depth of alluvial sediments in the western Nile Delta, the important site of Tell el-Fara’in - Buto is still relatively isolated in archaeological terms and can only be considered at a site-specific level, which, nevertheless, documents the existence of an important urban centre during the Proto- and Early Dynastic Period, cf. most recently HARTUNG *et al.* 2016.

⁷² Cf. MORTENSEN 1991; JEFFREYS and TAVARES 1994; KÖHLER 2004; 2008c.

⁷³ The early settlement remains found near Abusir and Saqqara (cf. JEFFREYS 2008) are possibly not part of the urban core of the city, which itself was probably located at the centre of the alluvial plain to the east of the ancient river course.

⁷⁴ TRIGGER 2003, 161; KÖHLER 2008c. On the basic principles of early Egyptian administration, cf. ENGEL 2013.

⁷⁵ KÖHLER and OWNBY 2011; HARTUNG *et al.* 2015.

⁷⁶ SMITH 2004; 2011; 2012; STOREY 2006; KÖHLER forthcoming.

pretation as well as later Pharaonic ideology, they also suggested that it was a southern culture (i.e. ‘Naqada Culture’⁷⁷) or polity that expanded north during the 4th millennium BCE and thereby instigated a process of cultural integration of the country that ultimately caused the political ‘Unification of Egypt’, or the formation of the territorial state of Egypt around 3100 BCE. That this reconstruction is far too simplistic has been recognised for some time now,⁷⁸ at least by some and at least in regard to some of the details, but the corner points of this account are still accepted by many, and to this day they set the agenda for ongoing research.⁷⁹

What most of us do agree upon today, however, is that the prevalence of mortuary data may have not only caused an imbalance and bias towards the south, but also that mortuary data in general are always a problematic source of evidence when investigating a society’s economic and social development and that other data must be consulted as well. As the above has aimed to demonstrate, evidence to assess social complexity outside the mortuary sphere is indeed present in the form of settlement sites of the 5th and 4th millennium BCE and in a rich material culture which together provide valuable evidence for developing technologies, craft specialisation, interregional trade and exchange, as well as for centralisation and settlement systems. This evidence complements and – in part – corrects conclusions derived from mortuary data and allows for the observation of an independent development of social and economic complexity in the north that clearly is not the result of an apparent ethnic, cultural or military expansion from the south.

In combination of domestic and mortuary data that are interpreted on the background of their contemporary social and ideological context, i.e. without the assistance of later Pharaonic ideologies, it is today possible to reconstruct a more adjusted picture of the various pathways to power and of the emergence of early Egyptian civilisation than was possible even only 20–30 years ago.

It appears, though, that especially research on early Egypt has long been rather bogged down by

now outdated scholarly concepts, which can probably be explained with the history of archaeological research and the great significance Egyptian civilisation has been granted in world history. In the pioneering days of archaeological research on Predynastic Egypt, the underlying research objective was a taxonomy of cultures when new sites were discovered and new cultures were defined at a rapid speed. At this time, cultures represented distinct groups of persons, or peoples, who shared a defined set of material culture, social customs and beliefs.⁸⁰ In this view, cultures were considered actors, as active participants in historical developments. And particularly in regards to early Egypt, cultural change was primarily explained by migration.⁸¹ In this tradition of culture history, the Neolithic sites in the region of Badari were seen as representing a ‘culture’ or ‘civilisation’. Its origin and ending were considered in relation to the so-called Tasian, Naqada and other cultures whose cultural sets somewhat differed from the Badarian and, therefore, represented different peoples.⁸² The construction of the history of Neolithic and Predynastic cultures accordingly set the archaeological parameters for the then recounted historical narrative as outlined at the beginning of this paper.

Modern research on archaeological cultures does not follow this explicatory model of ethnic definition and cultural change by migration or culture history anymore. Decades of interdisciplinary research involving not only the natural sciences, but also social and cultural anthropology as well as comparative archaeological theory, have resulted in an increased awareness of the complexities of cultural change and cultural process. Today, migration is often regarded as one of the least likely causes for change. This is not to say that people did not move around – quite the opposite; many prehistoric societies were probably very mobile, but their movements, scale, origin and destination are often difficult to ascertain on a scientific basis, even in the age of modern genetic analysis. Conversely, when cultural change is observed, other factors, including independent processes, technological as well as knowledge transfer via trade and

⁷⁷ But see KÖHLER 2014 and 2016 for the author’s most recent thoughts on the ‘Naqada Culture’. This writer’s earlier suggestions (1995) that the distinction of two separate cultures, Buto/Maadi vs. Naqada Culture, was unfounded and that there may be at least three distinct regions, or facies, of Predynastic material culture, have been sustained and further developed; contra HENDRICKX 2014, 262.

⁷⁸ E.g. KÖHLER 1995–2016; BUCHEZ and MIDANT-REYNES 2007; MACZYNSKA 2011; STEVENSON 2016.

⁷⁹ BUCHEZ and MIDANT-REYNES 2011; CIALOWICZ 2004–2016; HENDRICKX 2014; STEVENSON 2009; 2016.

⁸⁰ E.g. CHILDE 1929, p. V–VI.

⁸¹ See discussion in KÖHLER 2016.

⁸² KAISER 1985.

exchange, also need to be taken into consideration.⁸³

This shift in archaeological paradigms has slowly also made entry in the research on Predynastic Egypt and now challenges a number of widely held interpretations. Among these are the definition and history of Predynastic archaeological cultures as well as the development of Egyptian civilisation itself. Instead of contributing to defining the nature of distinct cultures, or peoples, in the Nile Valley, which may have migrated in and out of the valley, preceded or succeeded each other, it may perhaps be more appropriate to consider early Egyptian civilisation as a highly complex cultural system where each region has its own geographical, spatial, ecological, societal context and temporal development.

The various Neolithic sites along the Nile Valley have a lot in common with regard to their material culture and subsistence, i.e. the subsystems that make up the matrix of this cultural system. Especially the northern sites, which are also chronologically closer to each other, share aspects in the manufacture and styles of domestic pottery, the fact that they engage in food production complemented by varying degrees of wild food sources, especially fish, the way they bury their dead, employ light organic materials for house construction and store grain in basket-lined pits as well as an array of comparable lithic implements.⁸⁴ But there are also significant differences between them, as for example the degree to which they live a sedentary life style, precisely what kinds of natural resources they exploit and which other regions they are in contact with. These differences are largely explained by the geographic location and variability of ecological systems along the Nile and adjacent areas. These obvious differences emphasise the strong regional character of the early Neolithic cultural system and indicate a loosely tied matrix. It is possible that this matrix only became tighter as time progressed, as population density increased, and exchange between the regions became more intensive during the late 5th and 4th millennium BCE.

But, although there is an increasing degree of consistency in several subsystems of the wider

cultural system from one phase to the next and between different regions, it is important to note that it is clearly not appropriate to describe a history of culture from the Neolithic to the Chalcolithic periods for all of Egypt; or for north-eastern Africa, for that matter. This is because each site and each region essentially follows its own development, adapted to its own specific regional situation and environment.⁸⁵ While cultural change can sometimes be observed in different regions at roughly the same time, because this may have been catalysed by interregional contact and transfer, especially during the late Chalcolithic period, it is only with the emergence of the territorial state that a more geographically integrated historical narrative is possible.

Nevertheless, and although our conclusions may seem leaning towards a 'neo-evolutionary' approach when looking at the development of Egyptian civilisation across the Nile Valley, the current data generally support observing a change from transegalitarian small communities during the 5th to larger, more socio-economically complex and finally hierarchical complex societies towards the end of the 4th millennium BCE. From a socio-economic point of view, this millennium was probably the most crucial to the development of Egyptian civilisation across the different regions, because the end of it saw the emergence of independent complex chiefdoms or kingdoms in different places. This detail, however, is most obscure, because there is still not enough data from all the regions of Egypt to investigate how and why this happened. Those few areas where sufficient data are available, such as Hierakonpolis, Abydos or Tell el-Farkha, only represent a minority of communities and ought not be taken as exemplars for all the other regions for reasons outlined above.

It is possible that kingdoms may have been preceded by chiefdoms at least in some areas of Egypt and that power structures developed within a socio-political milieu dominated by one powerful individual who controlled resources and a territory of limited size and complexity.⁸⁶ The concept of the chiefdom in general has undergone review over the last few decades,⁸⁷ and has been rejected especially as a label for those societies where there

⁸³ BURMEISTER 2016.

⁸⁴ MORTENSEN 1992; HOLDAWAY and WENDRICH 2017.

⁸⁵ Cf. HOLMES 1989, 328; FRIEDMAN 1994, 862; KÖHLER 2014; 2016; and most recently HOLDAWAY and WENDRICH 2017.

⁸⁶ CARNEIRO 1981; EARLE 1987; 1991; 1997; STEIN and ROTHMAN 1994; FLANNERY 1999; BELIAEV *et al.* 2001; PRICE and FEINMAN 2012; SMITH 2012.

⁸⁷ YOFFEE 2005; PAUKETAT 2007.

is little evidence for powerful leaders, but whose social structure and economic development would otherwise suggest a certain level of social complexity. This clearly applies to society at Maadi during the early Chalcolithic Period and it may be possible to consider this society in the sense of corporate organisation, rather than exclusionary network power arrangements, which can both be found in chiefdoms.⁸⁸ The latter might well apply to contemporaneous societies in Upper Egypt, where powerful individuals in a ranked or incipient complex society held political and economic control over a region of limited size, i.e. a number of villages, and whose polity lacks the hallmarks of a state society, i.e. at least three-tiered social and settlement hierarchy as well as centralisation and urbanism. Some regions eventually developed into state societies at the end of the 4th millennium, but a number of important questions remain, one being where and when the first evidence for kingdoms (or early states) materialises, and the other what form of society and environment their power and institutions had originally emerged from. The distinction between these two forms of institutionalised leadership, i.e. chiefdom and kingdom, is obviously a difficult one when the data are incomplete. The early mortuary evidence currently available cannot be contextualised on the background of overall population or polity size, settlement hierarchy and of the level of social complexity of that society as a whole. Especially when there is iconographic evidence that would suggest a degree of continuity over long periods of time, e.g. with an imagery that focuses on the powerful leader who subjugates his enemies that stretches from the early 4th millennium BCE and across the entire Pharaonic Period, it is very difficult to draw a line between ‘chief’ and ‘king’.⁸⁹ This strong element of iconographic continuity alone⁹⁰ obviously cannot be considered sufficient to establish that those who used it in prehistoric times were also kings and that, by implication, society was as complex as in Pharaonic times. What it does show, however, is that the institution of the leader, be it

religious, political and/or economic, has its roots in earlier forms of society and that its Pharaonic version rests on very long traditions. Even if some evidence is of high quality as in the case of the early elite cemetery HK6 at Hierakonpolis,⁹¹ which is roughly contemporary with Maadi and the earliest levels at Tell el-Farkha, and whose occupants have been interpreted as early kings,⁹² it is important not to lose sight of the ‘bigger picture’. In isolation, this evidence is very impressive and suggestive of certain individuals’ obvious high status and their desire to express their power in ostentatious burials. But it is not necessarily reflective of their society’s level of complexity, especially if other areas of evidence, such as the level of craft specialisation, interregional exchange and a cemetery of commoners (HK43), as well as other scattered contemporary tombs, would rather point to a ranked or chiefdom society, particularly during the early Chalcolithic period.⁹³ The comparison between the varying interpretations of sites like Maadi and Hierakonpolis may be considered indicative of the different standards and values applied to settlement and funerary data.

The distinction between ‘chief’ and ‘king’, between chiefdom and kingdom or complex state society, clearly is a rather important and challenging question in current research on early Egypt and must be approached with a solid set of data and theoretical grounding. Considering the heterogeneity of the evidence deriving from the many different sites along the Nile Valley, it is important to emphasise that there also may have been many different pathways to power in the Nile Valley and that the process of state formation clearly was not a linear one. It also seems as if the emergence of political power, independent from social and economic processes, is more visible in the south due to the greater emphasis on powerful individuals and their kin in the iconography and mortuary sphere, who employ the display of wealth in a lavish burial as an avenue to express power and status. It is also reasonable to consider that funerary and other feasts, possibly explaining the invest-

⁸⁸ FEINMAN, in: SMITH 2012.

⁸⁹ KÖHLER 2002.

⁹⁰ It is also necessary to consider the ever-changing socio-ideological context of this concept and the resulting change in identity of the enemy. It was only with the advent of the early territorial state, during secondary state formation, that the iconography of the enemy became defined as a ‘non-Egyptian’ thus illustrating the construc-

tion of ethnic identity by the early Egyptian rulers. The ceremonial palette of Narmer is a perfect example of this concept, cf. KÖHLER 2002.

⁹¹ FRIEDMAN 2008; FRIEDMAN *et al.* 2011.

⁹² FRIEDMAN 2008; HENDRICKX 2014, 265.

⁹³ In this context, ‘YOFFEE’s Rule’ (2005, 41) comes to mind: “if you can argue whether a society is a state or isn’t, then it isn’t”. See also PEREGRINE, in: SMITH 2012, 165.

ment in large breweries as evident at Tell el-Farkha and Hierakonpolis, played a central role in solidifying the chiefs' power.⁹⁴ And it is also possible that it was just this element of self-aggrandisement of Upper Egyptian rulers that may have caused their temporary impoverishment or decline, as has been observed for example at Hierakonpolis, Abydos and Naqada where the elite cemeteries exhibit phases of reduction and even abandonment. This has been explained in different ways,⁹⁵ but it is also possible to hypothesise that this phenomenon simply might be the result of the aggrandising chiefs' overextending of resources invested in feasting and expensive burials, rather than a struggle over power in southern peer-polity competition, especially given that there is little evidence of relevant physical violence.⁹⁶

There were most probably high-status persons and political leaders in Lower Egypt as well who controlled the manufacture and flow of goods in their polities and beyond, who engaged in rituals in their local sanctuaries, but who – on the basis of the current evidence – chose not to express their status through the conspicuous display of mortuary goods as much as their southern counterparts. It is very possible that early rulers in the north employed different media to express their status which have not yet been recognised. It is also possible that power was shared among several individuals or clans in the north and that 'personal glorification' was initially less explicit.⁹⁷ As has been noted previously,⁹⁸ political organisation and socio-economic complexity can vary significantly across a geographically diverse cultural system, such as the Ubaid horizon in Mesopotamia, and a similar view can be taken to understand the situation in Egypt. It would be useful to investigate Chalcolithic Egypt along the lines of a multidimensional approach, as has been proposed by P. Peregrine, that builds upon the Corporate/Network Theory⁹⁹ and adds the Profane/Sacred as well as Volunteeristic/Terroristic trajectories to the analysis of archaeological evidence.¹⁰⁰

Further, there is increasing evidence that we should not only seriously consider the varieties of pathways to power but also that there were at least two distinct processes of state formation.¹⁰¹ One being a process of primary state formation in the different regions of the Nile Valley, as indicated by a number of contemporary Proto-Dynastic polities of comparable socio-economic development and social complexity, or what has been labelled 'proto-states',¹⁰² for example at Hierakonpolis, Naqada, Abydos, the Memphis-Fayum region, the eastern and the western Delta by 3200 BCE with identifiable individual rulers. The evidence for these derives from unusually large tombs, early writing and bureaucracy and in particular numerous early royal names (*serekhs*), which appear around the same time in different parts of the Nile Valley and Delta.¹⁰³ Most of these individuals cannot be attributed to the line of royal predecessors of the 1st Dynasty at Abydos who eventually dominated the political landscape of early Egypt. The *serekhs* themselves suggest that these rulers engaged in the same medium of language and writing by identifying their names with a central building and by associating themselves with one or several deities, thus suggesting comparable ideas of institutionalised sacred rulership. They seem to speak the same language and the aspects they have in common may be the result of peer-polity competition, each trying to outdo the other and simultaneously imitating the other. One could possibly argue that the stronger emphasis of individual leaders in the south gradually became incorporated in the expression of power also in the north. This could be an adaptation of a language of power in response to peer-polity interaction or a shift along the Corporate/Network continuum. The early *serekhs* also demonstrate how tightly woven the matrix of the Nile Valley cultural system already was at this time. But they exhibit great variety, with or without the falcon on top of the *serekh* or next to it, without *serekh*, with one or two falcons, with name and without name, just to mention a

⁹⁴ HAYDEN and VILLENEUVE, in: PRICE and FEINMAN 2012.

⁹⁵ HENDRICKX 2014; HARTUNG 2016.

⁹⁶ HAYDEN and VILLENEUVE, in: PRICE and FEINMAN 2012, 105.

⁹⁷ FEINMAN and NICHOLAS 2016. Especially the comparison of the Classic Maya with Teotihuacan polities (p. 285–286) demonstrates the differences in expressing power, and in reading that power archaeologically.

⁹⁸ STEIN 2010, 32. STEIN'S analysis of the 'Ubaid horizon' in Mesopotamia and its aspects of regional diversity offer a

very useful approach for understanding the Egyptian Nile Valley cultural system.

⁹⁹ BLANTON *et al.* 1996; DRENNAN, PETERSON and FOX, in: PRICE and FEINMAN 2012, 45–76.

¹⁰⁰ PEREGRINE, in: SMITH 2012.

¹⁰¹ KÖHLER 2010b; 2011.

¹⁰² KEMP 1989; CAMPAGNO 2002.

¹⁰³ KAISER 1982; VAN DEN BRINK 1996; JIMENEZ-SERRANO 2003; KÖHLER 2004.

few varieties. Up to now, they have resisted attempts at a consistent classification and typological sequence, which again speaks for their independent development.

The primary process of state formation clearly is the result of independent social, ritual and economic transformations in the different regions of Egypt that involved different avenues of expressing political power and leadership. It is followed by a political process, namely by the integration of several polities into an ever larger one, culminating in the formation of a territorial state polity along the entire Egyptian Nile Valley around 3100 BCE. Because quite different processes and parameters have now come into play during this later course of political integration, internal economic, administrative organisation and control, and ultimately of the creation of a state ideology that completely changed the nature and purpose of this new territorial state, this development ought to be considered secondary. To this writer, the distinction between primary and secondary state formation is an important one, because the processes involved are of quite different quality and character that must have also impacted on the institution of the leader.

The primary process of state formation probably occurred independently in the different regions, undoubtedly as a result of various socio-economic transformations within a highly complex cultural system. Contrary to that, the secondary process can almost be reduced to peer-polity interaction as well as economic and administrative integration of the territory.¹⁰⁴ It was, therefore, a largely political process that gave rise to completely new ideologies such as the definition of Pharaonic rule based on the concept of duality that again later became symbolic of the two parts of the country, Upper and Lower Egypt.¹⁰⁵ Thus, what is commonly referred to as the ‘Unification of Egypt’, and the apparent historical developments as narrated by later Pharaonic mythology

and state ideology, in essence really describes the secondary process of political integration into one territory, rather than the far more crucial one, i.e. the process of primary state formation and the development of complex state society, hierarchical centralisation and institutionalised power at a regional level that preceded it.

This notion and the significance of the distinction between primary and secondary are particularly highlighted at times of political fragmentation during the three so-called Intermediate Periods of Pharaonic history.¹⁰⁶ Although separated by hundreds and thousands of years and completely different historical circumstances, one could argue that when the centralised government lost control over the country to the advantage of regional leaders, the situation thereby reversed to a political landscape quite comparable to the Proto-Dynastic Period.¹⁰⁷ However, during these periods of relatively strong regional kingdoms along the Nile Valley,¹⁰⁸ complex state society probably never ceased to exist, meaning that the process of primary state formation was not reversed.¹⁰⁹ Instead, what came to be challenged every time when this process of political fragmentation occurred were only the effects of secondary state formation. These had to be renegotiated anew when one of the regional polities later took on a dominant role and again succeeded in re-unifying the country, as during the 11th, 17/18th and 25/26th Dynasties, thereby essentially repeating secondary state formation. This conclusion would suggest that the state formed by secondary state formation was ultimately less stable and enjoyed only limited success *à la longue durée*, despite the efforts and achievements of the Egyptian Pharaohs in trying to cement the legitimacy of their rule with ever-changing religious ideologies and political measures. It also underlines the tight fabric of local and regional culture, the endurance of regional complex societies in Egypt and their underlying, deeply rooted socio-cultural foundations, even during

¹⁰⁴ RENFREW and CHERRY 1986; TRIGGER 2003, 101.

¹⁰⁵ KAHL 2008; KÖHLER 2010b; 2011; 2012.

¹⁰⁶ SEIDLMEYER 2000. L. MORENZ speaks of “*Zeit der Regionen*”, instead of the term Intermediate Period. MORENZ 2010.

¹⁰⁷ KÖHLER 2012.

¹⁰⁸ RYHOLT 1997; SEIDLMEYER 1990, 2000; SCHNEIDER 2003; DODSON 2012.

¹⁰⁹ It has been suggested that power devolved to a chiefdom level and that state society had collapsed, for example during the First Intermediate Period; cf. BARTA 2015. This notion, however, is not supported by the overall level of socio-economic complexity and the existence of local kingdoms, which were incorporated in later king lists. See also the discussion on the question of the apparent loss of the *idea of the state* (‘Verlust der Staatsidee’) during the Third Intermediate Period, as originally proposed by H. BRUNNER, in ASSMANN 1996, 313.

Table 1: Chronological Table of the Egyptian Nile Valley during the pre- and early historical periods

Absolute chronology (in years BCE)	Historical chronology		Relative chronology
2700–2100	Early Bronze Age	Old Kingdom (Dynasties 3–8)	
2700 3100		Early Dynastic (Dynasties 1–2)	Naqada IIIC-D
3300		Proto-Dynastic	Naqada IIIA-B
3500	Late Chalcolithic		Naqada IIC/D – IIIA
3800	Early Chalcolithic		Naqada IB/C-IIB
4400	Late Neolithic		Naqada IA/B Badarian
5300	Early Neolithic		El-Omari Merimde Benisalame Fayum A
7000	Epi-Palaeolithic		
10 000 300 000	Palaeolithic		

times of tight central control.¹¹⁰ It is, therefore, also important to remember that the institution of Pharaonic rule throughout the more than 3000 years between the beginning of the Dynastic era until the Roman Period was never static. It was subject to constant changes and adaptations of religious, ideological and political nature, always depending on and in response to the circumstances of the time.¹¹¹

And the same changeability probably applies to the institution of the leader in prehistoric and early historical times. This specially accounts for the emergence of leadership of possibly tribal or clan-based character, the appearance of powerful chiefdoms in later Predynastic times and finally kingship during the primary and secondary processes of state formation that each required their own, distinct political responses as well as ideological and structural definitions.

¹¹⁰ E.g. ASSMANN 1996; 2000; 2009; 2010. GUNDLACH (1998, 18) points out that divine kingship *per se* was mandatory in Pharaonic Egypt and was thus never questioned. But each and every individual king had to take measures to legitimise his claim to the throne and to exercise his powers.

¹¹¹ O'CONNOR and SILVERMAN 1995; GUNDLACH 1998.

Bibliography

- ANDERSON, W.
1992 Badarian Burials: Evidence for Social Inequality in Middle Egypt during the Early Predynastic Era, *JARCE* 29, 51–80.
- ASSMANN, J.
1996 *Ägypten – Eine Sinngeschichte*, Munich/Vienna.
2000 *Herrschaft und Heil*, Munich.
2009 Der Mythos des Gottkönigs im alten Ägypten, 11–25, in: A. BETTENWORTH and CH. SCHMITZ (eds.), *Mensch - Heros - Gott: Weltentwürfe und Lebensmodelle im Mythos der Vormoderne*, Stuttgart.
2010 Politik und Religion: altägyptische und biblische Ausprägungen eines aktuellen Problems, 83–105, in: J. ASSMANN and H. STROHM (eds.), *Herrscherkult und Heilserwartung*, Munich/Paderborn.
- BAINES, J. and YOFFEE, N.
1998 Order, Legitimacy, and Wealth in Ancient Egypt and Mesopotamia, 199–260, in: G.M. FEINMAN and J. MARCUS (eds.), *Archaic States*, Santa Fe.
- BARD, K.A.
1987 The Geography of Excavated Predynastic Sites and the Rise of Complex Society in Egypt, *JARCE* 24, 81–93.
1994 *From Farmers to Pharaohs. Mortuary Evidence for the Rise of Complex Society*, Sheffield.
- BARD, K.A. and CARNEIRO, R.L.
1989 Patterns of Predynastic Settlement Location, Social Evolution and the Circumscription Theory, *CRIPEL* 11, 15–23.
- BARTA, M.
2015 Ancient Egyptian History as an Example of Punctuated Equilibrium: An Outline, 1–17, in: P.D. MANUELIAN and T. SCHNEIDER (eds.), *Towards a New History for the Egyptian Old Kingdom. Perspectives on the Pyramid Age*, Leiden/Boston.
- BAUMGARTEL, E.J.
1955 *The Cultures of Prehistoric Egypt I*, Oxford.
1960 *The Cultures of Prehistoric Egypt II*, Oxford.
- BELIAEV, D.D., BONDARENKO D.M. and KOROTAYEV, A.V.
2001 Origins and Evolution of Chiefdoms, *Reviews in Anthropology* 30.4, 373–395.
- BLANTON, R.E., FEINMAN, G.M., KOWALEWSKI, S.A. and PEREGRINE, P.N.
1996 A Dual-Processual Theory for the Evolution of Mesoamerican Civilization, *Current Anthropology* 37, 1–14.
- BRUMFIEL, E. and EARLE, T.K.
1987 *Specialization, Exchange, and Complex Societies*, Cambridge.
- BRUNTON, G. and CATON-THOMPSON, G.
1928 *The Badarian Civilisation and Prehistoric Remains near Badari*, BSAE & ERA 46, London.
- BUCHEZ, N.
2004 The study of a group of ceramics at the end of the Naqada period and socio-economic considerations, 665–687, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
- BUCHEZ, N. and MIDANT-REYNES, B.
2007 Le site prédynastique de Kom el-Khilgan (Delta oriental). Données nouvelles sur les processus d'unification culturelle au IV^e millénaire, *BIFAO* 107, 43–70.
2011 A Tale of Two Funerary Traditions: The Predynastic Cemetery at Kom el-Khilgan (eastern Delta), in: R.F. FRIEDMAN and P.N. FISKE (eds.), *Egypt at its Origins 3*, Leuven/Paris/Walpole, 831–858.
- BURMEISTER, S.
2016 Archaeological Research on Migration as a Multidisciplinary Challenge, *Medieval Worlds – Comparative & Interdisciplinary Studies*, 2016.4, 42–64
- BUSSMANN, R.
2010 *Die Provinztempel Ägyptens von der 0. bis zur 11. Dynastie. Archäologie und Geschichte einer gesellschaftlichen Institution zwischen Residenz und Provinz*, Leiden.
2011 Local traditions in early Egyptian temples, 747–762, in: R.F. FRIEDMAN and P.N. FISKE (eds.), *Egypt at its Origins 3*, Leuven/Paris/Walpole.
- CAMPAGNO, M.
2002 On the Predynastic “Proto-states” of Upper Egypt, *GM* 188, 49–60.
2004 In the Beginning was the War. Conflict and the Emergence of the Egyptian State, 689–703, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
- CARNEIRO, R.L.
1981 The Chiefdom: Precursor of the State, 37–79, in: G.D. JONES and R.R. KAUTZ (eds.), *The Transition to Statehood in the New World*, Cambridge.
- CASTILLOS, J.J.
1982 *A Reappraisal of the Published Evidence on Egyptian Predynastic and Early Dynastic Cemeteries*, Toronto.
1983 *A Study of the Spatial Distribution of Large and Richly endowed Tombs in Egyptian Predynastic and Early Dynastic Cemeteries*, Toronto.
- CATON-THOMPSON, G. and GARDNER, E.
1934 *The Desert Fayum*, London.

- CHILDE, W.G.
1929 *The Danube in Prehistory*, Oxford.
- CHŁODNICKI, M.
2004 Tell el-Farkha and Explorations of the Central Kom 1987-2002, 357–370, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
2011 The Central Kom of Tell el-Farkha: 1000 years of history (ca. 3600-2600 BC), 41–58, in: R.F. FRIEDMAN and P.N. FISKE (eds.), *Egypt at its Origins 3*, Leuven/Paris/Walpole.
2016 Beginnings of mudbrick architecture in Egypt: A case study from Kom C at Tell el-Farkha, 21–32, in: M.D. ADAMS, B. MIDANT-REYNES, E. RYAN and Y. TRISTANT (eds.), *Egypt at its Origins 4*, Leuven/Paris/Bristol.
- CHŁODNICKI, M. and CIAŁOWICZ, K.M.
2007 Golden Figures from Tell el-Farkha, 7–21, in: J. ŚLIWA (ed.), *Studies in Ancient Art and Civilization 10*, Kraków.
- CHŁODNICKI, M., CIAŁOWICZ, K. and MACZYŃSKA, A. (eds.)
2012 Tell el-Farkha I. Excavations 1998-2011, Poznań/Kraków.
- CIAŁOWICZ, K.
2004 Tell el-Farkha 2001-2002. Excavations at the Western Kom, 371–388, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
2011 The Early Dynastic administrative-cultic centre at Tell el-Farkha, 763–800, in: R.F. FRIEDMAN and P.N. FISKE (eds.), *Egypt at its Origins 3*, Leuven/Paris/Walpole.
2016 The Naqadian occupation of the Nile Delta. New Facts and Possibilities, *MDAIK 70/71* (Gedenkschrift Werner Kaiser), 81–90.
- COSTIN, C.L.
1991 Craft Specialization: Issues in Defining, Documenting, and Exploring the Organization of Production, 1–56, in: M. SCHIFFER (ed.) *Archaeological Method and Theory*, Tuscon.
- DEBONO, F. and MORTENSEN, B.
1990 *El-Omari*, Mainz.
- DEE, M., WENGROW, D., SHORTLAND, A., STEVENSON, A., BROCK, F., GIRDLAND FLINK, L. and BRONK RAMSEY, CH.
2013 An Absolute Chronology for Early Egypt using Radiocarbon Dating and Bayesian Statistical Modelling, *Proceedings of the Royal Society*, 469, 20130395. Available at: <http://dx.doi.org/10.1098/rspa.2013.0395>.
- DODSON, A.
2012 *Afterglow of Empire. Egypt from the fall of the New Kingdom to the Saite Renaissance*, Cairo.
- DREYER, G.
1992 Horus Krokodil, ein Gegenkönig der Dynastie 0, 259–263, in: R.F. FRIEDMAN and B. ADAMS (eds.), *The Followers of Horus. Studies dedicated to Michael Allen Hoffman*, Oxford.
- EARLE, T.K.
1987 Chiefdoms in Archaeological and Ethnohistorical Perspective, *Annual Review of Anthropology* 16, 279–308.
1997 *How Chiefs Come to Power: The Political Economy in Prehistory*, Stanford.
- EARLE, T.K. (ed.)
1991 *Chiefdoms: Power, Economy, and Ideology*, Cambridge.
- EARLE, T.K. and ERICSON, J.E.
1977 *Exchange Systems in Prehistory*, New York.
- EIWANGER, J.
1984 *Merimde – Benisalame I. Die Funde der Urschicht*, AV 47, Mainz.
1988 *Merimde-Benisalame II. die Funde der mittleren Merimdekultur*, AV 52, Mainz.
1992 *Merimde – Benisalame III. Die Funde der jüngeren Merimdekultur*, AV 59, Mainz.
- ELLIS, CH.
1996 Expressions of Social Status: A Statistical Approach to the Late Predynastic/Early Dynastic Cemeteries of Kafr Tarkhan, 151–164, in: L. KRZYŻANIĄK, K. KROEPER and M. KOBUSIEWICZ (eds.), *Interregional Contacts in the Later Prehistory of Northeastern Africa*, Poznan.
- ENGEL, E.-M.
2013 The organisation of a nascent state: Egypt until the beginning of the 4th Dynasty, 19–40, in: J.-C. MORENO GARCÍA (ed.), *Ancient Egyptian Administration*, Leiden.
- EYRE, CH.
2010 The Economy: Pharaonic, 291–308, in: A. LLOYD (ed.), *The Blackwell Companion to Ancient Egypt*, London.
- FEINMAN, G.M. and NICHOLAS, L.M. (eds.)
2004 *Archaeological Perspectives of Political Economy*, Salt Lake City.
- FEINMAN, G.M. and NICHOLAS, L.M.
2016 Framing the Rise and Variability of Past Societies, 271–289, in: L.F. FARGHER and V.Y. HEREDIA ESPINOZA (eds.), *Alternative Pathways to Complexity*, Boulder.
- FLANNERY, K.V.
1967 Culture history v. cultural process: A debate in American archaeology, *Scientific American* 217/2, 119–122.
1999 Chiefdoms in the Early Near East: Why it is so Hard to Identify Them?, 44–58, in: A. ALIZADEH, M. YUSEF and S.M. SHAHMIRZADI (eds.), *The Iranian World: Essays on Iranian Art and Archaeology*, Tehran.

- FRIED, M.H.
1960 On the Evolution of Social Stratification and the State, 713–731, in: S. DIAMOND (ed.), *Culture in History*, New York.
- FRIEDMAN, R.F.
1994 *Predynastic Settlement Ceramics of Upper Egypt: A Comparative Study of the Ceramics of Hemamieh, Nagada and Hierakonpolis*, Berkeley.
2008 Excavating Egypt's Early Kings: Recent Discoveries in the Elite Cemetery at Hierakonpolis, 1157–1194, in: B. MIDANT-REYNES and Y. TRISTANT (eds.), *Egypt at its Origins 2*, Leuven.
- FRIEDMAN, R.F., VAN NEER, W., and LINSEELE, V.
2011 The Elite Predynastic Cemetery at Hierakonpolis: 2009–2010 Update, 157–191, in: R.F. FRIEDMAN and P. N. FISKE (eds.), *Egypt at its Origins 3*, Leuven/Paris/Walpole.
- GHILARDI, M. and TRISTANT, Y.
2012 Geoarchaeology of Egypt and the Mediterranean: Reconstructing Holocene Landscapes and Human Occupation History, *Quaternary International* 266, 1–3.
- GOLDEN, J.
2002 The Origins of the Metals Trade in the Eastern Mediterranean: Social Organization of Production in the Early Copper Industries, 225–238, in: T.E. LEVY and E.C.M. VAN DEN BRINK (eds.), *Egypt and the Levant*, London/New York.
- GOPHER, A.
1998 Diffusion Processes in the Pre-Pottery Neolithic Levant. The Case of the Helwan Point, 91–105, in: I. HERSHKOVITZ (ed.), *People and Culture in Change*, Oxford.
- GUNDLACH, R.
1998 *Der Pharaoh und sein Staat. Die Grundlagen der ägyptischen Königsideologie im 4. und 3. Jahrtausend*, Darmstadt.
- HART-SKARZYNSKI, E.
2017 *Beyond Prestige: A ritual production model for stone tool specialization in Naqada period Egypt*, PhD Dissertation thesis, University of Virginia.
- HARTUNG, U.
1998 Zur Entwicklung des Handels und zum Beginn wirtschaftlicher Administration im prädynastischen Ägypten, *SAK* 26, 35–50.
2006 Bemerkungen zur Architektur und Chronologie der unterirdischen und halburterirdischen Bauten in der prädynastischen Siedlung von Maadi, 35–44, in: E. CZERNY, I. HEIN, H. HUNGER, D. MELMAN and A. SCHWAB (eds.), *Timelines: Studies in Honour of Manfred Bietak*, Leuven.
2013 Raw Material Supply and Social Development in Egypt in the 4th Millennium BC, 13–30, in: S. BURMEISTER, S. HANSEN, M. KUNST and N. MÜLLER-SCHEESSEL (eds.), *Metal Matters, Innovative Technologies and Social Change in Prehistory and Antiquity*, Rahden/Westfalen.
- 2016 Der Friedhof U in Umm el-Qaab und die funeräre Landschaft von Abydos in prädynastischer Zeit, *MDAIK* 70/71 (Gedenkschrift Werner Kaiser), 175–192.
- HARTUNG, U., ABD EL-GELIL, M., VON DEN DRIESCH, A., FARES, G., HARTMANN, R., HIKADE, TH. and IHDE, CH.
2003 Vorbericht über neue Untersuchungen in der prädynastischen Siedlung von Maadi, *MDAIK* 59, 149–198.
- HARTUNG, U., HARTMANN, R., KINDERMANN, K., RIEMER, H. and STÄHLE, W.
2017 Tell el-Fara'in-Buto. 12. Vorbericht, *MDAIK* 72, 73–126.
- HARTUNG, U., KÖHLER, E.CH., MÜLLER, V. and OWNBY, M.
2015 Imported Pottery from Abydos: A New Petrographic Perspective, *Ä&L* 25, 295–334.
- HASSAN, F.
1988 The Predynastic of Egypt, *Journal of World Prehistory* 2, 136–185.
- HENDRICKX, ST.
2014 The Emergence of the Egyptian State, 259–278, in: C. RENFREW, and P. BAHN, (eds.), *The Cambridge World Prehistory 1: Africa, South and Southeast Asia and the Pacific*, Cambridge.
- HENDRICKX, ST. and FRIEDMAN, R.F.
2003 Gebel Tjauti rock inscription 1 and the relationship between Abydos and Hierakonpolis during the Early Naqada III period, *GM* 196, 95–110.
- HENDRICKX, S., and HUYGE, D.
2014 Neolithic and Predynastic Egypt, 240–258, in: C. RENFREW, and P. BAHN, (eds.), *The Cambridge World Prehistory 1: Africa, South and Southeast Asia and the Pacific*, Cambridge.
- HENDRICKX, ST., MIDANT-REYNES, B. and VAN NEER, W.
2001 *Mahgar Dendera 2 (Haute Égypte), un site d'occupation Badarien*, Leuven.
- HENDRICKX, ST. and VAN DEN BRINK, E.C.M.
2002 Inventory of Predynastic and Early Dynastic Cemetery and Settlement Sites in the Egyptian Nile Valley, 346–399, in: T.E. LEVY and E.C.M. VAN DEN BRINK (eds.), *Egypt and the Levant*, London/New York.
- HENDRICKX, ST. and VERMEERSCH, P.
2000 Prehistory. From the Palaeolithic to the Badarian Culture, 17–43, in: I. SHAW (ed.), *Oxford History of Ancient Egypt*, Oxford.
- HIKADE, TH.
2003a in: U. HARTUNG, M. ABD EL-GELIL, A. VON DEN DRIESCH, G. FARES, R. HARTMANN, TH. HIKADE and CH. IHDE, Vorbericht über neue Untersuchungen in der prädynastischen Siedlung von Maadi, *MDAIK* 59, 180–186.

- 2003b Getting the Ritual Right - Fishtail Knives in Predynastic Egypt, 137–151, in: S. MEYER (ed.), *Egypt – Temple of the Whole World. Studies in Honour of Jan Assmann*, Leiden/Boston.
- HODDER, I.
2012 *Entangled. An Archaeology of the Relationships between Humans and Things*, Chichester.
2016 *Studies in Human-Thing Entanglement*, available at: <http://www.ian-hodder.com/books/studies-human-thing-entanglement>
- HOFFMAN, M.A.
1979 *Egypt before the Pharaohs. The Prehistoric Foundations of Egyptian Civilization*, Austin.
- HOLDAWAY, S.J. and WENDRICH, W. (eds.).
2017 *The Desert Fayum Reinvestigated*, Los Angeles.
- HOLMES, D.L.
1989 *The Predynastic Lithic Industries of Upper Egypt. A Comparative Study of the Lithic Traditions of Badari, Naqada and Hierakonpolis*, Oxford.
- HOLMES, D.L. and FRIEDMAN, R.F.
1994 Survey and Test Excavations in the Badari Region, Egypt, *Proceedings of Prehistoric Society* 60, 105–142.
- HOPE, C.A. and BOWEN, G.E.
2002 *Dakhleh Oasis Project: Preliminary Reports on the 1994–1995 to 1998–1999 Field Seasons*, Oxford.
- JEFFREYS, D.
2008 The Survey of Memphis, capital of ancient Egypt: recent developments, *Archaeology International* 11, 41–44, DOI: <http://doi.org/10.5334/ai.1112>
- JEFFREYS, D. and TAVARES, A.
1994 The Historic Landscape of Early Dynastic, Memphis, *MDAIK* 50, 143–173.
- JIMÉNEZ-SERRANO, A.
2003 Chronology and local traditions: The representation of power and the royal name in the Late Predynastic period, *Archéo-Nil* 13, 93–142.
- JOHNSON, A.W. and EARLE, T.K.
1987 *The Evolution of Human Societies. From Foraging Group to Agrarian State*, Stanford.
- JUCHA, M.
2016 The Northeastern Part of the Nile Delta during the Naqada III Period, 63–76, in: M.D. ADAMS, B. MIDANT-REYNES, E. RYAN and Y. TRISTANT (eds.), *Egypt at its Origins 4*, Leuven/Paris/ Bristol.
- JUNKER, H.
1932 Vorbericht über die dritte von der Akademie der Wissenschaften in Wien in Verbindung mit dem Egyptiska Museet in Stockholm unternommene Grabung auf der neolithischen Siedlung von Merimde-Benisalame, *Anzeiger der phil.-hist. Klasse der Akademie der Wissenschaften in Wien*, 3. Februar, Nr. I–IV, 36–97.
- 1933 Vorläufiger Bericht über die von der Akademie der Wissenschaften in Wien in Verbindung mit dem Egyptiska Museet in Stockholm unternommenen Grabungen auf der neolithischen Siedlung von Merimde-Benisalame, *Anzeiger der phil.-hist. Klasse der Akademie der Wissenschaften in Wien*, 14. Juni, Nr. XVI–XXVII, 54–97.
- KAISER, W.
1956 Stand und Probleme der ägyptischen Vorgeschichtsforschung, *ZÄS* 81, 87–109.
1957 Zur inneren Chronologie der Naqadakultur, *Archaeologia Geographica* 6, 69–77.
1964 Einige Bemerkungen zur ägyptischen Frühzeit, *ZÄS* 91, 86–125.
1982 Zur Reihe der gesamtägyptischen Könige vor Aha, in: W. KAISER and G. DREYER, Umm el-Qaab. Nachuntersuchungen im frühzeitlichen Königsfriedhof 2. Vorbericht, *MDAIK* 38, 211–269.
1985 Zur Südausdehnung der vorgeschichtlichen Deltakulturen und zur frühen Entwicklung Oberägyptens, *MDAIK* 41, 61–87.
1987 Zum Friedhof der Naqadakultur von Minshat Abu Omar, *ASAE* 71, 119–126.
1990 Zur Entstehung des gesamtägyptischen Staates, *MDAIK* 46, 287–299.
1995 Trial and Error, *GM* 149, 5–14.
- KEES, H.
1941 *Der Götterglaube im alten Ägypten*, Leipzig.
- KEMP, B.J.
1989 *Ancient Egypt. Anatomy of a Civilization*, London.
- KLEES, F. and KUPER, R.
1992 *New Light on the Northeast African Past*, Cologne.
- KÖHLER, E.CH.
1995 The State of Research on Late Predynastic Egypt: New Evidence for the Development of the Pharaonic State?, *GM* 147, 79–92.
1996a Evidence for Interregional Contacts between Late Prehistoric Lower and Upper Egypt – a View from Buto, 215–226, in: L. KRZYŻANIĄK, K. KROEPER and M. KOBUSIEVICZ (eds.), *Interregional contacts in the Later Prehistory of Northeastern Africa*, Poznan.
1996b Die Keramik, in D. FALTINGS and E.CH. KÖHLER, Vorbericht über die Ausgrabungen des DAI in Tell el-Fara'in / Buto 1993 bis 1995, *MDAIK* 52, 100–114.
1997 Socio-economic Aspects of Early Pottery Production in the Nile Delta, *BACE* 8, 81–89.
1998 *Tell el-Fara'in - Buto III. Die Keramik von der späten Naqada- Kultur bis zum frühen Alten Reich (Schichten III bis VI)*, Mainz.
1999 Re-assessment of a Cylinder Seal from Helwan, *GM* 168, 49–56.
2002 History or ideology? New reflections on the Narmer Palette and the Nature of Foreign Relations in Pre-

- and Early Dynastic Egypt, 499–513, in: T.E. LEVY and E.C.M. VAN DEN BRINK (eds.) *Egypt and the Levant*, London/New York.
- 2004 On the Origins of Memphis, 295–315, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
- 2008a Craft and Craft Specialisation. Introduction, 3–6, in: B. MIDANT-REYNES and Y. TRISTANT (eds.), *Egypt at its Origins 2*, Leuven.
- 2008b The Interaction between and the Roles of Upper and Lower Egypt in the Formation of the Egyptian State, 513–540, in: B. MIDANT-REYNES and Y. TRISTANT (eds.), *Egypt at its Origins 2*, Leuven.
- 2008c Early Dynastic Society in Memphis, 381–399, in: E.-M. ENGEL, V. MÜLLER and U. HARTUNG (eds.), *Zeichen aus dem Sand. Festschrift Günter Dreyer*, Göttingen.
- 2010a Prehistory, 48–62, in: A. LLOYD (ed.), *The Blackwell Companion to Ancient Egypt*, London.
- 2010b Theories of State Formation, 36–54, in: W. WENDRICH (ed.), *The Archaeology of Egypt*, Chichester.
- 2011 The Rise of the Egyptian State, 127–130, in: E. TEETER (ed.), *Before the Pyramids*, Chicago.
- 2012 Das Pharaonische Ägypten, 61–76, in: W. HAMETER and S. TOST (eds.), *Alte Geschichte. Der Vordere Orient und der mediterrane Raum vom 4. Jahrtausend bis zum 7. Jahrhundert n.Chr.*, Vienna.
- 2014 Of Pots and Myths – attempting a comparative study of funerary assemblages in the Egyptian Nile Valley during the late 4th Millennium BC, 155–180, in: A. MACZYNSKA (ed.), *The Nile Delta as a Centre of Cultural Interactions between Upper Egypt and the Southern Levant*, Poznan.
- 2016 Auch die letzte Scherbe – More Thoughts on the ‘Naqada Culture’, *MDAIK 70/71* (Gedenkschrift Werner Kaiser), 255–264.
- forthcoming *Memphis – Rebuilding the Ancient City of White Walls*.
- KÖHLER, E.CH. and OWNBY, M.
- 2011 Levantine Imports and their imitations from Helwan, *Ä&L 21*, 31–46.
- KOBUSIEWICZ, M., KABACINSKI, J., SCHILD, R., IRISH, J.D. and WENDORF, F.
- 2004 Discovery of the First Neolithic Cemetery in Egypt’s Western Desert, *Antiquity 78*, 566–578.
- KROEPER, K.
- 2004 Minshat Abu Omar. Aspects of the Analysis of a Cemetery, 859–880, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
- KROEPER, K. and WILDUNG, D.
- 1985 *Minshat Abu Omar. Münchner Ostdelta - Expedition. Vorbericht 1978-1984*, Munich.
- 1994 *Minshat Abu Omar. Ein vor- und frühgeschichtlicher Friedhof im Nildelta. I. Gräber 1-114*, Mainz.
- 2000 *Minshat Abu Omar II. Ein vor- und frühgeschichtlicher Friedhof im Nildelta. Gräber 115-204*, Mainz.
- LATOURE, B.
- 2005 *Reassembling the Social*, Oxford.
- LINSEELE, V., HOLDAWAY, S. and WENDRICH, W.
- 2016 The earliest phase of introduction of Southwest Asian domesticated animals into Africa. New evidence from the Fayum Oasis in Egypt and its implications, *Quaternary International 412*, Part B, 15 August 2016, 11–21.
- MACZYNSKA, A.
- 2011 The Lower Egyptian-Naqada Transition: A view from Tell el-Farkha, 879–908, in: R.F. FRIEDMAN and P.N. FISKE (eds.), *Egypt at its Origins 3*, Leuven/Paris/Walpole.
- MALLORY-GREENOUGH, L.M.
- 2002 The geographical, spatial, and temporal distribution of Predynastic and First Dynasty basalt vessels, *JEA 88*, 67–94.
- MIDANT-REYNES, B.
- 2000 *Prehistoric Egypt*, London.
- 2003 *Aux origines de l’Égypte. Du Néolithique à l’émergence de l’État*, Paris.
- MIDANT-REYNES, B. and BUCHEZ, N.
- 2002 *Adaïma. 1. Economie et habitat*, Cairo.
- MORENZ, L.
- 2010 *Die Zeit der Regionen im Spiegel der Gebelein-Region*, PdÄ 27, *Kulturgeschichtliche Re-Konstruktionen*, Leiden.
- MORTENSEN, B.
- 1991 Change in the Settlement Pattern and Population in the Beginning of the Historical Period, *Ä&L 2*, 11–37.
- 1992 Carbon-14 dates from el-Omari, 173–174, in: R.F. FRIEDMAN and B. ADAMS (eds.), *The Followers of Horus: Studies dedicated to Michael Allan Hoffman*, Oxford.
- EL-NAHRAWY, M.
- 2011 Country Pasture/Forage Resource Profiles, Egypt. Food and Agriculture Organization (FAO) of the United Nations, available online: <http://www.fao.org/ag/agn/agpc/doc/counprof/PDF%20files/Egypt.pdf> (last accessed 18.5.2017)
- O’CONNOR, D. and SILVERMAN, D.
- 1995 *Ancient Egyptian Kingship*, Leiden/New York.
- PAUKETAT, T.R.
- 2007 *Chiefdoms and Other Archaeological Delusions*, Lanham.

- PETRIE, W.M.F.
1921 *Corpus of Prehistoric Pottery and Palettes*, BSAE & ERA 27, London.
- PETRIE, W.M.F. and QUIBELL, J.E.
1896 *Naqada and Ballas*, London.
- PRICE, T.D. and FEINMAN, G.M. (eds.)
2012 *Pathways to Power. New Perspectives on the Emergence of Social Inequality*, New York.
- RENFREW, C. and CHERRY, J.
1986 *Peer Polity Interaction and Socio-political Change*, Cambridge.
- RICHARDS, J.
1997 Ancient Egyptian Mortuary Practice and the Study of Socioeconomic Differentiation, 33–42, in: J. LUSTIG (ed.), *Anthropology and Egyptology*, Sheffield.
- RIZKANA, I. and SEEHER, J.
1987 *Maadi I. The Pottery of the Predynastic Settlement. Excavations at the Predynastic Site of Maadi and its Cemeteries*, AV 64, Mainz.
1988 *Maadi II. The Lithic Industries of the Predynastic Settlement*, AV 65, Mainz.
1989 *Maadi III. The Non-Lithic Small Finds and the Structural Remains of the Predynastic Settlement*, AV 80, Mainz.
1990 *Maadi IV. The Predynastic Cemeteries of Maadi and Wadi Digla*, AV 81, Mainz.
- ROWLANDS, J.
2016 The Neolithic within the context of northern Egypt: New results and perspectives from Fieldwork at Merimde Beni Salama, *Quaternary International 410 A*, <http://dx.doi.org/10.1016/j.quaint.2016.02.014>
- RYHOLT, K.S.B.
1997 *The Political Situation in Egypt during the Second Intermediate Period*, Copenhagen.
- SAMIDA, S., EGGERT, M. and HAHN, H.P.
2014 *Handbuch Materielle Kultur*, Stuttgart.
- SCHARFF, A.
1927 *Grundzüge der ägyptischen Vorgeschichte*, Leipzig.
- SCHNEIDER, T.
2003 Die Periodisierung der ägyptischen Geschichte, 241–256, in: T. HOFMANN and A. STURM (ed.), *Menschen-Bilder/Bilder-Menschen. Kunst & Kultur im Alten Ägypten*, Norderstedt.
- SEEHER, J.
1990 Maadi – eine prädynastische Kulturgruppe zwischen Oberägypten und Palästina, *Prähistorische Zeitschrift* 65, 123–156.
1991 Gedanken zur Rolle Unterägyptens bei der Herausbildung des Pharaonenreiches, *MDAIK* 47, 313–318.
1992 Burial Customs in Predynastic Egypt: A View from the Delta, 225–234, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th.–3rd. Millennium B.C.*, Tel Aviv.
- SEIDLMEYER, ST.J.
1990 *Gräberfelder aus dem Übergang vom Alten zum Mittleren Reich. Studien zur Archäologie der Ersten Zwischenzeit*, SAGA 1, Heidelberg.
2000 The First Intermediate Period, 118–147, in: I. SHAW (ed.), *Oxford History of Ancient Egypt*, Oxford.
- SETHE, K.H.
1930 *Urgeschichte und älteste Religion der Ägypter*, Leipzig.
- SHIRAI, N.
2010 *The Archaeology of the First Farmer-Herders in Egypt. New Insights into the Fayum Epipalaeolithic and Neolithic*, Leiden.
- SMITH, B.D.
2001 Low Level Food Production, *JAR* 9(1), 1–43.
- SMITH, M.E. (ed.)
2012 *The Comparative Archaeology of Complex Societies*, Cambridge.
- SMITH, M.E.
2004 The Archaeology of Ancient State Economies, *Annual Review of Anthropology* 33, 73–102, doi: 10.1146/annurev.anthro.33.070203.144016.
2011 Empirical Urban Theory for Archaeologists, *Journal of Archaeological Method and Theory* 18,3, 167–192.
2016 How can archaeologists identify early cities? Definitions, Types, and attributes, 153–168, in: M. FERNANDEZ-GÖTZ and D. KRAUSSE (eds.), *Eurasia at the Dawn of History: Urbanization & Social Change*, New York.
- STEIN, G.J.
2010 Local identities and Interaction Spheres: Modelling regional variation in the Ubaid Period Horizon, 23–44, in: R.A. CARTER and G. PHILIP (eds.), *Beyond the Ubaid: Transformation and Integration in the Late Prehistoric Societies of the Middle East*, Chicago.
- STEIN, G.J. and ROTHMAN, M.S. (eds.)
1994 *Chieftdoms and Early State Societies in the Near East*, Madison.
- STEVENSON, A.
2009 *The Predynastic Egyptian Cemetery of el-Gerzeh – Social Identities and Mortuary Practices*, Leuven.
2016 The Egyptian Predynastic and State Formation, *JAR* 24.4, 421–468. Available at DOI: 10.1007/s10814-016-9094-7.
- STOCK, J.T., O'NEILL, M.C., RUFF, C.B., ZABECKI, M., SHACKELFORD, L. and ROSE, J.C.
2011 Body Size, Skeletal Biomechanics, Mobility and Habitual Activity from the Late Palaeolithic to the Mid-Dynastic Nile Valley, in: R. PINHASI, and J. STOCK (eds.), *Human Bioarchaeology and the Transition to Agriculture*, Published Online: 14 JAN 2011. DOI: 10.1002/9780470670170.ch14.

- STOCKS, D.A.
2003 *Experiments in Egyptian archaeology. Stoneworking technology in ancient Egypt*, London.
- STOREY, G.R. (ed.)
2006 *Urbanism in the Preindustrial World – Cross Cultural Approaches*, Tuscaloosa.
- TAKAMIYA, I.H.
2004 Development of Specialisation in the Nile Valley during the 4th Millennium BC., 1027–1039, in: ST. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ, and M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams*, Leuven/Paris/Dudley.
- TILLEY, C., KEANE, W., KÜCHLER, S., ROWLANDS, M. and SPYER, P.
2006 *Handbook of Material Culture*, London.
- TRIGGER, B.G.
1983 The Rise of Egyptian Civilization, 1-43, in: B.G. TRIGGER, B.J. KEMP, D. O'CONNOR and A.B. LLOYD (eds.), *Ancient Egypt: A Social History*, Cambridge.
2003 *Understanding Early Civilizations*, Cambridge.
- TRISTANT, Y.
2004 *L'habitat prédynastique de la Vallée du Nil: Vivre sur les rives du Nil aux V^e et IV^e millénaires*, BAR/IS 1287, Oxford.
- VAN DEN BRINK, E.C.M.
1996 The Incised Serekh-Signs of Dynasties 0-1, 140–158, in: J. SPENCER (ed.), *Aspects of Early Egypt*, London.
- VAN HAARLEM, W.
2014 *Temple deposits in early dynastic Egypt: the case of Tell Ibrahim Awad*, PhD dissertation thesis, Leiden University, available at: <https://openaccess.leidenuniv.nl/handle/1887/28547>.
- VERMEERSCH, P.M.
2002 *Palaeolithic Quarrying Sites in Upper and Middle Egypt*, Leuven.
- VON DER WAY, TH.
1991 Die Grabungen in Buto und die Reichseinigung, *MDAIK* 47, 419–424.
1992 Excavations at Tell el-Fara'in/Buto in 1987-1989, 1–10, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th. - 3rd. Millennium B.C.*, Tel Aviv.
1993 *Untersuchungen zur Spätvor- und Frühgeschichte Unterägyptens*, Heidelberg.
1997 *Tell el-Fara'in - Buto I. Ergebnisse zum frühen Kontext. Kampagnen der Jahre 1983-1989*, Mainz.
- WENDORF F. and SCHILD, R.
1998 Nabta Playa and its Role in Northeastern African Prehistory, *Journal of Anthropological Archaeology* 17, 97–123.
2004 The Western Desert during the 5th and 4th millennia BC: the Late and Final Neolithic in the Nabta-Kiseiba area, *Archéo-Nil* 14, 13–30.
- WENGROW, D.
2006 *The Archaeology of Early Egypt. Social Transformations in North-East Africa, 10,000 to 2650 BC*, Cambridge.
WENGROW, D., DEE, M., FOSTER, S., STEVENSON, A. and BRONK RAMSEY, C.
2014 Cultural convergence in the Nile valley Neolithic: A prehistoric perspective on Egypt's place in Africa, *Antiquity* 88, 95–111.
- WETTERSTROM, W.
1993 Foraging and Farming in Egypt: The Transition from Hunting and Gathering to Horticulture in the Nile Valley, 165–226, in: TH. SHAW (ed.), *The Archaeology of Africa: Food, Metals, and Towns*, London.
- WILKINSON, T.
1996 *State Formation in Egypt*, Oxford.
- WILSON, P, GILBERT, G. and TASSIE, G.
2014 *Sais II: The Prehistoric Period at Sa el-Hagar*, EES ExcMem 107, London.
- YOFFEE, N.
2005 *Myths of the Archaic State. Evolution of the Earliest Cities, States and Civilizations*, Cambridge.