

## Chapter 5

### Lower Egyptian economy and social system

#### 1. ECONOMY

Lower Egyptian economy was fully based on farming and animal breeding. Hunting, gathering and fishing were all secondary to food production, as confirmed by plant and animal remains found on Lower Egyptian sites.

##### 1.1. Farming

Lower Egyptian farmers grew first of all emmer wheat (*Triticum dicoccum*) and hulled barley (*Hordeum*). Remains of those two plants were found on all Lower Egyptian sites. Barley and wheat continued to be the dominant crop in Egypt until Greco-Roman times. The relative importance of emmer versus barley might have changed in the course of time (Murray 2000a: 512; Samuel 2000; Kubiak-Martens 2012). In addition, the popularity of barley as a crop was determined by its resistance to soil salinity (typical all over Egypt) as well as to frequent droughts. A characteristic feature of this combination of crops was the presence of the following weeds on the fields: darnel (*Lolium temulentum*), phalaris (*Phalaris*), Caley pea (*Lasthyrus hirsutus*) and sorrel (*Rumex*) (van Zeist & de Roller 1993: 13; Kubiak-Martens 2002; 2003).

The two most important products made of emmer and barley were bread and beer, the staple diet of Egyptians both in the Predynastic period and thereafter. Beer production in the Predynastic period in the Delta area is confirmed by the discovery of breweries in Tell el-Farkha. An analysis of the residue of one of the vats found in the brewing installation showed the presence of two cereals: emmer and barley, as well as grains of darnel. Botanical and chemical studies of the residue made it possible to determine the beer production process, whereby the main role was played by emmer (Kubiak-Martens & Langer 2008).

Papilionaceous plants, rich in nutrients in general and protein in particular, were registered on Lower Egyptian sites as well. One of them was vetch (*Vicia sativa*), quite popular at the time, most probably used as animal feed. The communities of Tell el-Farkha and Buto grew peas (*Pisum sativum*) and lentils (*Lens culinaris*). Those plants were fairly easy to cultivate and additionally the Delta's climate was conducive to their growth. It also seems that already

in the Predynastic period people appreciated the nutritive value of those vegetables. Lentils and peas contain easily digestible protein and can substitute meat in human diet. Additionally, pea and lentil stalks could be used as animal feed (Murray 2000b: 640; Kubiak-Martens 2002: 125).

Other plants identified on Lower Egyptian sites include flax (*Linum usitatissimum*), which could be grown both for oil and for the manufacture of fabrics (Serpico & White 2000: 396).

On the sites at Tell el-Farkha and Tell el-Iswid, tubers of nut grass (*Cyperus esculentus*) were most probably used as food. According to M. Serpico and R. White (2000: 402) they were used to manufacture oil. Written sources from the 4<sup>th</sup> century BC mention that Egyptians cooked nut grass tubers in beer (Murray 2000b: 636; Kubiak-Martens 2002: 125). It is not impossible that such practice was already known in the Predynastic period.

The layers of Phase II in Buto contained traces of grapevine (*Vitis vinifera*) and common fig (*Ficus carica*). Grapes could have been eaten without any earlier processing or dried and then eaten as raisins. They could have also been used for making juice, either consumed fresh or fermented to vinegar (Murray *et al.* 2000). Making of wine from grapevine in Egypt began on a larger scale in Naqada III BC (van den Brink & Levy 2002: 20). Growing of fig trees could also have a wide range of practical uses. Figs could have been consumed in either fresh or dried form, or added to beer or bread (Murray 2000a: 548, 559; 2000b: 623-624). Fig tree latex could have been used in manufacturing dairy products, *e.g.* for coagulation of milk (Serpico & White 2000: 409).

In Maadi, remains of Cucurbitaceae plants were found (*Cucumis melo* or *chate*). In the Egypt of Pharaohs the leaves of those plants were used for manufacturing medicines used in treating stomach conditions. It is possible that the community of Maadi also knew those therapeutic properties (Murray 2000b: 635).

Samples collected from most sites additionally contained charcoal of acacia (*Acacia nilotica*) and tamarisk (*Tamarix*). In Maadi the presence of cedar (*Cedrus*) imported from Southern Levant was also registered. Samples from Tell el-Iswid contained traces of sorrel (*Rumex*) and bulrush (*Scirpus*), which may have grown around the settlement (Kroll 1989; van den Brink 1989; Thanheiser 1997).

## 1.2. Animal breeding

Animals bred by Lower Egyptian communities include cattle (*Bos primigenius f. domestica*), sheep (*Ovis aries*), goats (*Capra hircus*), pigs (*Sus domesticus*) and dogs (*Canis familiaris*) (Tab. 16). Dogs were not bred for consumption purposes. Instead, they could have been used as guardians and sentinels of the settlement (Ablamowicz 2012). Their graves were registered on the cemeteries at Maadi, Wadi Digla and Heliopolis (see Chapter 4). The Lower Egyptian settlements in Maadi and Tell el-Farkha were the first places where donkey bones (*Equus africanus*) were ever recorded. Donkeys were quite surely used as means of transportation (Ovadia 1992; Ablamowicz 2012: 420).

Table 16. Percentages of domestic animals on sites of the Lower Egyptian culture.

SITES/ANIMALS	CATTLE	PIG	SHEEP AND GOAT	DOG	DONKEY
MAADI	26,23%	19,85%	50,78%	1,74%	1,4%
BUTO	44,49%	53,86%	1,27%	0,38%	0
TELL EL-FARKHA	13,1%	75,7%	4,4%	2,1%	4,2%
TELL EL-ISWID	38,42%	37,44%	23,64%	0,5%	0
TELL IBRAHIM AWAD	34,87%	51,37%	13,3%	0,46%	0

In Maadi and Wadi Digla over 86% of all bones registered within the settlement and the necropolis were the bones of domestic mammals: cattle, sheep, goats, pigs and dogs. In Tell el-Farkha, domestic animal bones represented 96.4% of all animal remains registered there (Ablamowicz 2012: tab. 2). The percentage of each species of domestic animals varies from site to site. Such variations could result *inter alia* from different environmental conditions, different eating habits, or different lifestyles. Thus, they indicate the existence of regional differences within a single cultural unit. In Maadi the dominating group were cattle bones. While pig bones were the least numerous, their size indicates very good breeding conditions. In Tell el-Iswid and in Tell el-Farkha pig bones clearly prevail. In Buto's layer I pig bones significantly outnumber cattle bones, but in layer II the relative proportions become equalized (Boessneck *et al.* 1989; Boessneck & von den Driesch 1997).

The significance of pigs in the economy of Lower Egypt implies a sedentary lifestyle of its communities. Pig breeding was very valuable for the settlement's inhabitants, as it ensured quick and easy response to food demand. Pigs are unlikely to travel long distances, but on the other hand they can graze on woodlands, on grasslands or near the house. In addition, pigs are omnivores, gain weight quickly (already at the age of approximately 1 year they achieve 90% of adult weight) and breed well (2 liters per year, 8 to 15 piglets per litter).

Analyses of pig bone remains from Tell el-Farkha also showed that in order to meet the food demand generated by a considerable number of people, pig carcasses were divided into small portions to maximize their use. The above claim is supported by strongly fragmented bones representing all skeletal parts. The said fact may indicate that meat was processed in pottery vessels before consumption. Attention is drawn to a relatively large number of skull, mandible and teeth fragments, which suggests that head meat could have been consumed too. Furthermore, an analysis of the distribution of the percentages of skeletal elements of domestic mammals showed certain interesting behaviors among the inhabitants of Tell el-Farkha. In the case of pigs, there is a clearly visible surplus of

bones from the less valuable parts and a shortage of bones from high quality carcass parts (*e.g.* ham). This may imply that high quality meat was exchanged for other goods (Ablamowicz 2012: 420).

The high demand for meat among the inhabitants of Tell el-Farkha is indirectly confirmed by the slaughter age of pigs. R. Ablamowicz (2002; 2003; 2012) successfully confirmed that pigs were usually slaughtered at the age of 1 to 3 years (79.9% of all bones), and younger and older animals (under 1 and above 3 years, respectively) were slaughtered less often.

On the basis of an analysis of pig bones from the oldest layers of the Lower Egyptian culture, R. Ablamowicz (2003: 112) also concluded that pigs in the earlier period were generally larger than those in the later period. The said difference is believed to have resulted from specific breeding methods. Young animals were kept in enclosures together with cattle, and only after they grew older they were grazed on pastures.

Examination of pig bones from layers linked to Lower Egyptian settling activity revealed bone material coming from intermediate animal forms. Such material could have originated from recently domesticated pigs or from the offspring of a wild boar and a domestic pig, or finally from a primitive form bred in extensive conditions (Ablamowicz 2003; 2012).

Cattle and small ruminants (sheep and goats), although their breeding is more demanding than pig breeding, also played a significant role in satisfying the food demand of Lower Egyptian communities. Like in the case of pigs, the bones of the animals in question show a remarkably high degree of fragmentation, which suggests careful division of carcasses. Apart from meat, cattle could have provided milk, possibly used for manufacturing a range of dairy products. Ethnographic studies show that milk production is generally known all over Africa, unlike animal slaughtering carried out in a cyclical manner and on a large scale (Krzyżaniak 1980: 145). However, there is no evidence whatsoever to determine the relative importance of milk production in Lower Egyptian economy.

Animal remains from Maadi and Tell el-Farkha also included donkey bones (Ablamowicz 2012: 420), marking the oldest discovery of such remains in Egypt. Donkeys were domesticated in the Near East, but researchers fail to agree on the exact place and time. The prevailing view is that the central spot in the domesticated donkey area is occupied by Southern Levant. According to E. Ovdia (1992), the small number of donkey bones in Chalcolithic Southern Levantine sites implies that from the moment of its domestication the animal was primarily used as means of transportation.

### **1.3. Hunting, gathering and fishing**

Lower Egyptian communities satisfied their food demand by means of food production. Hunting, gathering and fishing played a marginal role in this respect. Bones of wild animals recovered from the settlements were innumerable in comparison to the bones of domesticated animals. Bones of wild mammals, birds and fish accounted for 14% of all bones registered in Maadi and for as little as 3.4% of the bones found in Tell el-Farkha. The most common wild

mammals included aurochs (*Bos primigenius*), wild boar (*Sus scrofa*), hippopotamus (*Hippopotamus amphibius*), gazelle (*Gazella dorcas*), antelope (*Alcelaphus buselaphus*), jackal (*Canis aureus*), hyena (*Hyaena hyaena*) and fox (*Vulpes vulpes*) (Ablamowicz 2012: 416). In addition, capricorn (*Capra ibex*) horns were found in Maadi. The lack of other skeletal parts of this particular mammal suggests that the settlement's inhabitants obtained this material not by hunting, but by other means, e.g. by exchange. Even less numerous on Lower Egyptian sites were bird and fish bones. As far as the former are concerned, the dominating species include Anseriformes: greater white-fronted goose (*Anser albifrons*), bean goose (*Anser fabalis*), mallard (*Anas platyrhynchos*), common pochard (*Aythya ferina*) and tufted duck (*Aythya fuligula*). More rare were the bones of Passeriformes: brown-necked raven (*Corvus ruficollis*), or Gruiformes: Eurasian coot (*Fulica atra*). Among fish bones the prevailing ones belonged to catfishes (*Synodontis*). On that basis one can hypothesize that fishing was organized in accordance with certain preferences, with an aim to catch fish providing the largest amount of meat (the energy value of fish meat must have been an important addition to the diet) and simultaneously providing raw material for manufacturing small tools (fish bones were used to produce e.g. fish hooks) (Ablamowicz 2003: 110-111; 2012: 417; Makowiecki 2012).

Lower Egyptian communities also gathered bivalves, the most common of which were *Aspatharia (spathopsis) rubens*. Bivalves may have constituted a dietary supplement, and their shells were used as containers, spoons, or pendants (van den Brink 1989; Boessneck *et al.* 1989; Boessneck & von den Driesch 1997).

Land animals and birds were hunted with harpoons, bows, flint-headed arrows, stone spears and various kinds of nets (used e.g. to catch waterfowl). Fish were caught using copper or organic hooks and nets (Rizkana & Seeher 1989: 76).

#### 1.4. Summary

Lower Egyptian communities made a very good use of the natural resources offered by the Nile Delta. Adaptation to local conditions meant acceptance of both positive and negative characteristics of the region. The first farmers from the Delta cultivated first of all two cereals: barley and wheat, both of which were well adapted to the specific soil conditions (moisture fluctuations and high salinity). Diet was based on foods made from cereals (beer and bread) and supplemented with other plants, including in particular the protein-rich Papilionaceous. It also seems that concentration of animal production on pig breeding was the optimum choice in terms of meat production efficiency. The value attributed to pork meat is confirmed by a high degree of bone fragmentation (implying very rational portioning of carcasses), as well as by traces of head meat consumption. Cattle, sheep and goats were most probably used as the basis for milk production. The low percentage of wild animal meat in the Lower Egyptian diet is rather intriguing. Possibly, limited reliance on the Delta's wildlife resulted from specific food preferences on the one hand, and from rational arguments on the other. Hunters focused on large animals and easily available birds, large

numbers of which inhabited the Delta's wetlands. Wildlife was a source of not only meat, but also skins, bones (used as a raw material), and possibly also feathers. A similar situation is observed in the case of fishing, with catfish being the most commonly caught species due to the high amount of meat. Bivalves, rich in easily digestible proteins, were gathered as well.

Considering the above, one should conclude that Lower Egyptian communities made their food choices on the basis of economic arguments: they opted for those sources of food that offered the best ratio of nutritive value to labor intensity. Therefore, it seems that the adaptation of the Lower Egyptian culture, manifesting itself in opting for the most suitable economic strategy, proved successful and ensured conditions necessary for sustained existence.

## 2. SOCIAL SYSTEM

Assuming that prehistoric societies had a systemic nature leads to a logical conclusion that the (social, economic and ideological) subsystems of those societies were closely interrelated. Individual elements of each of those subsystems must have been reflected in the organization of the other two subsystems. Therefore, the existence of a social division must have been visible *e.g.* in ideology, which in its turn could have been used to legitimize, interpret or explain social divisions. Furthermore, social divisions in earthly life could have affected the organization of a given community's afterlife. The social status of an individual could have been preserved also after his/her death by means of certain grave architecture, grave goods or even funerary rites. Distinguishing an individual through a large number of grave offerings, highly valuable at times, or through unusual grave structure, could have reflected that individual's position (vertical differentiation) or his/her sex or age (horizontal differentiation). The existence of a relationship between social organization on the one hand and funerary practices on the other has been frequently discussed among archeologists and anthropologists (*i.e.* Binford 1972: 208-243; Hodder 1982: 201; O'Shea 1984). Archeologists studying funerary practices of a given society need to realize that what they study is not a consequence of an isolated process, but rather of a number of intertwining processes – demographic, social, ritual, symbolic, geological, depositional, and statistical (Braun 1981: 412). Therefore one should always bear in mind many other factors, elusive from an archeologist's perspective, that could have affected funerary practices (Ucko 1969: 275).

The Lower Egyptian community is generally seen as egalitarian, and thus free from status-related vertical differentiation (Kemp 1989; Commenge & Alon 2002: 140). This view is primarily based on frequent comparisons of the Lower Egyptian culture to its contemporary Naqada culture from the south of Egypt. It is assumed that the process of social differentiation in Upper Egypt began most probably towards the end of Naqada I period. The said process is reflected in archeological material, including in particular more and more important concentrations of goods in an increasingly restricted number of graves throughout the Naqada II period (Guyot 2008: 715). Meanwhile, our understanding of the

Lower Egyptian culture is based mostly on records from settlement sites. This imbalance between the data from Upper and Lower Egypt makes all comparisons between the two regions misleading (Hendrickx & van den Brink 2002; Levy & van den Brink 2002: 7-8; Köhler 2008; *in press a*). It goes beyond doubt that both cultures differed from one another, each representing its distinct and unique model of adaptation to its environment. Climate, geographic conditions and available raw materials all affected the final shape of each culture. It was on the basis of those elements that the members of Naqada and Lower Egyptian communities made their choices and built their own cultures. Meanwhile, in most comparisons these two cultures are situated in opposition to each other. Naqada culture is always seen as “better”, being more developed and socially stratified, even if all these processes had just started. In comparison to Naqada culture, Lower Egyptian culture is treated as unspectacular with its egalitarian social system, simple, poor burial custom and household production (*cf.* Maczyńska 2008; *in press a*).

Currently known Lower Egyptian necropolises are not contemporary to one another and therefore they most probably represent different stages in the development of Lower Egyptian communities. On that basis one can trace back the changes in funerary practices and the related social rules.

In terms of size and depth, grave pits in all Lower Egyptian cemeteries are fairly similar and they do not seem to reflect the social status or the age of the deceased. Even the youngest Lower Egyptian graves from group I in Minshat Abu Omar were shallow and the body was most probably deposited right after digging the pit, without any special preparations. K. Kroeper (2004) concluded that both the size and the depth of the grave were of no importance and that in the period in question there was no standardized grave size.

If one looks at the characteristic funerary practice in the oldest phase of the Lower Egyptian culture, one will notice a high degree of similarities between and scarce offerings in graves, which may indicate similar social status of the dead. Meanwhile, the younger necropolis in Minshat Abu Omar stands out in terms of quality and quantity of grave offerings, and the differences in grave goods are the most visible here. The richest grave 330 enshrining a female (?) aged 17 or 18 contained 33 offerings – locally manufactured pottery vessels, a single vessel of Southern Levantine origin, stone vessels, stone beads, flints, shells and a bone spoon (Kroeper & Wildung 1994: 116-122). The grave 231 with the second largest number of goods belonged to a male aged 20 to 40 and contained 25 items, including a W-ware vessel, stone balls, a flint knife and two decorated needles. For K. Kroeper (2004) the number of grave goods was the key factor differentiating graves from one another. According to her, the 33 offerings could have accompanied a leader or chief, and the number of goods reflected his/her social status rather than wealth. If this assumption is true, another important member of the community was buried in grave 105. However, an analysis of offerings in graves from Minshat Abu Omar suggests that it was not only the number of offerings that mattered. Particularly remarkable are grave goods from outside Lower Egypt (from the south and the east), as they are innumerable when compared to local

objects and stand out in terms of form and raw material. All imported items were found in graves containing at least 3 offerings, and most of them were registered in graves with more than 6 offerings. Limited availability of goods imported from outside Lower Egypt, as well as their different form and fabric must have made them particularly valuable. A fine example here is the grave 313, containing only 3 items, 2 of which were local R-ware vessels and the third one was a Southern Levantine keg form vessel. Judging by the number of grave goods only, one could classify this particular burial as poor. However, it seems likely that the value of one of the goods, the Southern Levantine vessel, suggests a special social status of the woman buried in that grave.

Emphasizing the importance of a dead person by means of the number and/or unique character of goods deposited in the oldest Lower Egyptian graves in Maadi, Wadi Digla or Heliopolis is uncommon. In Wadi Digla, only a few graves contained vessels that may have come from Upper Egypt and vessels made of local clay with ornaments reminiscent of Southern Levantine vessels (Rizkana & Seeher 1990: 76, 87; see Chapter 7). In Heliopolis attention is drawn by a grave where presumably the bottom part of an imported vessel with a characteristic plastic knob was deposited. In the younger necropolis in Minshat Abu Omar the tradition of depositing imports is already well visible. Thus, it seems likely that sometime in the middle of Naqada II period a shift in the Lower Egyptian funerary practices may have occurred. Only two necropolises are known from that period: Kom el-Khigan and Minshat Abu Omar. In terms of offerings, graves from phase 2 in the necropolis of Kom el-Khilgan dated to Naqada IIC are similar to those from Maadi, Wadi Digla and Heliopolis. Meanwhile, group I graves from Minshat Abu Omar, some of which are contemporary to those from Kom el-Khilgan, show major differences as regards grave goods. Explanation of this situation is not made any easier by the lack of graves dated to NIID in Kom el-Khilgan.

A closer look at the materials from settlements from the same period does not allow one to hypothesize about sudden changes in the social structure that could theoretically result in the appearance of richer graves. Instead, it seems that the materials from settlements show a steady development of the culture in question. Maadi, one of the key settlements, provided evidence confirming the existence of trade exchange with Upper Egypt and Southern Levant and the emergence of specialized production of certain items (copper objects, basalt bowls). Interestingly, although the inhabitants of Maadi possessed certain exotic imports (vessels, knives, palettes), they did not offer them as grave goods. One of the more interesting finds are blacktopped vessels and their imitations from Maadi. In Upper Egypt vessels with black tops are very rare on the settlement. They were used mostly as grave goods and thus are found mostly in cemeteries. Although Lower Egyptians from Maadi used vessels imported from the south and imitated them locally, they did not accept the southern idea of their use as grave goods. No grave of Maadi and Wadi Digla contained black topped vessels, which were probably used only on the settlement (Mączyńska *in press* b; d). The above context gives a new meaning to the statement by M.A. Hoffman (1979: 209) quoted by



E.K. Köhler (*in press a*) discussing social complexity of the Maadi inhabitants: “[merchants from this site] preferred to invest most of their extra wealth in trade, storage and metallurgy rather than in fancy tombs and luxury goods”.

Trade exchange intensified in the middle of Naqada II. Data from settlements, including in particular Tell el-Farkha and Buto, show that the number of imports from the south and the east grew at that time. In the south, Naqada II was a period of intensive social stratification and formation of elites in need of prestige goods denoting and validating one’s special position and status. One method of obtaining prestige goods was by accessing the interregional trade network (Köhler 2010: 39; Guyot 2011: 1257). It seems that essentially at the same time the Lower Egyptian culture also saw changes in social complexity. Those changes were related to increasing specialization and intensification of interregional contacts related to the exchange of goods and information. The community that buried its dead in Minshat Aby Omar participated in the exchange between Upper Egypt and Southern Levant and derived benefits from this participation and (likely) intermediation (*cf. Maczyńska in press c*). This would have had affected the community’s social complexity. A similar situation was observed in Tell el-Farkha which due to a number of discoveries (brewing center, special purpose buildings, imports, mudbrick walls – see Chapters 4, 6 & 8) and its location is considered as the center of commercial exchange between Upper Egypt and Southern Levant (Chłodnicki & Geming 2012; Ciałowicz 2012a; Czarnowicz 2012b; Maczyńska *in press d*). Involvement in trade gave the inhabitants of both settlements (Tell el-Farkha and Minshat Abu Omar) easy access to imports. Southern and eastern items regularly reached the settlements, and some of them remained in the hands of their inhabitants. Quite surely, the exchange had to be managed and controlled by an individual or a group whose social status could have been special as a result. Furthermore, it is not impossible that such a function involved material benefits. At the current state of research and publications our understanding of this issue is incomplete. The only archeological material available are dead bodies and grave goods, some of which are imports standing out in terms of form, material and probably value.

An analysis of the data discussed above does not allow one to precisely define the social rules governing Lower Egypt’s burial customs. It seems likely that in the beginning Lower Egyptians did not pay much attention to funerary practices. The arrangement of burials did not require any particular effort. Over time, the number of offerings increased (Tab. 15). In addition, items imported from outside Lower Egypt began to be deposited in graves. Their value was most probably greater than that of goods made locally. It is assumed that grave offerings did not denote the wealth of the deceased, but rather his/her particular social status. Differences in grave goods could thus reflect certain social divisions within the Lower Egyptian culture, including in particular the presence of individuals enjoying a special social status.

The presence of a leader (or leaders) in Lower Egyptian communities could also be inferred from other discoveries. The number and the well-organized structure of breweries discovered in Tell el-Farkha suggest the presence of a person (or persons) in charge

of supervising beer production. While we are unable to determine the social status of such supervisor(s), the function itself could have been a distinguishing factor within the community. Furthermore, it is unquestionable that the amount of beer produced in the huge brewery center must have been greater than the local demand for beer (Adamski & Rosińska-Balik *in press*). Surpluses – just like pork meat – could have been exchanged with Upper Egypt and Southern Levant (Mączyńska *in press a*; d).

Excavation works revealed two major buildings in the settlement of Tell el-Farkha, whose form and dimensions make them significantly different from all previously known Lower Egyptian structures. The first one, located in the central part of the Western Kom, had a distinct courtyard and was divided into a number of rooms. Most probably it was used not only for residential purposes, particularly because it was located in the vicinity of the brewery (see Chapter 4; Fig. 7; Cichowski 2001: 49-63; 2008). The other building, referred to as the Lower Egyptian residence, is also unique due to its form, items found inside it and the presence of a mudbrick wall (see Chapter 4; Pl. 6). It seems that the building must have played an important role for the inhabitants of the settlement and was probably connected with commercial exchange.

The existence of distinct social groups in society could have also been linked to the pursuance of different crafts by different members of the group. Most items and tools were made from locally available materials in individual households, catering for their own needs. It seems however that already at that time specialized production of certain items took place as well. Undoubtedly, manufacturing of metal items required thorough knowledge of metal properties and production processes. While no traces of metallurgy workshops in Lower Egypt have been discovered thus far, researchers generally agree that such workshops did exist. The small number of metal items used by Lower Egyptians may indicate high value of this material and its multiple recycling in the case of damage. It needs to be remembered that the concept and knowledge of metallurgy reached Lower Egypt from Southern Levant, where metal production was a highly specialized craft, and metallurgists enjoyed a special social status (see Chapter 3). When adapting metal and its production process, Lower Egyptians could have also adapted other ideas linked to metallurgy, such as the social position of metallurgists.

Similarly, it seems that beer production involved a certain form of specialization. Producing a beverage of adequate quality depended on following the right procedure. Beer production required one to prepare cereals and then to monitor the brewing process (see Kubiak-Martens & Langer 2004). Physical separation of the breweries from the remaining parts of the settlement by means of a mudbrick wall also suggests that beer production was a specialized occupation.

E.Ch. Köhler (*in press a*) claim that specialization was also necessary in manufacturing basalt bowls, given the skill, labor and energy required. Likewise, manufacturing of imitations of blacktopped vessels involved special skills and more energy than normal production and firing of typical utilitarian vessels (Maczyńska *in press a*).

A careful analysis of social structure data derived from necropolises on the one hand and from settlements on the other shows a certain discrepancy. Materials from settlements do not suggest any significant changes in the social structure. Instead, one observes a fairly constant development of the communities inhabiting the Nile Delta and utilizing its natural resources. Involvement in commercial exchange with other regions and development of specialization exerted profound influence on the social transformation of Lower Egyptian communities. In the initial period the said changes are not reflected in funerary practices. Although the inhabitants of Maadi possessed valuable prestigious items imported from Upper Egypt, such as ritual fishtail knives, palettes, vessels, copper tools, and even tried to imitate them in some cases, they did not offer them as grave goods. Most probably it was only intensified exchange and specialization in the middle of Naqada II that did affect Lower Egyptian burial customs. The number of grave goods increased and began to include valuable imports. Although most researchers believe that the number of grave goods reflected the social status of the deceased, it is not impossible that it was also linked to their wealth. The benefits of exchange and specialization were enjoyed by those individuals who organized and participated in such trade or manufactured given items or products. Golden beads found at Tell el-Farkha or a jar with a painted boat from the grave 757 at Minshat Abu Omar most probably belonged to individuals. The fact that only 5 golden beads and only one such jar were found is quite significant. The community whose members are buried in Minshat Abu Omar had a remarkably diversified social structure. Social changes observable in the oldest graves continued throughout Naqada III. In groups III and IV the number of graves with greater numbers of offerings increased. Interestingly however, the richest grave in each of the three groups contained comparable numbers of goods in proportion to all goods offered in each group (Kroeper 2004: tab. 7). Currently however we are unable to confirm whether the above fact reflects the relatively constant importance of the group's leader throughout the period in which the necropolis was in use, particularly because it is not only the number but also the quality of offerings that needs to be considered.

Relying on the data presented above one is unable to ultimately evaluate the social complexity of the Lower Egyptian culture. Settlement data seem to contradict funerary data. Despite a uniform burial custom, items discovered in the settlements suggest differences in social positions of Lower Egyptian community members. Specialists in manufacturing various items or products (copper tools, vessels, beer), or persons supervising or managing certain activities (trade, beer production) could have enjoyed particular prestige. The presence of luxurious Upper Egyptian items (blacktopped ware, flint knives, rhomboidal palettes) is intriguing – possession of such items could denote a special status in the Lower Egyptian culture.

Full understanding of Lower Egyptian social organization requires a number of further analyses based on both old and new material. Undoubtedly, discoveries of new Lower Egyptian sites would be a welcome contribution to that process.