

“Silver, small data and grand narratives: towards an (integral) agrarian history of pharaonic Egypt (2500-550 BC)”

Juan Carlos MORENO GARCÍA

ABSTRACT. Ancient Egypt was one of the earliest agrarian civilizations in the world. With the introduction of writing (about 3300 BC) institutions such as temples, the crown and others produced large amounts of documents dealing with agriculture, the organization of the agricultural workforce, the management of cultivated land, etc. Yet the very origins of these documents, as well as the vivid descriptions of rural life in many literary texts, have inspired a rather biased image of pharaonic agriculture. According to this view, institutions appear as the overwhelming dominant actors in agricultural life, peasantry as an undifferentiated mass of impoverished cultivators and agrarian structures as essentially the same for nearly three millennia (prior to the Ptolemaic Period). Furthermore, the role of markets and commercial agriculture is considered irrelevant or, in any case, dwarfed by the alleged weight of the redistribution networks controlled by the monarchy. However, recent research from nearby areas (Mesopotamia), led by Govert Van Driel, Michael Jursa and others, shows a different picture, in which markets, early “monetization” of agrarian exchanges and indirect forms of agricultural management (through rural entrepreneurs, merchants, etc.) had a much greater impact on agrarian production and decision-making than previously thought. Egyptian sources show that these conditions can be also found in the Nile Valley and that, in fact, the organization of agriculture and peasantry was rather more complex and differentiated than the usual depictions still prevalent in Egyptology. Institutions were not as dominant as previously thought; alternative productive options were available to the inhabitants of the Nile Valley depending on the impact of the tax-system; rational decision-making is described in a surprisingly vivid way in some early documents; and the use of silver suggests that commercially-oriented agriculture was significant, at least in some periods of Egyptian history. In all, pharaonic agriculture emerges as a rather dynamic economic sector, subject to deep changes over time and embedded in economic relations that transcended the limits of the Nile Valley.

I. Private land ownership, contracts and metals used as means of exchange

Pharaonic Egypt has been traditionally considered one of the most achieved examples of “hydraulic civilization”, an absolutist power whose authority and legitimacy were supposed to derive from three pillars: control of the irrigation system, control of the agricultural production of the country and control over a complex redistributive system encompassing most of the resources of the kingdom. If one adds scribes and an abundant use of administrative records, the picture of a hyper-centralized, bureaucratic monarchy is complete. Under this perspective, the king was supposed to own all the land of the country and private ownership of land was, at best irrelevant. As for the redistributive network controlled by the state, it left allegedly no room for private initiative. However, the organization of agriculture should be greatly qualified in the light of recent research. While in the ideological sphere the Pharaoh was represented as the absolute master of all resources of the kingdom (including land), in practice things were quite different.

To begin with, private ownership of land is well attested in private documents from the middle of the 3rd millennium on. As for royal tenures, they were limited to special categories of land, such as extensive domains on high ground (called *khato*-fields in 2nd millennium sources), new islands formed by the accumulation of sediments, riverside flooded areas where cultivation was only possible when conveniently drained, etc. Judging from the available evidence, royal domains were scattered in the countryside and their management was frequently assumed by wealthy

peasants and temples. Temples were also considerable landowners on their own, and they benefited from extensive royal donations of fields from the 3rd millennium BC, especially in areas with low density of population, like the Delta of the Nile and Middle Egypt. In both cases, and judging from later sources, royal land was but a fraction of all potentially cultivable land of the country while temples could concentrate up to 1/3 of all fields. This means that other forms of agriculture existed as well. The only problem is that their protagonists left practically no written evidence and, consequently, they are difficult to detect. Of course, this does not mean that they did not exist, and we should then be well aware of the limits of the evidence. That documents produced by institutions obviously refer to their activities does not mean that what is not documented did not exist.

This problem is also evident in the case of the best documented sector of the Egyptian society, the elite. Just take a look at the rich iconography of the tombs of the 3rd millennium BC represent an ideally hierarchical, ordered social world. The more prominent position was occupied by the great dignitaries, the officials of the Court and the members of the royal family. According to the inscriptions in their tombs, their main source of income were the rewards and gifts granted by the Pharaoh in exchange for their services. They usually included fields, a house (or domain) and servants, and the beneficiaries of such income could be deprived of their revenue in case of misconduct. Only in the case of the most important dignitaries their endowments included several agricultural domains scattered in different parts of Egypt, to the point that processions of idealized personifications of these holdings (often referred to as “funerary domains”) were quite common in the decoration of private funerary chapels of the second half of the third millennium BC. But, outside the sphere of tomb art, it is surprising to notice how little do we actually know about the possessions, sources of income and wealth of the elite. Only occasional pieces of information provide some glimpses into the sources and organization of their patrimonies, but essential questions still remain obscure. To take just one early example, that of prince Nykaure, son of king Khafra/Chephren (2558-2532 BC), an inscription in his tomb provides a unique look into the composition of his landed assets. According to this text, Nykaure distributed some of his estates among the members of his family: two agricultural domains went to a certain lady called Nykanebty, five agricultural domains to his son Nykaure, two to his daughter Hetepheres, five to his daughter Nykanebty the Younger and two more to his wife Nykanebty. So Nykaure possessed at least sixteen agricultural domains distributed, according to the inscriptions in his tomb, in several provinces of Upper and Lower Egypt. In other cases, single officials possessed entire villages. Finally, the inscription of Ibi (unfortunately quite fragmentary), a provincial administrator of Der el-Gebrawi, states that he inherited some unspecified possessions from his father, received several villages from the king and was granted a field of 203 aruras (about 50 ha) as well as, apparently, another field provided with cattle and serfs (Strudwick 2005, 364). Other possible sources of wealth were simply ignored or, more probably, considered inappropriate to evoke. That is the case of private possessions and acquisitions, heritage, trading operations, etc., and nothing shows better the gulf between social reality and official culture, with its particular codes about what was to be celebrated and what silenced, than the inscription of an early Old Kingdom official called Metjen. He lived around 2600 BC and the inscriptions in his tomb include several statements about the formation of his private patrimony. Among them, he mentions twice the acquisition of substantial plots of land (up to 50 ha) from several landowners, as if the fields were collectively owned and collectively sold to Metjen. The inscriptions even record the details about a plantation he had also acquired.

Meagre as it is, this handful of references help nevertheless to balance the information provided by the inscriptions of the elite. In their monuments they proudly refer to the administrative activities they performed for the state, including the management of crown land and temple land. This evidence reveals a network of agricultural centres of the crown, agricultural fields created by the crown and land donations made to the temples. But they were only part of the story. There also existed a world of peasants, private possession of land, etc., about which we virtually know nothing,

and only some glimpses here and there in the official archives allow us to infer their existence. One of the earliest archives known from ancient Egypt may provide some clues. In the Thirties, a team of Italian archaeologists discovered a group of papyri at the locality of Gebelein, south of Egypt. They can be dated around 2500 BC and they provide a unique look into the life of small rural communities. The documents are in fact a census with a list of household heads from several villages around Gebelein. Not surprisingly, the great majority of their inhabitants were peasants (designated as “king serfs”), fowling, hunters, bakers, etc. Their background seems to be a rather modest one, as we know from other sources that people called “king serfs” performed compulsory work for the king, perhaps on a seasonal basis. However, this impression of modesty might be misleading, as in two cases, for instance, “king serfs” were involved in the purchase of houses by means of written “contracts”.

In fact, contracts or, at least, transactions between workers and members of the elite, reveal that economic activities happened in the private sphere where metals were used as means of exchange. That is why 3rd millennium inscriptions which mention payments to the artisans who built and decorated tombs are particularly useful. They stress that it was the owner of the tomb who paid the artisans with his own property, without any intervention of the king. One of the most detailed is that of Akhetmehu at Giza: *“with regard to this my tomb of eternity, it was made for bread and beer; every workman who worked on it thanked all the gods for me. I gave them clothing, oil, copper and grain in great quantity”* One can also evoke the case of Remenuka at Giza: *“this tomb was made for me in exchange of bread and beer which I gave to the workmen who made this tomb. For indeed I have given to them a large payment of all sorts of linen which they requested and they thanked god for it”*. It seems then that metals (especially copper), cloth and, obviously, grain were not only part of the wealth of particulars, but also commodities freely used as “currency” when a payment was to be made. An inscription found at Giza confirms this pattern. There, a house was sold in exchange for a prize evaluated in ten *shat*-units but actually paid with several pieces of furniture and cloth (*“one piece of four-measure cloth: 3 shat; one wooden bed: 4 shat; one piece of two-measure cloth: 3 shat”*: Strudwick 2005, 205-206).

So private ownership of land and private transactions involving the use of metals appear in the most ancient sources at our disposal. However, it was only when the monarchy collapsed, around 2150 BC when the sources provide much more information about this. As the monarchy disappeared, its cultural values and codes lost some of their former importance. New values appear then in private inscriptions, individuals expressed themselves more freely while writing was used in new and, sometimes, somewhat surprising spheres. One of them is the so-called letters to the dead. This curious set of letters consists in fact in petitions made to a dead person by the members of his or her kin in order to request help for solving ordinary problems. These letters thus provide a unique insight into domestic life, family disputes and in some cases concern agricultural matters. Not surprisingly, and as in many other pre-industrial societies, bad harvests, hard times, indebtedness and disputes over heritages provoked that people lose their wealth and, in some cases, were reduced to serfdom. Such concerns are the subject of the letter addressed by Shepsi to his deceased father Iyenkhenmut, dealing with the loss of Shepsi's fields because of the debts run up by his brother and never repaid. However, harsh conditions also opened possibilities for personal enrichment and, consequently, others profited from distress in order to acquire land, people and property and to enhance their social status. Following the collapse of the centralized monarchy and the emergence of many petty local powers in Egypt about the end of the third millennium (the period known as “First Intermediate Period”, 2160-2055 BCE), many texts from provincial monuments refer to two distinct but related phenomena (**map**). Firstly, particulars proudly evoke that they had obtained their wealth thanks only to their own effort and, what is more, that they have also succeeded in preserving intact the “house of the father”, that is to say, the family household; then they passed it on to the next generation, sometimes with its wealth increased. Secondly, they also boast about acquiring prestigious possessions like fields, serfs, boats and cattle. Finally, there are many cases in

which they rhetorically claim that they never enslaved a girl or deprived a man of his property in periods of distress and famine. In all cases, the absence (or the contested role) of kings during a period of civil war, political division and emergence of rival kingdoms meant that royal endowments were now rare and had lost their former appeal as source of personal wealth and status. Inscriptions celebrate instead private acquisition of property through one's own initiative, as in the case of the army commander Nuy: “*I acquired 40 people, 54 bulls, 36 asses, 260 goats, 3 imu-ships and 6 depet-ships. (Furthermore,) I have bought (by contract?) 20 kha of fields [=about 50 ha] as well as (several) houses. (Finally,) I have dug a pool and planted 40 sycamores, and I did all that in excess of the goods of my father*” (Musacchio 2010).

Unfortunately, precise data about the amount of land bought (not to speak of prices paid) are rare, but it could be quite substantial. A Nubian soldier proclaimed that he had obtained a field of 23 arouras (about 5,5 ha); a resident at the locality of Dendera bought a field of five *kha* (that is to say, 50 arouras, about 12,5 ha); Nuy, a chief of the army from this same locality, got 20 *kha* (that is to say 200 arouras, about 50 ha), while in several other instances a particular simply asserts that he had bought “a big field”; Bawi, from the locality of El-Hawawish, acquired many people as well as many fields and another contemporary, Beb, proudly declared that he had acquired four fields. In some of these cases the inscriptions precise that the acquisition took the form of a (sealed) contract. The influence of these new mentality can be also found in a contemporary corpus of funerary formulae known as *Coffin Texts*. In these texts the dead is ideally presented as the patron or household head in possession of a vast self-sufficient agricultural unit including extensive herds, plantations, houses and fields.

The practical illustration of such a system may be found in the correspondence of a moderately well-off official, early second millennium Heqanakht. His letters and household accounts provide a unique glimpse into the composition and management of the agricultural assets of a well-off provincial landlord of this period. Unfortunately, it is impossible to know from these texts if the fields he managed were privately owned, if he just administered them in the name of a powerful official sometimes evoked in his letters or if they were, partly at least, a reward for his condition of funerary priest. Anyway, Heqanakht controlled a substantial amount of land, well above the average Egyptian peasant holding: he administered at least about 27-37 ha of land as well as a sizeable cattle herd, he employed several assistants and was also a creditor for about 25 neighbours who owed him grain. But the most striking aspect is the “modern” way in which he run his agricultural enterprise: he leased land from wealthy neighbours, decided which harvest to plant on the basis of its expected return and gave precise instructions about how to work his fields in order to get a profit. Other fragmentary private archives suggest that the case of Heqanakht was far from being unique. As the ideology of his times celebrated households, their wealth and their prosperity, Heqanakht reveals that these values fitted him well. On the one hand, his documents show that his household included eighteen people: including his mother, his second wife, his son, two daughters, his older aunt or daughter, his youngest brother, his foreman (and this man's dependents), three cultivators, and three female servants. On the other hand, the letters and some accounts from his archive record twenty-eight men with whom Heqanakht had financial dealings. The most prestigious one was Herunefer, addressed to as Heqanakht's social superior and who seems to be the owner of some fields in the same area as Heqanakht. Two other neighbors were apparently fairly prosperous landowners who sold or leased substantial amounts of land to Heqanakht. Finally, twenty-five people (also neighbors in some cases) owed him barley and emmer, including a mayor. Thus, the social network built around Heqanakht included people from different social environments (from higher, equal, and lower strata) who could be roughly ascribed to his household proper and to his extended network of social relations.

All these examples support the ideal of economic autonomy celebrated in private monuments from this period. They also confirm that private landholdings were not necessarily managed according to the “absentee landlord” model but as a potentially profitable enterprise too.

Land leases and grain loans were also part of the strategies followed by rural potentates, while “being somebody” in the provincial world also meant access to temple land (for instance, as a part-time priest) and integration into patronage networks. Archaeology provides some clues about these social sectors. During the First Intermediate Period ordinary people had access to precious goods like small beads of gold, pieces of jewellery, etc., as it can be observed in some provincial cemeteries in Middle Egypt, such as Qaw and Badari. In fact, gold and copper were part of the wealth also accumulated and stocked by officials of modest status around 2100 BC, as one of them proudly states in his tomb: “[I surpassed everyone who was and] who will exist therein in people, Lower Egyptian grain and emmer, gold, copper, clothing, oil, [honey], ... [cattle], goats, cargo ships and everything” Quite significantly, the tombs of women and children in this period reveal that they used stamp seals as ornaments. So we can see that the increasing wealth amongst the rural population went together with a widespread use of seals as instruments of property control and to authenticate transactions of commodities. In fact, seals and sealing became routinely evoked in everyday transactions and contracts between particulars, such as land and houses purchases. On the other hand, women began using the title of “mistress of the house” during the First Intermediate Period, which was to become thereafter the most common feminine title. The title emphasizes an adult, independent woman, who was able to manage the economics of a household – with, or without a male owner, or to be enrolled in some other business enterprise.

To conclude this section, I would like to stress that temples were a crucial institution in the organization of agricultural activities in the provinces, also since the 3rd millennium BC. They were controlled by powerful provincial families. So, when they obtained considerable grants of land from the Pharaoh, sometimes accompanied with workers and production centres, the king was in fact reinforcing his links with this families. We cannot evaluate how much land was in the hands of temples in the third millennium, but in some cases temples received single donations of around 50 ha. The inscriptions from the tomb of Nikaankh are a good example of this policy. The texts describe the confirmation by the king of the donation of a field of half a hectare made by one of his predecessors. As for the royal decrees of the late 3rd millennium from Coptos, they provide a detailed insight about the founding of agricultural domains and their impact over the peasant communities in their vicinity: first of all, the overseer of the sanctuary chose a tract of land in a flooded environment with the assistance of the scribes of the fields, he marked out the plots of land and named the domain and, finally, an administrative council was established in order to ensure the running of the fields. The labour force was provided by the peasants from the neighbouring villages, whose chiefs were also members of the council. The inscriptions mention that the domains of this kind were usually assigned to specialised processing centres whose main concern was the transformation of the products into offerings which were later presented to the god.

To conclude this section I would like to stress two facts:

- firstly, in despite of the limited evidence, private agriculture and private ownership of land are well attested from the 3rd millennium BC. In the best documented cases, they show a rational mentality made of decisions seeking for profit or for the best possible investment. Even in the case of land owned by temples or the king, their management was possible thanks to the collaboration of local potentates. This helped create a social group formed by agricultural entrepreneurs and wealthy peasants who formed a kind of “middle class” in the provincial world, as we shall see later;
- secondly, metals were used as means of exchange. To the point that precious metals were subject to taxation from the very beginning of the pharaonic monarchy. The counting of gold was occasionally celebrated in the annals of the kings of the early 3rd millennium (“*fourth year: first time for counting gold*”), sometimes together with the assessment of fields (or the countryside) and also on a biannual basis (“*year 13: seventh time for counting gold and fields/countryside*” and “*year 15: eighth time for counting gold and fields/countryside*”). What is more, the fiscal demands on temples also included the delivery of precious metals,

thus revealing once again their widespread circulation outside the economic circuits controlled by the state and that they could be stocked and subsequently taxed. A royal decree from Coptos, from the late 3rd millennium is a good example. It lists the property of the temple subject to taxation and included gold, copper and jewels. Thus the redistributive networks controlled by the state only concerned a limited part of the pharaonic economy. Only when the monarchy collapsed, this private sector emerges in the documentary record and can be detected.

II. Gardens, specialized agriculture and private initiative

Canals, wells and basins or pools were subject to census and, probably, to taxation in the late 3rd millennium BC., as it appears in the decree of king Pepi I, a document aiming to protect the property of the funerary foundation of a former pharaoh, Snefru: “(My) Majesty has forbidden to reckon the canals, pools, wells, watering places (basins?) and trees in these two pyramid towns”. In fact, basins, wells and canals were also part of the property of individuals. The earliest and most detailed example appears in the tomb of Metjen, a contemporary of king Snofru, who acquired a garden planted with several kinds of trees and provided with a pool. Later on, many inscriptions routinely evoke officials who dug a pool and planted trees: “I have built my house and set up (its) doors, I have dug a pool and planted trees”, “I have dug a pool of 100 cubits on all its sides with ten sycamores thereon”. As private property, they could also be transferred to descendants by means of wills: a late 3rd millennium will from the oasis of Dakhlah, in the Western Desert of Egypt describes the distribution of sixteen basins between the sons of a dignitary called Tjeshiu: “sixteen water places of wild animals used as wells...”. Besides these references, little is known about irrigation in private fields. Only ritual formulae from the late 3rd and early 2nd millennium mention wells together with agricultural plots: “farm-lands are given and wells divided”. Then, it can be tentatively inferred that, in the absence of more sophisticated implements enabling permanent irrigation (*shaduf*, *shaqiya*, etc.), wells were used in private tenures, on a small scale, and that they perhaps played a role still to be determined in permanent irrigation and in the production of cash crops like dates and vegetables.

Later on, during the second millennium BC, wells and cistern appear more frequently in the administrative sources, quite often as markers of boundaries. Furthermore, a semitic term entered in the Egyptian language: *brkt* “well, cistern”. The late 2nd millennium Wilbour Papyrus contains many terms that designate pools, basins and cisterns (including those called *brkt*), usually located close to towns and villages; that is why they were frequently mentioned as toponyms or territorial markers for plots and fields. In one case a document reveals that a field was to be tilled, but one aroura in it should be reserved for planting vegetables (Papyrus Berlin 8523, from the very late 2nd millennium BC): “as soon as my letter reaches you, you shall attend to this field and not be neglectful of it. And you shall remove its halfa grass and plow it and farm a quarter of a hectare of land [in] vegetables at this well”. A harvest receipt from the middle of the 1st millennium mentions a field planted with flax and called “the pool/cistern of [...]yami”. Wells and cisterns appear also enumerated in some stela concerning the acquisition or donation of land. To the donation stela mentioned earlier, one can add another donation stela concerning a field (*sxt*) and a cistern (*brkt*). The famous Apanage stela lists several tenants who sold their plots to Iuwelot (reign of Takelot I); each plot is described in detail, including its surface, types of land and the price paid for it. In three cases the presence of one or up to three wells is mentioned; and it is noteworthy that two of these plots were the only ones containing several types of trees, mainly date-palms: (lines 8-9) “the place of the priest of Amon, Neskonsu, the justified, son of Hori, the justified, son of Ankhefenkhonsu, the justified: 137 arouras of field privately owned with clear title, 99 arouras of 'tired' field, total: 236 arouras of field, 1 well, 8 sycamore trees, 6 date palms, amounting to 8 deben, 2/3 kite of silver”; (lines 9-10) “the place of the 'cadet' Djedmutiuefankh, the justified, son of Iken, the justified: 66 arouras of field

privately owned with clear title, 5 arouras of 'scrub and tired' field, total: 71 arouras of field, 3 wells, 26 large date palms, 50 small date palms, 3 sycamore trees, amounting to 4 deben, 1 and 11/12 kite of silver". Finally, a papyrus of around 770 BC refers to the acquisition of several plots of land made by a certain Ikeni in a year of hard times; the plots are quite small (in three cases hardly more than half an aroura) and in several cases they are told to be located next to "the well (tA Sdj.t) of Ikeni". It seems as if Ikeni followed a calculated strategy of purchase, seeking to acquire plots around a well that bore his name or that of a possible ancestor.

So, though rare and unequally distributed over time, there exist nevertheless some evidence about private possession of wells connected with agricultural activities. Not only to private recreation in a pleasant and luxurious domestic environment made of vineyards, small plantations and garden plots. Usually of reduced surface and in the hands of private landowners, these tenures are rarely mentioned at all in documents issued from the institutional sphere, more centred on extensive cereal cultivation on large domains and on a less intensive (and, consequently, less onerous) use of workforce. Wells made it possible permanent irrigation and the production of high-value crops, perhaps oriented towards local, urban markets (vegetables, flowers, etc.). In some cases, there are traces of intentional strategies seeking to accumulate land surrounding wells. In other cases, wells are closely associated to plantations of date-palms. Finally, wells must not have been an unusual element in the agricultural landscape, as they were subject to administrative control and, perhaps, taxing. Given the lucrative but, at the same time, expensive nature of wells, because of the strenuous extraction of water, plots associated with wells were small and probably belonged to relatively well-off tenants, able to engage workers occupied in watering small plots with jars, as it appears in some tomb scenes. The condition of such plots would then be quite similar to that of a very particular kind of land, the *jdb*-plots. Usually translated as "riverbanks", the careful analysis of this term by Antoine based on the Wilbour papyrus reveals a different story. *Jdb*-plots seem to lie in a region of the floodplain combining high grounds and depressions sufficiently low to reach the water table and permit an easy construction of a well or the natural formation of pools alimented by the flood or water resurgence. Being on or near high grounds, *jdb*-plots may appear as the actual riverbanks during the inundation period. It has been shown that 8 per cent of the nearly 3400 plots listed in the Wilbour Papyrus were on *jdb*-land, that near 2/3 of them were held by private landowners, that the yields of these plots were high according to their high tax rates, and that 73 % of all *jdb*-plots were tiny parcels measuring about half an acre. Other administrative documents reveal which could be the crops planted in these plots and why landholders were so interested in them.

Small private tenures in highly productive soils, "commercial" crops such as dates and small irrigation seem to converge around the middle of the 2nd millennium BC, just prior to the beginning of the New Kingdom. It was then when a new irrigation tool, the *shaduf*, was introduced in Egypt; at the same time, a Semitic term, *brkt* "well, cistern" entered into the Egyptian vocabulary, new plants began to be cultivated in gardens and new literary/scrabal genres, such as the "Praise of the city" or the "Miscellanies" introduced a new topic, that of the opulent town surrounded by villas and luxurious gardens. Archaeology confirms the importance of villas provided with hydraulic facilities (pools, cisterns) and gardens. In all these cases, a new kind of private wealth seems to be based, partly at least, on private small-scale irrigated agriculture and lucrative crops oriented towards urban markets. The case of date-palm may prove an insightful sign of these innovations.

Recently discovered evidence shows that dates were a regular part of the rations delivered to the workers employed in state activities in the middle 3rd millennium. Offerings of dates were regularly delivered at the necropolis of Qubbet el-Hawa, at Elephantine, around the end of the 3rd millennium BC. Furthermore, several dishes and bowls were inscribed with administrative records about deliveries of food to residents or to personalities on their way to Elephantine. In one case, a plate mentions cereals and dates distributed to distinguished dignitaries; that was the case of Sobekhotep, who was given 4 sacks of malt, four sacks of Upper-Egyptian barley and 2 sacks of

dates; specialized workers were also remunerated with dates, like butcher Rensi: he was given a sack of an unspecified cereal and one sack of dates. These provisions were delivered by an officer in charge of a *hut*, a kind of production and administrative centre of the crown where crops from royal domains were collected, stocked and delivered. So, the regular supply of dates by an officer implies some kind of local production, management and harvesting of dates.

Another document that provides important information about the role played by dates and date-palm is papyrus Louvre E 3226, from around 1420 BC. It records administrative operations carried out along the Nile by several ships belonging to the Granary, that is to say, the institution in charge of collecting and stocking grain. Several sections of this papyrus reveal that the Granary employed two teams of agents called *beneryw* or “those in charge of dates”. The system operated as follows: the Granary supplied barley to both teams, and they exchanged the grain for dates at several points along their itinerary. The equivalence system was always the same: one sack of barley for a sack of dates, as in Mesopotamia. The global quantities exchanged were not very high: between 50 and 100 sacks per year for seven years, thus making between 3,8 and 7,5 tons of dates. How the *beneryw* obtained the dates is not specified, but comparable papyri reveal that small fleets from temples and royal institutions traveled around the Nile and collected dates, flowers, wine and other goods from particulars. This means that, in all probability, the *beneryw* of the Louvre papyrus obtained the dates from individuals on a regular basis, as institutional agricultural documents never refer to plantations of date-palms, only to recreational basins in temples and palaces in which date-palms grew together with many other types of trees.

This sudden importance of dates and garden crops around the middle of the 2nd millennium BC seems linked to the introduction of a new irrigation tool, the *shaduf*, which made it possible perennial irrigation on small gardens. Also then a new literary motif became quite popular in Egyptian texts. Suddenly particulars and officials boasted about their gardens and plantations, while cities were celebrated because of the gardens that surrounded them and the exotic and prized fruits they produced. Archaeology has provided many examples of the actual existence of such gardens, usually vineyards. It seems then that private landowners cultivated date-palms, among other trees, in small irrigated gardens and, quite probably, in plots provided with wells or in which *shadufs* could be used. Moreover, these landholders supplied institutions with dates. Quite significantly, temples and the crown do not seem very interested in the creation of specialized date-palm plantations, in sharp contrast to olive plantations and vineyards. The most probable reason is that date-palm plantations required a specialized and expensive workforce. That is why, as it happened in Mesopotamia, date-palm plantations were usually in private hands and they represented a lucrative investment for urban landowners and rural potentates. This could explain the importance of wells in small tenures as well as the strategies followed by some individuals in order to purchase plots of land adjoining wells, as revealed by the documents evoked before.

However, dates were not the only crop grown in gardens and irrigated plots. Also during the New Kingdom other species were introduced, such as the pomegranate, the olive tree, the apple tree and the almond tree. Extended irrigation possibilities, extensive contact with the Levant and a relatively affluent sector of Egyptians made it possible a small “agricultural revolution” based on private orchards and plantations and the use of the *shaduf* in a context of an expanded urban life and markets (Pi-Ramesses, Memphis, Thebes). Limited and indirect evidence as it is, archaeology and texts reveal nevertheless another aspect of irrigation in ancient Egypt, centred not on the state but on private tenures instead.

III. What is a temple? Temples, agriculture and “middle class”

Since the early 3rd millennium BC temples were important economic institutions, in control of fields and workers. But it was only since the middle of the 2nd millennium BC that temples and especially the Domain of god Amun and the memorial temples of the kings, became immense

production centres that possessed immense resources in land, herds, personnel as well as other resources, from mines to fisheries and textile workshops. This marked a new era, as temples now replaced older forms of institutional agricultural and labour management based on networks of royal agricultural centres (such as the Old Kingdom *ḥwt*) and labour camps (most notably Middle Kingdom *ḥnrt*) as well as on relatively modest provincial temples. If figures evoked in documents such as the papyrus Harris I, the Wilbour Papyrus and other administrative documents are correct, New Kingdom temples became enormous economic machines, crucial poles in the agricultural and economic organization of the countryside, able to produce huge amounts of agricultural and textile produce and promoting their own mining, trading, gathering and cattle-rearing operations. But their economic role went much further as they also specialized in the management of crown land. Under these conditions, the cultivation of the fields under their care (whether their own or those belonging to the crown) was made possible by the simultaneous use of several complementary work systems, including the utilization of their own dependent workforce (compelled to deliver standard quotas of grain), of *corvée* and, increasingly, agricultural “entrepreneurs” and “free” tenants who leased land and delivered part of the harvest, even gold, to the owning institution. Under this decentralized system, temples and the crown saved resources (especially the sustenance of a permanent workforce only needed seasonally), could cultivate dispersed fields without the need to create an administrative infrastructure and obtained huge amounts of grain and silver as income. And here lay two capital questions. On the one hand, the considerable amounts of silver delivered by the temples as taxes to the crown reveal that they commercialized part of their production (about a ton of silver in just one case). On the other hand, entrepreneurs had at their disposal a workforce that could be used when and where it was required, thus implying the possibility of hiring workers and the existence of wages. However the weight of hired work and wages in relation to other forms of work, especially serfdom and dependent workers, is difficult to evaluate.

So it would be erroneous to consider temples as independent entities, opposed to the king and in a position to contest or at least to limit his authority. Their assets, in fact, were partly at the disposal of the crown, which could use temple facilities and goods to its own advantage. Thus, for instance, the papyrus Harris I records the grants made by Ramesses III of more than 100,000 workers and more than a million aruras (about 270,000 hectares) to the main temples of Egypt, especially to his own funerary temple at Medinet Habu. To put it another way, these donations represented about 5% of the Egyptian population and almost 15% of the total agricultural area of the country. However, the slightly later Wilbour papyrus records very few traces of such donations, thus showing that land grants were far from perennial and that, in fact, the same domains were transferred and re-transferred between institutions from one reign to the next. Moreover, the Wilbour papyrus and other contemporary administrative documents also reveal that part of the temple land was also distributed among soldiers, officers, priests and wealthy peasants, probably as recompense or in exchange for some services. Also a small amount of temple land consisted of “donation fields” granted by the king to provide for the cult of a royal statue; the fields were exploited by an individual within the framework of the temple administration and they represented in fact a reward providing the recipient with considerable income. Finally, temple land was cultivated by a combination of different systems: temple permanent agricultural personnel (*jḥwtjw*), compulsory workers through *corvée*, “agricultural entrepreneurs” in exchange for part of the harvest and, finally, dignitaries or people granted with temple fields by the king. The balance between all these modalities of cultivation changed over time. Consequently, the land in the hands of the temples was not only an economic asset; it also enabled these institutions to maintain a dense network of economic and social relations linking together the temples, the crown, the dignitaries, the local elite and provincial society, even at its humbler level. This gave rise to economic opportunities.

Among the administrative papyri of the New Kingdom, occasional references show that wealthy peasants were of fundamental importance when cultivating the land of temples. That is the

case of some 18th dynasty accounts preserved in the Louvre Museum and which explicit the amounts of grain paid as taxes by several cultivators. What appears is that single peasants delivered huge quantities of cereal in several localities, quantities that exceeded by far the canonical 200 sacks of grain usually delivered by cultivators, and consisting, according to several New Kingdom sources, in 200 sacks of grain. Such peasants could then mobilize enough workforce to cultivate extensive tracts of land, even in several localities. Later on, the Wilbour papyrus refers again to cultivators in charge of extensive domains and holding pieces of land usually reserved to member of the local sub-elite like priests, “ladies”, scribes and military personnel. Lastly, in very rare instances, such peasants could afford prestige goods that usually escaped the possibilities of simple peasants. That is the case of some funerary statuettes or ushebtis, funerary cones and other objects bearing the name of their owner accompanied by the specification that he was a cultivator. Archaeology confirms this picture, as the excavation of several cemeteries in the same geographical area the dealt with by the Wilbour papyrus reveals the existence of a local sub-elite that included wealthy peasants and who were incorporated in some cases in prestigious institutions like temples. A 1st millennium inscription from Elephantine provides another fascinating glimpse into this question. Here, a stela erected by a delegate of the authorities of the South records that the local temple suffered from some disruptions of its ordinary life, when some cultivators had become priests. The authorities dispatched their delegate to restore order, something he did as he explicitly stated that those “illegal” priests had become cultivators again “among the people of low condition”.

This evidence is important in two ways. On the one hand, it helps balance the current picture of peasant life conveyed by stereotyped iconography or by literary texts. There, peasant appear under a single perspective, as people prone to the rapacity of unscrupulous agents, merchants and officials, living at the very edge of subsistence. But archaeology shows that this was only part of the picture, and that the term “peasant” designates in fact a rather stratified social group, from poor land workers and cultivators to people able to cultivate extensive tracts of land, mobilize enough manpower and even to procure for themselves prestige goods and positions in temples. The very same notions are hidden beneath the term cultivator. It would be a mistake to see them under the perspective provided by literary texts or agricultural scenes. That they could be wealthy enough to be considered eminent members of the local society appears clearly shown in the legal procedure in the tomb of Mose, dating to the Ramesside era, when a cultivators was part of the local council which judged about the conflict opposing Mose to other members of his kin.

On the other hand, temples appear as crucial social institutions, not only related to cults, but also as managerial agencies as well as instruments in the formation of local elites. Agriculture, and especially the management of the extensive landed assets of temples, open opportunities for wealthy peasants and rural entrepreneurs to make business and to be co-opted by these institutions. Boards of priests and the king himself decided who could and who could not join the staff of a temple. Granting temple land to individuals or endowing fields to royal statues, then administered by trusted officials, are good examples of this policy. I would like to analyze with you some cases:

- local potentates were sometimes referred to as “big men” in the first millennium BC. Their ties to the local temples further strengthened their authority, as in the case of a demotic literary text where a local potentate (lit. a ‘great man’) was also a priest in the local temple, a profitable source of income. He obtained indeed part of the agricultural income of the sanctuary because of his condition of priest and, in addition, he also exploited some fields of the temple as a cultivator in exchange for a part of the harvest; the considerable wealth thus amassed allowed him to pay wages to the personnel of the temple, who were thus considered his clients (the text states that he had ‘acquired’ them) and he could even marry his sons and daughters to priests and potentates (lit. ‘great men’) of another town;
- in other cases, royal grants of land sought to reward officials ... and to provoke divisions in their kin group. This was possible through a formal clause that specified that the endowment

was to be transferred from son to son and from heir to heir, therefore privileging the direct family over collateral branches. A good example is the Medamud donation stela of Ramesses III, where the pharaoh decreed that a land donation of 12 ha be assigned to a statue of the king and a statue of god Amun-Re under the care of Khaemope, a keeper of the archives of the domain of god Amun-Re, ‘from son to son, heir to heir’. Khaemope belonged to a family with strong links to the temple, as they had been keepers of the archives and of the treasury of Amun for at least four generations. Thus, when the king set up a royal statue provided with fields and when he appointed an official as priest and beneficiary of the land income, he was enhancing the links between the monarchy and selected members of the elite. Such rewards were only bestowed on a minority of selected agents of the crown, to the point that they represented a small amount of the institutional land transferred into private hands, as can be inferred from administrative documents like papyrus Wilbour. But for beneficiaries of royal largesse, it was not only a prestigious and often considerable source of income; it also strengthened ties between local potentates and the crown through the temples. In the early New Kingdom, Sataimau of Edfu claimed that the king had appointed him second lector-priest in the temple of Horus and had granted him the income from a royal statue in the sanctuary endowed with about 9 ha of land as well as many offerings (Davies 2009: 34-36);

- inversely, individuals could donate land and offerings to the statues of the king set up in temples. The goal was to strengthen their links with the crown and to enhance their local status. An excellent example is provided by the high priest of Osiris Wenennefer of Abydos, who lived under the reign of Ramesses II. His family dominated the highest priesthood at Abydos for centuries and Wenennefer’s descendants continued to hold high priestly offices there for generations. Moreover he also displayed family and ‘inter-peer’ connections with many other members of the high-ranking society of his time, including holders of prestigious priestly functions and eminent dignitaries of the court of Ramesses II. His ‘brothers’ (that is to say, his equals), for instance, included two viziers or “prime ministers”, the high priest of Onuris at the neighboring locality of Thinis, and another high priest. As for his wife, she was the daughter of the superintendent of the granary of the South and the North Qeny, a position her family had held for generations at Asyut, a locality situated further north. Given this pedigree, Wenennefer erected many statues as a privileged means to display the importance of such connections and to strengthen ties with prominent members of the court, including the king himself. Several fragments of an inscription found in his tomb also record many royal statues erected (?) in the years 21, 33, 30+x, 38, 39, and 40 of Ramesses II and endowed with offerings of wine and milk as well as with substantial amounts of land (more than seven hectares in one case. His case was not an isolated one. Another member of the Ramesside elite, rooted in northern Sudan and called Penniut. The inscription in his tomb records an endowment made by Penniut for a statue of the king. The text sets out the areas of fields rented to endow the statue-cult. The total surface amounted to a little over ten acres. At the end of the document, Penniut added a further plot of land, apparently from his own property, to ensure provision of a regular sacrifice;
- temple land appears thus as a true ‘elite-building tool’ in the hands of kings, an aspect often emphasized in both royal and private inscriptions: the high steward Amenhotep declared that the king had built a new temple close to Memphis, endowed it with fields, and appointed priests and prophets from the children of the potentates of Memphis. In other cases, personal initiatives pursued the same goal: the priest Merenptah stated before the great court of Heliopolis that he had placed a statue of Ramesses III in the temple of Ptah at Memphis, equipped with ritual personnel and offerings; the court approved his measure as well as his appointments (which included Merenptah himself as main authority of the cult ‘from son to son, heir to heir’, a sister and two other persons) and assigned offerings from the treasury of

god Ptah and the royal treasury. Ramose, a scribe at the locality of Deir el-Medina, made some donations to a royal statue and, in return, his own statue was allowed to share in the god's offerings presented to the royal image (Hovestreydt 1997);

Therefore private donations of land were often followed, in return, either by offerings from the king's monuments or by authorisation to control and derive an income from the endowment (a privilege which continued under the heirs of the donor). In both cases the donor preserved some control over the land and was sure that it was protected from outside interference, including other members of his or her kin. In other cases, when the king granted donation-fields, usually attached to royal statues and on land belonging to funerary royal temples, a rent was paid to the possessor.

Temple land was then an important asset in the hands of private people. While it formally belonged to the temple, plots granted to people as rewards could finally be considered almost as the private property of their holders, who could lease and sold their rights over it to other people. This gave place to complex situations in which the rights of different actors might be in conflict: the temple, the original beneficiary of the grant, his or her heirs and people who had bought the rights over the field. So, in some cases, when high officials and members of the royal family decided to build up a big estate for themselves on temple land, they reorganize and bought the rights of many private tenants. I would like to mention some cases:

- the Medamud endowment text states that 39 arouras of fields were granted to the temple of Montu and that its entire domain was reorganized, to the point that former holders of plots belonging to the sanctuary were to be compensated "plot for plot, threshing-floor for threshing-floor". Another passage of this inscription gives the dimensions of the endowment, about 396 ha.
- As for the famous Apanage stela, it lists several tenants who sold their plots to Iuwelot (reign of Takelot I); each plot is described in detail, including its surface, types of land and the price paid for it. In three cases the presence of one or up to three wells is mentioned; and it is noteworthy that two of these plots were the only ones containing several types of trees, mainly date-palms: (lines 8-9) "*the place of the priest of Amon, Neskhonsu, the justified, son of Hori, the justified, son of Ankhefenkhonsu, the justified: 137 arouras of field privately owned with clear title, 99 arouras of 'tired' field, total: 236 arouras of field, 1 well, 8 sycamore trees, 6 date palms, amounting to 8 deben, 2/3 kite of silver*"; (lines 9-10) "*the place of the 'cadet' Djedmutiuefankh, the justified, son of Iken, the justified: 66 arouras of field privately owned with clear title, 5 arouras of 'scrub and tired' field, total: 71 arouras of field, 3 wells, 26 large date palms, 50 small date palms, 3 sycamore trees, amounting to 4 deben, 1 and 11/12 kite of silver*".
- Henuttawy, sister and wife of a great priest of Amun, declared that she had bought some land, including "fields of *nmḥ*". As for princess Maatkare, she obtained, when she was just a child, some property that she had bought as well as "anything of any sort that the people of the land sold to her" and which was recorded as goods of *nmḥw*. Another high priest of Amun, Menkheperre, bought a field from about two dozen individuals ("the *nmḥw* of the town"). Finally, princess Karo(m)ama.

IV. Silver, merchants and agriculture

Traditionally, Egyptology has regarded traders and merchants operating within pharaonic Egypt as dependant of institutions. Such opinion is based on two premises:

- royal inscriptions like those found at Wadi Hammamat, Sinai and Nubia stress the importance of the king in the organisation of expeditions sent abroad in order to search for precious goods. One can think in incense brought from Punt and recorded in 5th dynasty reliefs of king Sahure or in 18th dynasty scenes and inscriptions of queen Hatshepsut. In other cases, royal decrees like that of king Sethi I at Nauri mention merchants and ships

working for the central administration or the temples. Even diplomatic correspondence, like the Amarna letters or the fragmentary letters sent by Ramesses II to the Hittite court, reveal the vitality of the exchanges between courts, the diplomatic procedures involved in such transactions (including bargaining) and the quality of the goods traded, including skilled specialists like doctors or artisans. To sum up, the overwhelming visibility of royal inscriptions has led to the misleading conception that foreign trade was almost a monopoly of the state, thus leaving little or no room to independent activities carried out outside the institutional sphere;

- administrative papyri, especially from the Ramesside era, record the activities of fleets and captains working for temples and collecting goods from people and agricultural domains along the Nile. Thus, administrative sources seem to confirm what can be learned from royal inscriptions, pointing once more to the crucial role played by merchants but always at the service of the crown or of specific institutions like temples.

However, things appear rather more complex. Certainly, some passages from literary texts and from the Ramesside *miscellanies* also suggest that wealthy individuals sent ships to the Levant in order to trade, but these texts have been often disregarded as literary exercises, furthermore referring to activities typical of the highest elite and, consequently, hardly representative at all of actual economic practices. Nevertheless, other sources reveal another perspective. Let's take the famous robbery papyri of the late Ramesside era. These papyri evoke the legal procedure followed against the robbers of the New Kingdom royal tombs and temples and contain detailed accounts of the precious metals stolen and the way in which they were exchanged for land, slaves, cattle, etc. In all these transactions merchants appear as indispensable partners whose mission consisted in exchanging precious metals for diverse goods. What these peculiar transactions reveal is that gold and silver circulated broadly among Egyptian people to the point that precious metals could be introduced in such non-official circuits with the hope of not being detected. Other sources give the same impression. An administrative papyrus of the Ramesside period shows that gold and silver were paid as taxes by temples, priests and officials. In another late New Kingdom letter a village governor from Elephantine complains about undue taxes transferred to him and mentions that, in fact, they should be paid by cultivators who used to pay their taxes in gold to the royal treasury. An Old Kingdom royal decree from Coptos also mentions temples and their deliveries of precious metals as taxes. Many more examples could be evoked, from the famous taxation scene in the tomb of Rekhmire to the blocks from temples built by famous pharaoh Akhenaton, in which towns and temples paid taxes in precious metals to the royal treasury. What is interesting about them is the fact that the circulation of precious metals was not exclusive of the institutional sphere and that they were currently used in Egyptian society. Merchants appear thus under a different light, as necessary specialists who transformed precious metals into other goods and who developed economic circuits in which commodities were also transformed into silver and gold.

Looking for such merchants is difficult due to the scarcity of material evidence of their own. Once again, when we abandon the sphere of members of the court, officials and members of the administration, who were the main consumers of high quality inscribed objects, it becomes difficult to find evidence for social sectors operating outside this sphere. Only in some cases direct and indirect evidence points to their existence. As it happened with the cultivators mentioned before, there are instances in which merchants could provide for themselves prized high quality objects usually reserved to the members of the court. That is the case of a funerary papyrus whose owner was a merchant. In other case, a late period stela now in the Louvre museum (stela Louvre C 101) records a transaction between two funerary priests about a tomb. One of them sold a tomb to the other in a prestige sector of a necropolis and the text describes the exact place where it is located and mentions who owned the adjacent burials; so, we know thanks to this inscription that it was built next to the tombs of two merchants. Thus, an apparently marginal quotation in a private transaction shows that this sector of the necropolis, used by artisans and priests, was also chosen by

merchants in order to build their burial places. And, as we saw about cultivators, merchants could also be interested in being incorporated into prestigious institutions like temples. In fact, a Ramesside papyrus from Elephantine evokes the conspiracy of several priests in order to avoid that a man was nominated priest. The reason invoked with some contempt was that the man was a son of a merchant. This kind of declarations is misleading because, in some very rare instances, we are able to see the real power and social importance of some merchants in late 2nd millennium society. That is the case of prince Samontu, son of Ramesses II, who married the lady Iryet, daughter of a Syrian merchant (the ostrakon states that his father was a ship owner). As for the story of Wenamun, it mentions another Egyptian ship owner whose fifty ships traded with Byblos at the end of the 2nd millennium, apparently on his own and independently of any institutional power.

Unfortunately, the still insufficient development of urban archaeology in Egyptology prevents to detect areas where traders inhabited and to discover traces of their activities, like documents, store-rooms, harbour facilities, goods imported or exported and so on. Such reconstruction is possible nevertheless for other Near Eastern societies. For the moment being, we must just rely on a very sparse documentary evidence, almost textual, that attests the social importance and activities of certain merchants. Holladay has suggested that traces of commercial diaspora are discernible in the archaeological record of the Levant, as the plans of urban houses may display in some cases quite distinctive marks pointing to the geographical provenience of their inhabitants. This should allow to discover Hittite, Egyptian or Assyrian houses in merchants neighbourhoods in the Levant. In other cases, sanctuaries have preserved chapels apparently used by distinctive communities of merchants abroad, as in the case of Middle Bronze Byblos. Finally, documentary evidence reveals in some cases the investment policy followed by some merchants in order to enhance their social position. Middle Bronze Larsa is one such case, as their archives show that successful traders bought urban land in order to demolish the existing houses and to build there their urban villa. Similar archives also show that buying positions and prebends in temples was considered another possible investment. Comparable evidence is still lacking in ancient Egypt but it may be observed, however, that first millennium wisdom texts introduce new statements where greediness and investment appear for the first time, a phenomenon to be doubtless linked to the broader use of contracts and the increasing integration of Egyptian economy in Mediterranean first millennium circuits of exchange.

There is another Egyptian social sector who intrigues me: fishermen. Egyptian texts repeatedly evoke their taxes paid in silver, like the Gardiner Ostrakon 86 or the inscription of Taharqa relating to the provision of a new temple at Memphis. This is the most striking when considering that tax lists where they are listed show that other people paid their taxes in kind (like grain), but fishermen usually pay in silver. This means, of course, that they sold their production in exchange of silver and that they could obtain it in “markets”. In this respect, later sources like Herodotus reveal that the tribute paid by Egypt to the Persian king consisted in seven hundred talents of silver and additionally the silver paid by the fishermen of lake Moeris.

To conclude, New Kingdom documents reveal the increasing use of precious metals in everyday transactions, including the acquisition of slaves, fields and cattle. Especially significant is the case of fishermen, who were paid in silver and who also paid their taxes in silver, thus suggesting the commercialization of their catches. As for the tomb and temple robberies of the late New Kingdom, when huge amounts of silver and gold were stolen, the Ramesside documents reveal that robbers used the booty for the acquisition of fields, slaves, etc. In all cases traders appear as crucial elements in the transformation of agricultural produce into precious metals and their activities seem crucial not only in the service of temples and the crown but also individuals. The extent of such operations is difficult to evaluate but, judging from the evidence in the Papyrus Harris I and other contemporary texts, it seems to have been quite important. That cultivators from some temples in Egypt could pay about a ton of silver each year in taxes means that they or the temples commercialized part of their production. In fact, it also appears that Egyptian grain was

exported, partly at least in the context of agreements between states. Mario Liverani, for instance, suggests a possible link between the exports of Egyptian grain to the land of Hatti and the depreciation of the value of silver in Egypt around the reign of Merenptah (from a ratio silver/copper of 1:100 to only 1:60 *deben*), suggesting that huge quantities of this metal had arrived into Egypt as payments for the grain delivered. To sum up, an increasing role of traders and silver in institutional and everyday transactions, the commercialization of agricultural produce (both produced by institutions and individuals, especially horticultural goods), the availability of hired work and decentralized management appear to be related phenomena in New Kingdom Egypt. A tendency that would continue during the 1st millennium BC with the first land leases.

Small-scale trade also involved the use of silver and gold. A scribe, for instance, wrote to a colleague to forbid him to behave in such a reprehensible way again as he had done in the past, when he set aside part of the rations under his care in order to convert them into silver. A papyrus recording the collection of diverse goods along the Nile evokes the delivery of silver to a woman at the *meryt* “quay, marketplace”, and a market scene from the tomb of Niankhkhnum and Khnumhotep (around 2400 BC) records the exchange of a piece of cloth in exchange for 6 *shaty*, a unit of value currently used with gold and silver. And, as stated before, traders played a crucial role in the tomb robberies of the late New Kingdom, as they recycled the stolen metals into other goods, thus suggesting that the circulation of precious metals was quite common within Egyptian society and that the sudden appearance of gold and silver in the hands of commoners did not arouse particular suspicion. In some cases stolen gold was melted in the houses of priests. How did precious metals circulate at the local, small-scale level?

The discovery of a small treasure at El-Amarna may provide some clues. In a small open space beside a public well in the North Suburb a pottery jar was buried, containing 23 bars of gold and a quantity of silver fragments and roughly made rings, as well as a silver figurine of a Hittite god. The total weight of the gold was 3,375 grams (about 37 *deben*), while the total weight of the silver came to 1,085 grams (about 12 *deben*). As Kemp has stated, this discovery illustrates easily convertible wealth poised on the point of re-entering the economy at a private level. Some texts confirm this impression. Ostrakon BM 5631 from Deir el-Medina, dated from around 1250 BC, contains a statement made by an individual, in which he mentions the discovery of a sealed jar bearing two seal impressions and inscribed with a list of its contents: 10 *deben*-weights of silver, 2 *mine*-weights of gold, 7 heart amulets, 7 chains (?) of gold, and 20 gold signet rings. Quite significantly, other metallic objects also found by the same individual are said to belong to Pharaoh, but apparently it was not the case of the jar; it may then be assumed that, quite probably, it belonged to an individual. As in the case of the Amarna treasure, an amalgam of different objects and pieces of precious metals were stocked together. So precious metals circulated in the private sphere in different forms, and Castle has emphasized that contemporary units of value (*sha(y)t*) referring to metals (copper, silver, gold) derived from verbs meaning “to cut”.

This evidence, both archaeological and textual/linguistic, points to a crucial aspect of the circulation of precious metals in everyday operations, that discs, rings, wires, pieces of metal, etc., were stocked, cut, exchanged and held in houses. The recent discovery at the Ramesside garrison city of Beith Shean, in Israel, of three small silver hoards found in the 20th dynasty levels is of particular interest, since they contained “chocolate bar” silver ingots and used silver objects that had a monetary function, and could have been used to pay the wages of Egyptian officials or mercenaries. Silver came from southeast Turkey and Greece. Such small hoards are well known in Early Iron Age contexts in the Levant and have inspired some discussion of pre-monetary practices in the Near East and the role played by bullion *hacksilber* that had to be cut and weighed out in every transaction. But what transpires from discoveries like those at Amarna and Beith Shean is that such practices were also common in the Late Bronze Age and their precedents can be traced back even earlier, to the late 3rd and early 2nd millennium, as revealed by about a dozen hoards of silver from beneath the floors of private houses in several Mesopotamian cities as well as by an Old

Assyrian hoard found at Kanesh/Kültepe, in Anatolia, an Old Babylonian one at Larsa and an Old Syrian one at Ebla. Also since the middle of the 2nd millennium, but especially from the 1st millennium BC on, silver and precious metals also circulated in the form of sealed bags of a given weight, both in Egypt and the Near East, such as the bag with 11 *deben* of silver mentioned by Wenamun.

V. Conclusions

To conclude I would like to stress the following points:

- great institutions such as temples and royal domains played an important role in the organization of pharaonic agriculture, but they were not the only ones. Rural entrepreneurs, wealthy peasants and landholders were a dynamic sector of rural society and their collaboration was essential in the exploitation of institutional land;
- markets, a commercially-oriented agriculture and the circulation of silver played a greater role than commonly assumed in agricultural production, at least in certain periods of Egyptian history;
- temples appear as a privileged sector for the study of the interaction between private and “public” strategies as well as for the transformation of huge quantities of agricultural production into silver;
- in all, instead of a homogeneous “pharaonic agriculture” we can discern several different types, sometimes contemporary, sometimes succeeding themselves over the centuries. In all cases, the interplay between peasants, institutions and trade produced deep changes over time.