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## PRELUDE TO NEW KINGDOM WARFARE

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The Egyptian Empire, founded at the beginning of the XVIIIth Dynasty ca. 1560 BC, experienced a lengthy period of economic growth and military success. The rapid expansion of the kingdom north into Asia and upriver into ancient Nubia began earlier when the native state was still divided into various realms and the Hyksos, Asiatic foreigners, controlled the north. The latter, of northern (Palestinian) origin, had been able to take over the Egyptian Delta, the age-old capital of Memphis, and a large portion of Middle Egypt upstream to Cusae. The result was that a native ruling house (Dynasty XVII) controlled only Upper Egypt, having its capital at Thebes and its southern boundary fixed at Aswan at the First Cataract. It was during this time, lasting approximately a century, that the Egyptians forged a far more effective means of centralized governmental control over their limited realm. At the same time the war machine of the Theban state had to deal with conflict to the south (Nubia) as well as with a cold war to the north. By and large, the XVIIth Dynasty managed to develop the use of the new military technology of the horse and chariot as well as other improvements in armament, most of which had come into Egypt from Asia at an earlier time. The Hyksos, in fact, had accelerated this trend owing to the weaknesses of the native Egyptian state of the Late Middle Kingdom (late Dynasty XII–Dynasty XIII) which had already lost control of the Eastern Delta. By the end of Dynasty XVII the Thebans felt themselves able to begin fighting in a regular fashion against their opponents on the Nile – both north and south – and it is at this point that significant transformations of the military commenced.

The best way to understand the military system of Pharaonic Egypt at the commencement of the New Kingdom is to analyze the famous war inscriptions of King Kamose, the last Pharaoh of the Dynasty XVII.<sup>1</sup> The narrative was written on two stone stelae and placed within the sacred precinct of the temple of Amun at Karnak. The king expressly commissioned this record to be set up by his treasurer, Neshi, an army commander and overseer of countries, whose figure and name were included at the bottom left of the

inscription. The account lacks a high literary flavor, perhaps because his career was associated with the Egyptian war machine and foreign administration. On the other hand, Neshi's utilization of one important war record, an intercepted letter from the northern Hyksos foe, indicates that he was permitted access to an extremely important diplomatic document captured during the course of Kamose's northern campaign. The war record, although relatively straightforward in style and partly dependent upon a logical progression through time, nonetheless reveals a deep understanding of language and thought. This account presents a lively approach centered upon the key successes of the king, but without any reference to dates. Indeed, the original inscription lacked even a regnal year of the Pharaoh.<sup>2</sup>

Before delving into the actual sequence of events and how they reveal the military system of the day it is necessary to outline briefly the precise historical setting. At the end of Dynasty XVII Kamose had inherited the war against the Hyksos. He followed his father Seqenenre II to the throne of Egypt at a time when the Egyptians had begun to mass their forces against the northern enemy. In a later story centered on Seqenenre the latter are considered to be cowardly foreigners, Asiatics. Their non-Egyptian status is, in fact, one of the key elements in this patriotic record. The narrative of Kamose is as clear and organized in its physical aspects as in its nationalistic fervor. The author included royal speeches in order to heighten the dramatic aspect of the king's victories and to break up the separate events that Neshi preferred to write down. The beginning, however, throws one into a common literary setting of king in court, surrounded by his officials, both civilian and military, and his announcement of war.

Because the first stela was later retouched at the beginning of the opening line in order to date the text to Kamose's third regnal year, it is evident that the introductory backdrop serves more as a reflection of mood than of reality. At an unknown time Kamose had called his magnates into his palace for an official proclamation of war.<sup>3</sup> We may assume that high officials, including army leaders and naval men, were present. There is a simple sequence of policies. The king argues for war because Egypt is divided; the great men prefer the status quo. Not surprisingly, Kamose is displeased over their pacifistic approach and haughtily rejects their words. He concludes his rejection of the weaker policy with a prediction that after the campaign Egypt will recognize their ruler as a victorious king and a protector. Suddenly the narrative opens, and from then on the first person is employed. At this point the text presents an account as if spoken by Kamose himself. Henceforward, we gain in historical insight what the opening backdrop adumbrates through its stereotypical setting of king versus court.

The type of warfare is not as one might at first expect. It is oriented to the Nile.<sup>4</sup> The king's flotilla plays the key role in transport. Land battles are not described with any detail and chariot warfare does not play an overt role in the narrative. Kamose, for example, sails downstream and ends up at

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Nefrusi, a settlement in Middle Egypt, while his army precedes him. The latter situation may imply that those men traveled by land. If so, they must have left days before the king's fleet. Necessary food supplies were probably brought along with the ship or else secured from the locals. An elite division of the army scoured the countryside for troublesome opponents. Then Nefrusi was besieged and sacked.

The specific type of warfare is barely presented in detail. On the contrary, we first hear of the siege at Nefrusi that seems to have taken place without any immediate opposition. The military encounter actually began the next day following the king's arrival, and from the tenor of the account it appears that the battlefield as well as the timing was prearranged: the Egyptians fought on land in the early morning and achieved success. Clearly, the siege was not as important as the land victory. Immediately afterwards, the Pharaoh traveled further north, frightening off any military opposition to his flotilla. Even though the system of fighting is not minutely described, its manner can be inferred. The Egyptians used their fleet to transport troops. They rapidly took over the enemy's territory owing to this method of transportation. Indeed, if a town or even a city resisted, all that Kamose would have to do is to bypass it and to attack one to the immediate north, thereby isolating the enemy in a pocket that could then be subdued afterwards. Only this can explain Kamose's sudden arrival in the East Delta at the capital of the Hyksos, Avaris, modern Tell ed-Dab'a. How else could he have achieved such a sudden dash north? Owing to the fragmentary condition of the first stela we do not learn of the fall of the key cities in the north. The account of the capture of Memphis at the apex of the Delta, for example, is lost. On the other hand, the isolation of Nefrusi and those regions immediately north of it lends support to the hypothesis that Kamose had sprung his army at a fortuitous time when the foe was unaware of his intentions.

At Avaris Kamose arranged his fleet to lay siege to the Hyksos capital. He places emphasis upon the timber used to construct his ships and taunts his royal opponent in two speeches that very well may reflect the actual situation. That is to say, the war is considered to be a duel, a personal conflict between the Egyptian king and the enemy leader Apophis. The Pharaoh commands his army on his golden flagship, allowing his elite troops to secure both sides of the river at Avaris. But he did not take the city, and, properly speaking, the military account ends the progressive narrative development at this point. The author ceases recounting these virile deeds with the last word of Kamose's second address of taunts to his enemy and instead turns to events preceding the arrival at Avaris.

A flashback is presented, serving as a lengthy coda to the Pharaoh's arrival at the Hyksos capital. In this portion of the second stela we learn that other towns had been burnt and that a messenger of the Hyksos king had been caught on the oasis route to the west of the Nile. That man had with him a crucial letter for the new ruler of Nubia (Kush). In it we learn that upon

hearing of Kamose's move north, Apophis, the Hyksos king, quickly dispatched a messenger in order to effect an alliance with the new king of Kush. This attempt to circumvent Kamose failed. Nonetheless, it tells us that Apophis had learnt of his opponent's strike northward but had not been able to send his troops south. Granted that this is a modern interpretation, it nonetheless explains the apparent failure of Apophis to resist Kamose in Middle Egypt.

The strategy of Kamose is thereby presented by means of this short backdrop. In a separate section following upon the capture of Apophis's emissary, the Theban king indicates that he faced no resistance. This, of course, may be taken as mere boasting, but it reinforces the war account so well that we can suppose that his bragging is relatively free from exaggeration. In this light it is useful to note that Kamose originally sent his troops westward to secure his rear, for he was afraid that his opponent might have launched a preventative attack far away from the Nile in order to trap him as the Egyptian fleet moved north.

Lacking from the extant war narrative is any description of actual fighting. Granted, we have seen that the style of warfare tended to be locally arranged. The fleet moved the soldiers but the actual armed conflict was to take place upon flat ground. As a result, sieges were expected. No chariot encounters are described (as one might expect) nor is there any indication how the native Egyptian army was organized. We have to look elsewhere for these important details. True, Kamose stresses his capture of Apophis' chariots and fleet outside of Avaris, but little else is revealed concerning the make-up of either army.

Let us move a few years later into the reign of Ahmose, Kamose's Theban successor, and see from a private historical account how the Egyptian military operated at this time. The tomb biography of Ahmose son of Ebana, located at El Kab south of Thebes, is our major source for the wars subsequent to the death of Kamose.<sup>5</sup> Granted that we have to cover significantly more years of warfare, this personal account of valor is very instructive. Ahmose son of Ebana replaced his father in the royal fleet. He was originally a common soldier who, after marriage, officially entered the Egyptian war machine. (Subsequently, he became crew commander.) His narrative is laconic but nevertheless describes the art of war at this time. The king uses his chariot. Avaris is under siege more than once, and Ahmose is promoted to another and more important ship in the fleet. In the East Delta the fighting is hand-to-hand against the Hyksos. More than once in the meleé Ahmose son of Ebana brings back either a hand from a dead enemy or a living opponent as proof of success. At the fall of Avaris the hero takes away one man and three women, the latter undoubtedly noncombatants. Yet we hear little of horses and chariots. In fact, there is no overt statement in the text that fast-moving chariots played the major role in warfare at this time; this we have to infer from the account and from the pictorial reliefs of

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Pharaoh Ahmose. Even the subsequent capture of the city of Sharuhen by king Ahmose in southern Palestine indicates that the earlier method of sieges had to take place, proving that chariot-based attacks by themselves were not always conclusive.

When Ahmose son of Ebana fought south of Egypt in Nubia the Egyptian fleet stood in good stead. Used again as a means of rapid transportation, the ships carried the Egyptian army until the disembarkation, at which point the soldiers then fought on land. In this case we can assume that the better-equipped and technologically superior Egyptian army was able to repel the enemy with little difficulty. When further warfare was necessary it is not surprising to read of the enemy's ship. This reference to naval affairs must indicate a prepared foe whose orientation was sufficiently similar to the Egyptians, possibly also indicating the presence of a yet remaining Nubian state. Indeed, Ahmose son of Ebana specifically notes that this enemy, Aata by name, moved against Egyptian territory.

The type of warfare within the Nile valley differed considerably from that later encountered in Palestine and Syria.<sup>6</sup> There were no wide-open spaces available for the deployment of chariots. Nor could such rapid maneuvering and quick attack on land occur. The narrow and rugged Nile valley with its umbilical cord of the great river reduced to a minimum the efficacy of chariots. We can reasonably conclude that the latter sector had yet to receive written emphasis in the war records of Kamose and his immediate successors, Ahmose and Amunhotep I.<sup>7</sup> Quite to the contrary, a different set-up existed in the Egyptian army just before the creation of the Empire.

In fact, the terminology of the Middle Kingdom (Dynasties XII–XIII) and the outgoing XVIIIth was quite different from that employed later. The two major terms employed by the Egyptians of this earlier age were “youths” and “army”/“troops.” The last two words are essentially identical. There was a standing army, and it was considered to be a real profession for the youth. The term for “warrior” is derived from the verb “to live,” and it designated a footsoldier dependent upon the king, a virile young man. These youths were placed under a commander or a military leader. The latter, considered to be “tutors,” led the “youths,” who often served in the rowing teams. There is a generic designation for the “youths,” a word that literally means a collective group of people, but within a military context it designated a “naval team” or a “detachment.”

The ordinary warriors, the footsoldiers, were inferior to the sailors. The naval men, perhaps sharpened by their more difficult service in the fleet, were young officers. Soon thereafter, the Middle Kingdom word for “naval team” replaced the more specific term, “rowing team.” Evidently, the two are the same. In the civil fleet the “commanders of the ships” stood over the “tutors of the naval teams,” but in the military flotilla the “captains” of the ships directly obeyed the king. That is to say, the “captains” were directly responsible to the Pharaoh. It is thus not surprising that later, at the

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beginning of Dynasty XVIII, Ahmose son of Ebana first stresses his naval service as well as his role in following his father in the same function. The flotilla, after all, was the basic military strength during the Middle Kingdom. It was at the direct command of the king and his closest officials, the highest being the vizier who communicated directly to the ship commanders.

The striking difference between Middle Kingdom warfare and that of the later Empire Period is thus self-evident. The army of the former was amphibious, and its foundation was the fleet. Being an officer in the royal navy was especially attractive to the nobility of the day. Especially at the beginning of the XIIIth Dynasty the officers were princes, members of the royal family and representatives of the highest nobility. During this time and later into Dynasty XVII we find the hereditary nomarchs of El Kab who were captains in the navy. Even though members of the military elite could be from the middle classes, the army ranks remained separate and lower than the naval ranks. The elite warriors were those in the royal navy.

But the New Kingdom army around the time of Kamose and Ahmose was undergoing a rapid transformation.<sup>8</sup> Consider, for example, the military activity in Asia during the Middle Kingdom and contrast it with the aftershocks of the capture of Sharuhén by Pharaoh Ahmose. Warfare in the earlier age lacked chariots and horses. As befitted the Nile it was water based. Hence, the Egyptians were able to make only sallies or razzias into Asia. They could not easily annex Palestine with their army, which had as its core the navy. Only the creation of a separate and strong division in the land-based army could render conquest permanent. At the time of king Ahmose Egypt was able to be unified but Asia, or at least parts of it, could not be so easily taken. Ahmose son of Ebana, who belonged to the elite of El Kab, finished his career as “commander of the rowing team.” Under Thutmose I, the grandson of Pharaoh Ahmose, the navy was no longer called the royal army. By this time the land-based army was the main force with the chariots its core. The navy henceforth played only a supporting role in warfare.

The military society of the New Kingdom and of her neighbors operated within a system different than earlier.<sup>9</sup> The series of additional changes in both offensive and defensive weapons can be seen in the swords (in their various manifestations), spears, and body-armor. Previously, the main weapon was the bow and arrow, intended for long-range combat, in addition to a preponderance of weapons for hand-to-hand fighting. To the northeast in Palestine and Syria there were many fortified cities. The effects of this change would impact upon the Egyptian war machine when it decided to advance into southern Palestine. The soldiers themselves remained Egyptian, although Nubian “mercenaries” are also known as early as the Late Old Kingdom (Dynasty VI) and the First Intermediate Period. But the core of the native state of Thebes in Dynasty XVII was Egyptian, and through their strength the successful, albeit lengthy, wars against the Hyksos occurred.<sup>10</sup>

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Before proceeding further it is necessary to examine more carefully the term “mercenaries.”<sup>11</sup> Scholars normally employ this word when they deal with the non-Egyptians who were members of the army. But this designation is misleading. Mercenaries work for pay; so did the Egyptian troops of the Middle and New Kingdoms. These men, however, sell themselves, or rather their abilities, to whatever state or leader can afford them. They have no national loyalty. The situation with regard to New Kingdom Egypt therefore revolves around the case whether, for example, foreign troops soldiering with the Egyptians could leave at any time if their pay was in arrears or whether they could switch sides. There is no evidence that this occurred. Later, we also hear of captured elite Asiatic *maryannu* troops in Dynasty XVIII who were brought back to Egypt by the Pharaoh, presumably not as hostages but rather to serve in the army. Here, as well, I do not think that the term “mercenaries” fits them. These Asiatics were well versed with the art of war and so could form a useful permanent contingent within the native Egyptian war machine.

Later, in Dynasties XIX and XX (the Ramesside Period), the Sherden, originally sea raiders in the eastern Mediterranean, performed similar duty.<sup>12</sup> These foreigners appear both in texts as well as in battle reliefs serving the Pharaoh. They also owned plots of land in Egypt, small to be sure, but this must indicate that they had become settled within the Nile Valley. In other words, the Sherden were inhabitants of the land that they served. The males appear to have been organized into separate contingents within the Egyptian army. Indeed, they are connected with various “strongholds,” presumably set up by the Ramesside kings in order to continue their separate way of life. The Sherden are also known to have been organized along different military lines than the Egyptians. But they did not remain loyal to their monarchs only for pay. They actually lived in Egypt and belonged to the economic structure of the land. Libyan troops fought in the Egyptian army in the same period, and they too became settled member of the society. I purposely have left aside the additional designation of “elite” Asiatic warriors, or in Canaanite, the “Na’arn.” Whether or not these men who served in such divisions during Dynasties XIX–XX were Semites must remain open. But if they were, these soldiers further reveal the polyglot or polyethnic nature of the Egyptian military in the Late New Kingdom.

Owing to these factors, the commonplace term “mercenary” is inappropriate when referring to such troops. They were professionals, as all ancient and modern mercenaries were. But so were the Egyptians. Significantly, we hear of no mercenary takeover of Egypt. This point is crucial. Native rulers of the Nile Valley continued beyond the terminus of the end of Dynasty XX, notwithstanding the political vicissitudes of the day. As we shall see at the close of this work, there was a slow movement of Libyans upward, first into the middle levels of the state (administrative and military), and subsequently, at the end of Dynasty XXI, into the office of king. But even then



this was no “takeover” by a strong band of hardy and well-prepared warriors. What occurred was the domination of a group of clans whose origins lay to the west. No Libyans rebelled against the government and took over the reins of power.

The social and political ramifications of foreign mercenaries cannot be seen in Egypt during the New Kingdom.<sup>13</sup> Normally, such troops end up being a major threat to the state that they served. Through blackmail, displacement, or supplantation they gain control of the state. In power, mercenaries prove themselves incapable of further development, normally retaining their system of warfare for many years, indeed centuries. The Mamlukes in Egypt provide an excellent example of heroes who never had the interest to alter either their tactics or their weapons.

But the foreigners in the Egyptian army were hired on a permanent basis. They became natives despite their outlandish clothing, social conventions, and, originally, language. To find, for example, Sherden in the middle of Dynasty XX owning parcels of land indicates that they had become cultivators, just as were the rank-and-file Egyptian soldiers. After all, land was the major commodity that provided sustenance and wealth. The real question that we must face is why did the Egyptians hire or use these foreigners. It is not enough to say that these men were able soldiers. Natives could be as well. Perhaps their military preparedness was on a level higher than the Egyptians. This supposition, however, remains moot. We simply do not know how the native soldier was regarded, militarily and socially speaking, in contrast to the foreign one. It may be the case that the population level of the Nile Valley was lower than many assume, and that correspondingly the number of Egyptian soldiers who could be trained to fight was not that large. This assumption will be tested later. Suffice it to say that the increased costs of military administration in Asia at the end of Dynasty XVIII and onward may have exhausted the ability of Egypt to provide larger and larger troop divisions which could set out on a major campaign.

Let us now turn to the military technology at the beginning of the New Kingdom. Chariots and horses were introduced from Western Asia into Egypt.<sup>14</sup> Warfare in Egypt thus came more and more to depend upon the acquisition of equids. True, horses at this time were small and their height up to the withers was on the average 1.40 to 1.50 m (between 13.7 and 14.6 hands). This is based upon data from archaeological data at Avaris dated to the beginning of Dynasty XVIII but also during the late Second Intermediate Period.<sup>15</sup> The famous “Buhen horse” in Nubia was 1.50 m in height at the withers. Recent analysis has revealed that Tell Brak in central Syria was the old center for the development of mules, bred from male donkeys and female horses.

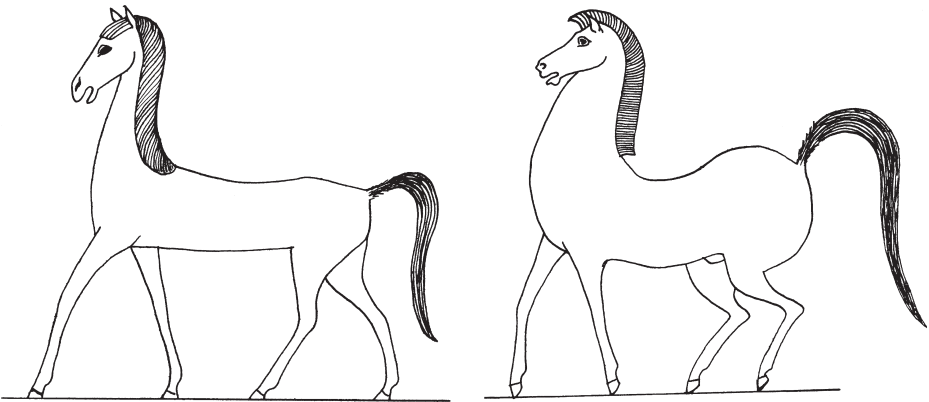
Two types of horses are known from the New Kingdom.<sup>16</sup> The first group, which is called “long-lined,” was relatively long with respect to girth. The thoracic cavity was narrow and weak whereas the scapula-ischial bones were



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strong. The voluminous head was also narrow and elongated. A second race, labeled “short-lined,” was shorter in length and can be recognized by its short face and back, a large round croup that was raised, and an ample chest. Some scholars have remarked upon the resemblance of the first type to the famous Prezewalsky horse, in contrast to the second group. Pictorial representations indicate that these equids had been domesticated for a long time. Data conclusively reveal that this first group was the earlier one to be successfully utilized within the Nile Valley. Significantly, the second race appears from the beginning of the reign of Amunhotep II in middle of the XVIIIth Dynasty, a time when the chariot division of the army came into great importance. It would appear that during the first half of Dynasty XVIII one type of horse had been developed from those brought into Egypt by the Hyksos (if not somewhat earlier). The second, clearly more robust for a single rider although still small by our standards, later took over, and this took place when Egypt’s Empire encompassed territories in Asia up to southern Syria. That is to say, the apparent switch – it is sudden within the pictorial art of the day – must have been dependent upon a new breed of horses that could only come from northern lands outside of Africa.

An Asiatic origin for the latter race is the only possibility, and we can hypothesize that the second more robust type of horse was a by-product of Egypt’s imperialistic activity in the north. This conclusion is partly supported by the contemporary war records because they indicate that a large number of equids were captured from the enemy after battles. Moreover, we can suppose that others were exported to the Nile Valley during times of peace, a point that shall be covered later in this study. A recently excavated horse



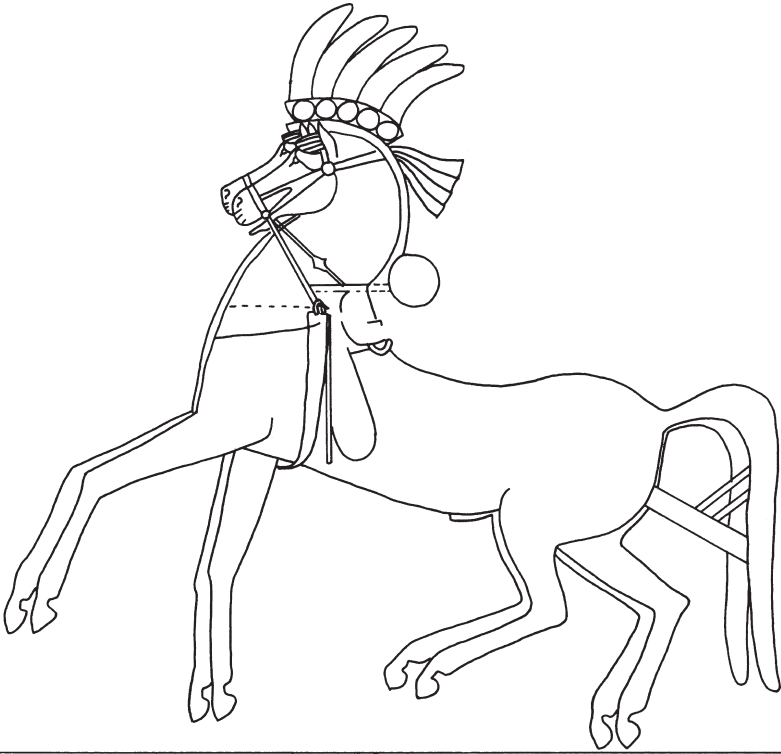
**Figure 1.1** Egyptian horses: (a) Long-lined and (b) short-lined. *Les Chevaux du Nouvel Empire Égyptien. Origines, races, harnachement* by Catherine Rommelaere, figures 4 and 5. © 1991 by Connaissance de l'Égypte Pharaonique. Reprinted by permission of Claude Vandersleyen, Connaissance de l'Égypte Ancienne.

from Tell Heboua in the Sinai shows that a medium-sized equid characterized by a heavy head and robust limbs belongs to the later “short-lined” race rather than to the earlier slender animals of the “long-lined” type.<sup>17</sup> The date of the skeleton was placed in the Hyksos Period. Hence, should we not regard the artistic representations in Egypt as conservative or at least indicating the presence of the later race somewhat after its importation in Egypt?

There is some evidence that the Egyptians practiced slitting the nostrils of their horses.<sup>18</sup> We can see it for the first time in the XVIIIth Dynasty on the chariot horses. Significantly, the excavators of the tomb of Thutmose IV found bridles with the reins attached to the nose-strap and the archaeologists tentatively concluded that the command of the animal was obtained through the nose-strap. No bits were found with the bridle equipment in the tomb of Tutankhamun. Later data from the Dynasty XIX capital of Tell ed-Dab'a/Avaris in the East Delta indicate that bits were standard. This recently published material, however, reflects an age when the Egyptians also manufactured shields of a foreign (Hittite) type and so cannot be used to interpret the evidence from an earlier time. The slit noses, of course, were instituted in an effort to compensate for the impairment in breathing caused by the nose-straps. More recently, in the 17th century AD, the noses were slit also to prevent the horse from whinnying, a problem that is all too frequent when scouts are sent out to reconnoiter the landscape. One might argue that the use of the bit was introduced in Egypt at a time after the mid point of Dynasty XVIII but the earlier war reliefs from the time of Ahmose and Thutmose II, however, indicate otherwise.

Nevertheless, from pictorial evidence of the Amarna Period we still see the practice of slitting horses' noses, and it might be argued that bits were introduced even later than we assume. Certainly, the large number of reliefs in the Ramesside Period that depict warfare may imply that bits were regularly employed by the reign of Seti I and later. But we are faced with the unfortunate situation of not having any chariot horses preserved in a tomb or on a site until the second half of the reign of Ramesses II (mid Dynasty XIX). In other words, we can only argue from the evidence of Tell ed-Dab'a/Avaris where foreign (Asiatic) military influences were great.

Stirrups were not in use at this early time, and from pictorial representations the forward position of the rider was not employed.<sup>19</sup> Instead, the horseman sat in a position similar to that which he used for a donkey; i.e., toward the rump. The lightness of the horses or, to be more accurate, their size and mass, combined with the technology of the day meant that no independent cavalry could be developed. Instead, all the civilized neighbors of Egypt in Mesopotamia, Anatolia, Syria, and Palestine used simple chariots. Horses and their vehicles were brought into Egypt during the XIIIth Dynasty by the Hyksos or other Asiatics. Although the exact date of introduction is a controversial problem, it remains true that the Hyksos rulers in the north of Egypt succeeded first in capturing the age-old capital of Memphis and



**Figure 1.2** Egyptian chariot horses, Seti I, Karnak: Exterior of north wall to Hypostyle Court. *Les Chevaux du Nouvel Empire Égyptien. Origines, races, harnachement* by Catherine Rommelaere, figure 19. © 1991 by Connaissance de L'Égypte Ancienne. Reprinted by permission of Claude Vandersleyen, Connaissance de l'Égypte Ancienne.

then repulsed the natives probably by means of this new system of warfare. Unfortunately, the few Egyptian inscriptions that describe warfare at this time (Dynasty XIII–XVII, excluding Kamose's account) avoid mention of any chariots and horses. As we have seen, the navy remained the backbone of the Theban military arm.

Stirrups were not yet invented, but their lack was not serious because the horses were small. The large-barreled draught horses or the Medieval destriers had yet to be developed. (Heavy horses are recognizable by their thick fetlocks and wavy mane and tail.) Moreover, these animals were not used for cavalry charges. The mounted rider, sitting to the rear, was in a position effective for scouts and single riders but not useful for charging the enemy. Because the decided factor in managing these animals is that of control, the rear seated position placed a man at a disadvantage. We have to wait until

the period of the Neo-Assyrian Empire when the riders could sit in the forward position owing to the advances in selective breeding.

The later heavy saddle with its pommel and cantle were absent. Indeed, there were no saddles. Men rode the horses bareback, although some type of cushion, such as a blanket, may be seen on the Pharaoh's horses. One leapt onto the horse; mounting was impossible owing to the lack of stirrups. In this case, however, it would not have been a great feat because of the small height of the equids.

The physical condition of the horses automatically implied that modern lances were never employed in war. Instead, we find javelins or spears sometimes held in the hand of the charioteer or his protector, the shield-bearer. Even then this man became unprotected as the shield had to be thrust aside. This action was further deleterious because he could not protect the driver. Therefore, it seems probable that the throw would take place when the chariot was slowing down or had ceased to move. The driver could take up his bow and shoot while the second man could throw the spear. Protection, nonetheless, was needed, and when the charioteer served as an archer he had to be protected by a shield.

The attitudes of the Egyptians regarding their horses are hard to determine. Earlier, the animals were buried in tombs at Avaris during the period of the Hyksos domination, but this was a foreign trait, and when the Egyptian reconquered the East Delta this practice ceased.<sup>20</sup> Only the foreign Hyksos observed this practice, one that strikingly indicates their warrior ethos. Oddly enough, this situation can be seen in Early Medieval Europe.<sup>21</sup> When the Lombards had been converted to Christianity they ceased to include horses in the burials of their warriors, although from time to time they included bridles and even saddles in their graves. But since the gates of heaven prohibited imports, the official religious ideology banned horse-burials. In the case of Egypt the native age-old habits of burial persisted.

Later we shall note the repeated accounts of Dynasty XVIII in which horses and chariots were delivered to Egypt. This was a standard practice in peacetime but also prominent after a successful battle. One papyrus dated to Dynasty XIX mentions the presence of horse-teams and "fine young steeds" from Sangar in North Syria as well as top stallions from the Hittites (P. Anastasi IV; partly paralleled by P. Koller).<sup>22</sup> Their masters underneath the king's "Window of Appearances" led the animals. This small portion of the composition refers to the preparations for the arrival of the king, and among the requirements are resplendent chariots of superior quality.

John Keegan has observed that we should not be surprised over the rapid dispersion of the chariot.<sup>23</sup> Indeed, he adds, they may have been a chariot industry and chariot market. Certainly, the numbers recorded in the annual impost from Asia sent to Egypt are not that large, and this requirement ought not to have exhausted the economic foundations of the Asiatic city-states. The technology is relatively simple, and the transportation of the

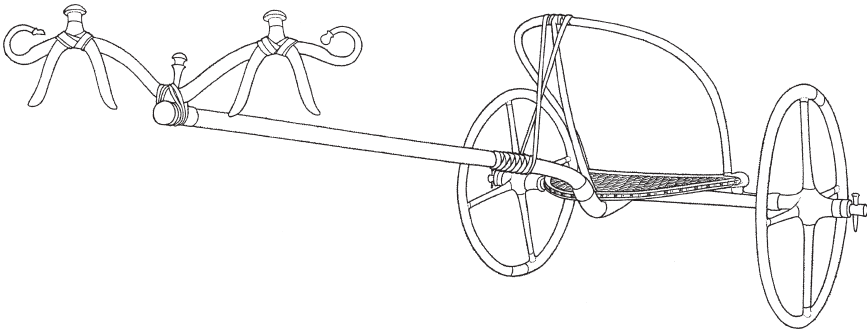
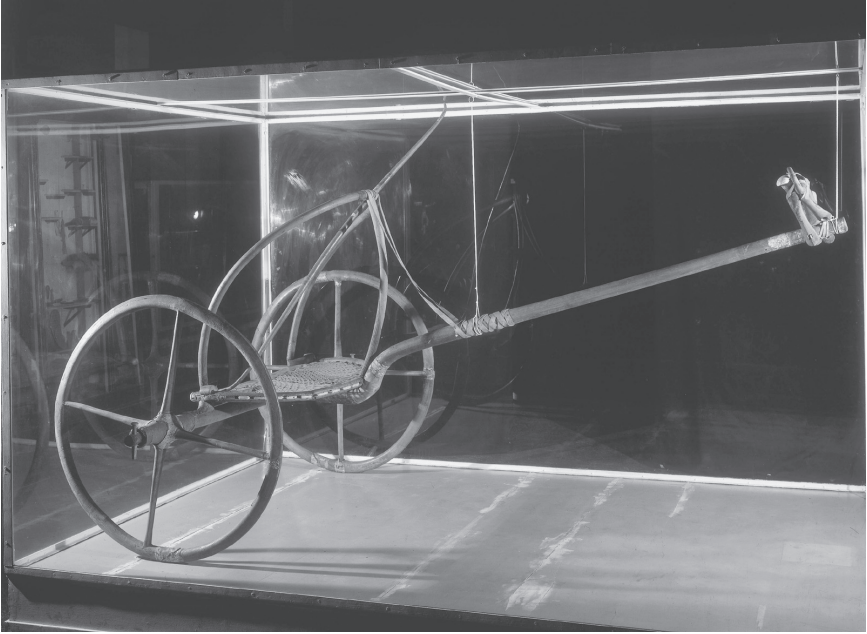
vehicle not that arduous. Keegan specifically notes an Egyptian relief that shows a man carrying a chariot on his shoulders, and the assumption is that the vehicles were not heavy.

As an aside, let us keep in mind that horses were not employed as draft animals. This has less to do with the absence of horseshoes, which were not important in these climes at any rate, but a result of the absence of the horse-collar. Because yoke-collars had been in use for a long time it might be supposed that the equids theoretically could have been used in agriculture. But with a yoke-harness the neck-strap pressed on the jugular vein and windpipe tended to lead to suffocation and the cutting of blood flow to the animal's head. Moreover, as Lynn White Jr. remarked, the point of traction came at the withers, too high for good mechanical effect.<sup>24</sup> The ratio is 5:1 for horse-collar versus yoke-collar. We have to wait for about two millennia until horses replaced oxen.

From later representations of chariots in Dynasty XVIII, and even from Ahmose's few broken reliefs, the chariots appear light and small.<sup>25</sup> Four spokes to the wheel betoken a simple war machine, one that was not suitable for anything but two horses, and very small ones at that. The wheels on the first chariots known to us from Western Asia were light and strong, and extremely useful for warfare in arid regions. This should alert us to their origins outside of the so-called "Fertile Crescent." The floor was generally shaped in the form of a D and was made of meshed rawhide. The superstructure was also light, and generally curved in the back. The sides were closed by the end of Dynasty XVIII, but pictorial representations from Ahmose, Thutmose II, and Amunhotep II indicate the opposite. In other words, the earliest scenes of Egyptian chariots show a simpler and lighter vehicle than the later ones. The latter, mainly dating from Dynasty XIX and XX, reveal a more substantial body. In fact, by the end of the XVIIIth Dynasty the number of spokes had been fixed at six, and it is highly probable that this occurred owing to the newer types of horses introduced into Egypt from the late reign of Thutmose III and onward.

Both the Asiatic and Egyptian chariots of this time were virtually identical, further indicating their northeastern origin. Their width was around one meter and the length of the cab one half of that figure. The diameter of the wheels also came to one meter. We can also note the extension of the axle system that afforded more velocity to these vehicles. Among the woods employed, the evidence indicates that elm and birch, non-native to Egypt, as well as tamarisk were employed. Because elm grows in Northern Palestine, it is reasonable to conclude that the Egyptians scoured this region and felled the trees after they had controlled it. Birch, however, is native to Anatolia, and therefore would have been imported, probably by ship, from the Hittites who lived there.

From the specific parts of a chariot (chassis, wheels, yoke pole), some of which have been found in Egypt, we can reconstruct their effect in battle.



**Figure 1.3** Egyptian chariot from Thebes. Florence, Museo Archeologico. Photo AKG-Images, Nimatallah. Drawing after J. Morel in *Wheeled Vehicles and Ridden Animals in the Ancient Near East* by M. A. Littauer and J. H. Crowel. E. J. Brill, 1979, figure 42.

In Egyptian scenes of warfare dating from Dynasty XVIII the Asiatics use four-spoked vehicles. At that time, only the Pharaoh might be depicted in an eight-spoked one. It seems probable, however, that four spokes remained the rule in Egypt until late in this period. The top of the sides approximated the flared upward-turning croup of the horses. In order to enter the vehicle all that a man had to do was to make one simple upward

step. No jumping was necessary. The charioteer was therefore able to see over the heads of the two horses with no difficulty because the animals were not tall enough to obstruct his vision.

Although the Egyptian army began to employ this new war machine in the Second Intermediate Period, its effect can be seen only at a later date. In contrast, the rapid introduction and development of the Asiatic composite bow meant that both the developing chariotry as well as the footsoldier-archers began to play a greater and greater role in military affairs. In this case the combination of chariot and bow was essential. Because the horse was not yet specialized for cavalry attack, archers remained very important. In this case the driver or charioteer switched from directing his vehicle into an archer. Therefore, both the Egyptians and their opponents used the chariots in a specific way, one quite different from that usually assumed by laypersons. Finally, it has been doubted whether the Hittites of Anatolia used the composite bow, at least as a weapon employed from one of their chariots. John Keegan stresses their virtual absence in the Egyptian reliefs of the XIXth Dynasty because the Hittite chariot crews are usually represented as spearmen.<sup>26</sup>

Because the Nile Valley lent itself to naval warfare, the necessity of expending time and expense upon chariot warfare was not that urgent. Both the native Egyptians of Thebes (Dynasty XVII) and their Hyksos opponents relied upon fleets. Have we not seen Kamose boasting of his seizure of Apophis' ships? But if the archer was so important, having now a more effective weapon in his hands, how could he be used? Here, as well, we can see that the period of Kamose and Ahmose was a transitional one during which techniques of chariot warfare began to grow in importance, but when fleets still played a key role.

With his arrows, the archer could now penetrate simple armor. Hence, the need for a thicker bodily protection, which was now made of leather and metal. This soldier could also cover a greater distance in a chariot. Hence, it was not necessary for him to be very close to a battle line. All of this meant that a second division of footsoldier-archers remained in the infantry, while others could be placed on chariots.

As noted earlier, the composite bow was an additional weapon introduced to Egypt during the Hyksos Period.<sup>27</sup> Middle Kingdom reliefs show the Egyptian employing double-complex bows that were made from one strong piece of pliable wood. The older type, the single-arc ones, has been found in tombs dated to the same time. There remains the problem whether the Egyptians in Dynasty XII had the quiver. Although it would appear likely, and such an item could have been developed independently by many cultures, it is noteworthy that the New Kingdom word for the quiver was Semitic. But whether this indicates that quivers were borrowed from Asia (via Palestine) or not, scenes dated to the Middle Kingdom show that the Egyptian bowmen carried their arrows in bundles. This situation can be



better explained by assuming that the Egyptian archers used to prepare their forces outside of a city by carrying along a number of arrows, too many for a single quiver. In fact, because an actual quiver was found from Upper Egypt dated to Dynasty XII, it is clear that for ordinary combat between two divisions of footsoldiers, such a policy would be counter-productive.<sup>28</sup> The contemporary pictorial representations of siege indicate a type of warfare separate from the clash of two infantry-based armies.

It is useful to concentrate upon these earlier weapons because they indicate a type of warfare quite different from the reign of Kamose and later. For example, the archers, lacking any chariots, stood behind the protective shields of their compatriots. In earlier siege depictions these men formed a contingent separate from the footsoldiers. None of these soldiers have body-armor. They also lacked helmets. Their shields were of moderate to large size, composed of hide stretched between thin wooden sides. From this information we can reconstruct the earlier type of warfare practiced in the Nile Valley.

The army was organized through the state, and the naval contingents were the elite class. The footsoldiers were transported by the ships to the battlefield. By and large, the combat would have taken place on a field or flat surface, and we might assume that the time was announced. Movement of troops on land is slow. The lack of horses and chariots was the obvious reason even though combat at this earlier time was not simple and lacking in carnage. The lack of protective armor is explained by the short distance of arrow flight, the relative simplicity of the tension in the bowstrings, and the presence of large though cumbersome shields. A flat cutting axe was held into the haft by three tangs. By and large, this type was not employed outside of Egypt during the Middle Kingdom. In Syro-Palestine (and also further east) the axes were set within sockets. It is evident that such weapons depended upon their sharp blades to cut into unarmored flesh. Later in Western Asia we see the rise of the eye axe, which, when developed, served more as a piercing weapon than a cutting one. Hence, the rapid need for protective armor first developed outside of Egypt and then later was introduced, once more indicating the importance of foreign technology. With the expansion of leather helmets and corselets, the axes switched to a weapon geared even more to piercing and penetration. This forced, as a logical counter-reaction, small shields and more armor.

Egypt, which lagged behind the military technology of Western Asia, was not resistant to such changes. The cause for its conservatism in weaponry has to be looked for elsewhere. By and large, in the Nile Valley the necessity of wars was limited. Except for expansion southward into Nubia, the Middle Kingdom feared no invasion. To put it another way, once the state was unified in late Dynasty XI and internal difficulties pacified, the Pharaohs ruled a stable land. Continual warfare of an internecine nature ceased, and except for a desire to take control over portions of Nubia the army was not

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that important within the Nile Valley. Unlike the situation to the northeast in Asia where city-states vied for control over small patches of land, Egypt was at peace. Therefore, the nature of warfare in Egypt tended to be conservative, and the demand for new technology limited, especially as her southern Nubian foes were even less developed, at least in the military arts, than herself.

We are faced with a common economic and social situation, one where a contrast can be made between Asiatic warring cities and small states whose needs for independence and self-sufficiency were more marked than Egypt's. The virtual monopoly of the Nile waterway, a perfect conduit for trade and political control, effected a stasis in Egypt with respect to the art of war. Those lands that frequently fought, on the other hand, were not blessed with such a peaceful condition. Hence, the tug of war between defense (armor) and attack (axes, swords) did not take place in the Nile Valley. When, however, the Hyksos took over the north during the weakened period of Dynasty XIII, the situation altered.

The move to sickle swords in Western Asia provides a good example of this dichotomy.<sup>29</sup> The blades were relatively short, and in many ways this implement can be considered to be similar in purpose to an axe. Later, the blades were extended, a result of the growing use of defensive armor. At the same time the Egyptian axes were converted to piercing types, and two well-known examples, dated to Kamose and his successor Ahmose, indicate how the Egyptians had to adapt their weapons to new developments. Both axes are short and have a wide edge. Their mode of use depended upon a swift and steady blow that caused a thick cut because the blade had a wide edge. Instead of cutting, these new weapons depended upon piercing.

In similar fashion, the introduction of the composite bow further hastened the need for armor protection. Reed arrows with bronze tips were placed upon the bowstring, which, because of the strengthened wood, was far more taut than the strings of earlier bows. The later Egyptian archers could inflict considerably more damage than their Middle Kingdom predecessors. Unfortunately, we do not know exactly when the composite bow came to Egypt. That it was used by the Egyptians in Dynasty XVIII is clear. The regular use of bronze in Egypt (middle to the end of Dynasty XII) provides a terminus of a sort. The written records of Kamose and Ahmose son of Ebana, however, do not tell us anything about these weapons.

The reason why archers were more effective on chariots than on foot is easy to see. First, it was necessary to speed up the transportation of these men to the battlefield. Insofar as the use of the composite bow made the archers more effective than previously, the need for them became all the more important. These warriors also required some protection as it was impossible to hold a shield and shoot arrows at the same time. So two men in a chariot were necessary, and both would have to work with each other. Therefore, the wheeled vehicles served a double purpose: to move the

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archer to the melee as soon as possible and to provide protection to that man by a shield-bearer. Furthermore, the quivers could be set against the side of a chariot, generally on the right, thereby allowing the two men to work as a team before the archer actually shot his arrows. (The chariot warriors also could carry quivers on their backs.) One can immediately see why the Hyksos Period was so important in Egypt. The new warfare that so upset the traditional way of fighting now focused more attention upon the archer. The reliefs on the sides of the chariot of Thutmose IV (mid Dynasty XVIII) indicate this. In fact, this royal vehicle possessed at least two quivers, both set on the right and left.

A brief look at the Egyptian chariot teams with two men per vehicle needs explication. They would have hastened to the battlefield. The ground had to be moderately level, otherwise the riders would have been unable to operate effectively. Traditionally, the navy had sped the troops to the encounter. Now chariots could do the same, especially if there was no river. In Egypt, on the other hand, the royal fleet would have still transported the infantry with the charioteers and their vehicles, but after disembarking the army would have formed into two major sectors and then quickly advanced upon their opponents. The latter still took place under Kamose and Ahmose, and was probably commonplace during the southern expansion into Nubia and the later conquest of that region.

The charioteer was supported by his man at arms, the shield-bearer, who held his shield in front of the driver with his right hand. The first man held the reins, and stood to the right in the vehicle. Next to him was the quiver, although it is also possible that a second quiver would be placed on the left. Representations in Dynasty XVIII and later indicate that there was a bow case also attached on the right side of the cab, and it was normally set over the quiver. The charioteer stopped pushing his horses forward at a point in time. He then took up his bow with his right hand, set it in his left and placed arrow after arrow on the bowstring, shooting his missiles into the advancing army. The shield-bearer remained as a protective unit, perhaps using a spear or javelin if need be.

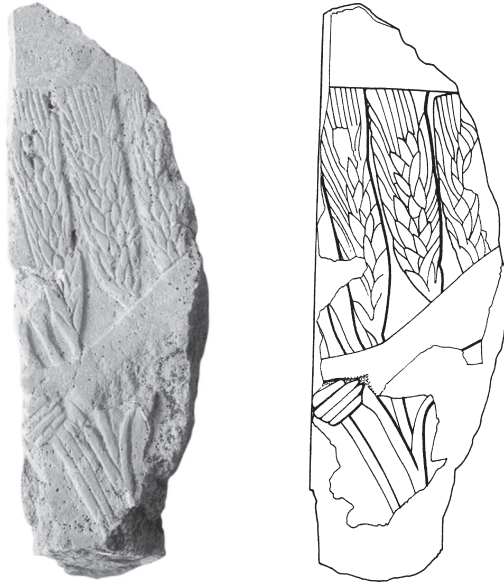
Some have hypothesized that the charioteer tied together the reins behind his back while shooting in battle.<sup>30</sup> Evidence for this is circumstantial with one exception, but I still feel that it would have been foolhardy to attempt such an action unless the actual combat was relatively well organized. Scenes of the Pharaoh in chariot charging the enemy alone with the reins tied in such a manner are common. However, they must be viewed carefully, with the appreciation of the intent of the artist and the imposed structure of representation with which he worked. We can readily dismiss the solitary nature of the royal warlord. If he acted thus, he would be suicidal. The presence of the tied reins, however, can be seen in a war scene of the late XVIIIth Dynasty.<sup>31</sup> In depictions of royal hunting the king in his chariot pursues lions or bulls with the reins tied behind his back. But here

there was no worry of physical attack. Could such have occurred during a melee? This question is crucial, as it forces us back upon the nature and logic of war. Protection for the archer was needed. Hence, there always were two men in a chariot, including the one of Pharaoh. But when the charioteers became archers, how could this use of the reins be accomplished in an efficient and quick manner when the warrior had already reached the enemy? Consider the enemy chariots advancing, behind which came the infantry. Add the flying arrows, the need for a shield-bearer, and perhaps more importantly, the presence of spears or javelins. In other words, we have to treat the official pictorial representations of king in battle with a degree of caution, although some evidence indicates that this use of the reins was in practice.

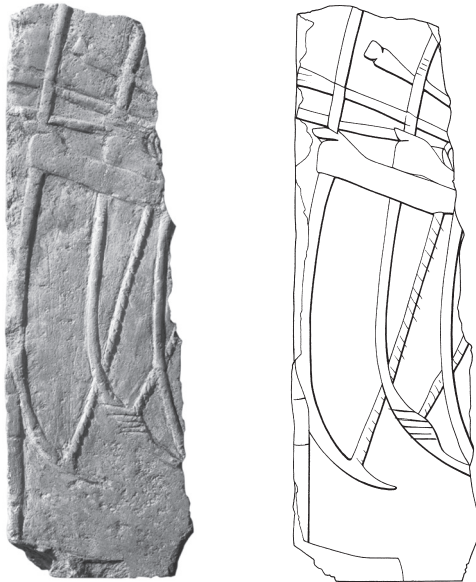
Now let us analyze the arrows and javelins/spears. Later Egyptian kings have a javelin holder attached to their chariot and it is usually placed on the left side.<sup>32</sup> That is, it was meant to be thrown by the second man, the shield-bearer. But if he did this, how could he protect the charioteer? The spear or javelin, therefore, was probably hurled before the charioteer stopped his vehicle. Furthermore, both arrows and javelins are most effective against large objects, not small ones. That is to say, they would most probably have been employed to bring down horses. It is easier to strike a horse with a spear than a man, especially if, as we know, the downward position of the hand is employed with the spear. Equally, arrows are more effective against horses than men, especially if the latter are protected by shield-bearers. All in all, I consider the dual role of charioteer and shield-bearer to be complementary, notwithstanding the more important – and the more elitist – role of the former.

Taking into consideration this new method of warfare, it would appear that the Egyptians used the new technology to defeat the Hyksos. Yet, as we have seen, up through the reign of Kamose the naval contingent remained in the key position of the Egyptian army. By and large, it is assumed that the chariot arm of Kamose was the means by which he defeated the Hyksos, notwithstanding virtual silence by the extant sources on this matter. On the other hand, the need for a fleet was as important as the newly developed chariot division. Both sectors, therefore, played equal roles in the reconquest of northern Egypt without one taking prominence. Fortunately, recent support for this modified interpretation can be given owing to the discovery of a number of fragments of Ahmose's war reliefs from his temple at Abydos.<sup>33</sup>

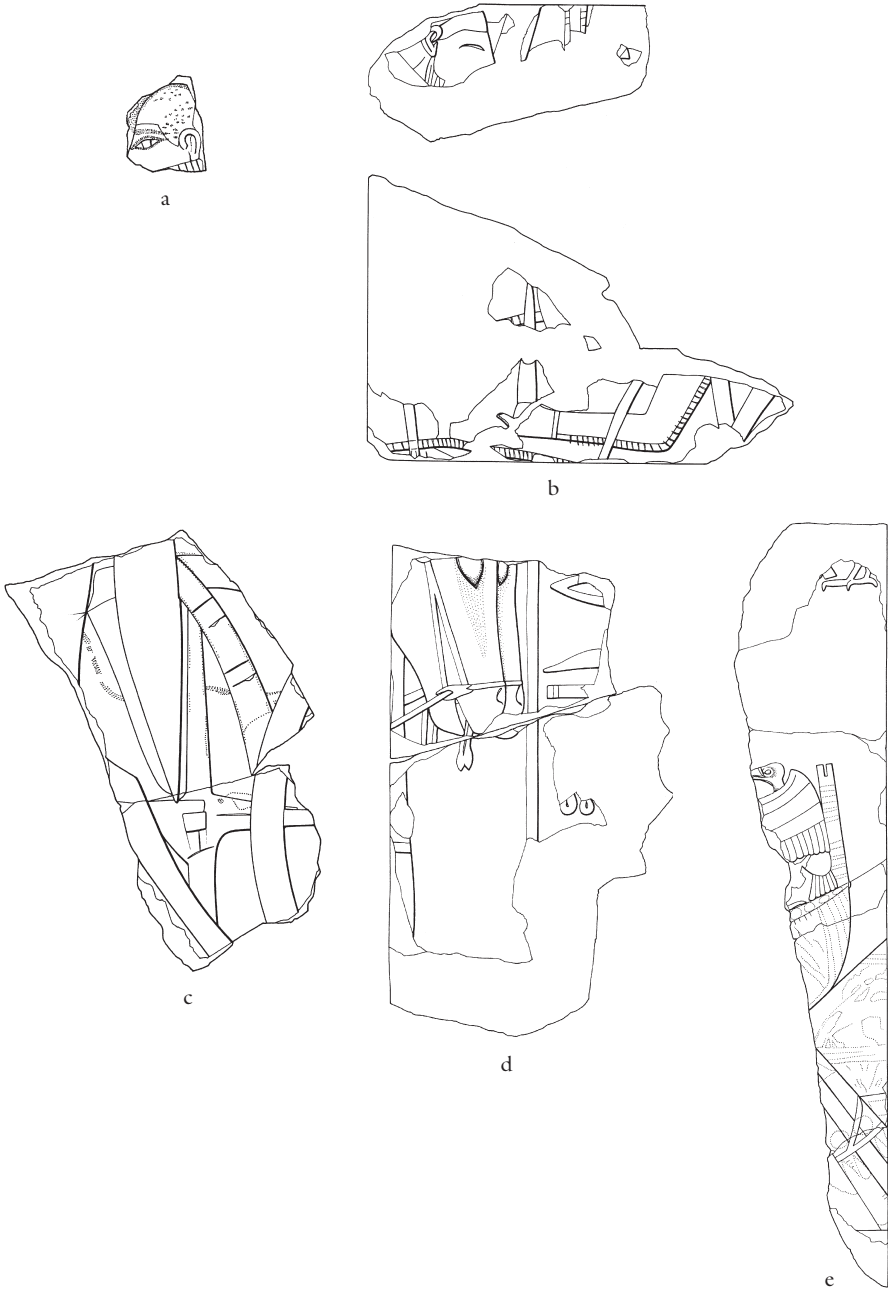
This pictorial evidence meshes perfectly with the analysis presented above. The archers use the convex bow; the royal ship is present; and oars and sails may be seen on additional fragments. The presence of horses and their vehicles is significant. One solitary scene shows four spoked wheels on a chariot, whether of the enemy or not cannot be determined with accuracy. Two additional depictions shows bridled horse pairs, and from their precision we can determine that the Egyptians employed the bit in the corner of



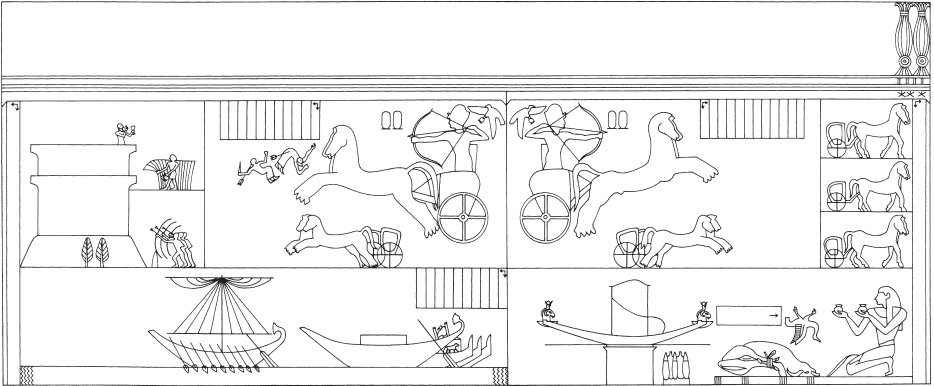
**Figure 1.4** Limestone relief depicting the harvesting of grain from the pyramid temple of King Ahmose at Abydos. Photo by Laura Foos. Drawing by William Schenck. Courtesy of Stephen P. Harvey.



**Figure 1.5** Limestone relief showing Nubian archers with longbows firing into the air, from the pyramid temple of King Ahmose at Abydos. Photo by Laura Foos. Drawing by William Schenck. Courtesy of Stephen P. Harvey.



**Figure 1.6** Drawings from the pyramid temple of King Ahmose at Abydos. (a) Head of an Asiatic enemy (?), perhaps with shaved head. (b) Head of a bearded Asiatic enemy, and arm of an Asiatic with long fringed garment holding a sword. (c) Limestone relief showing overlapping horse teams and chariots. (d) Bridled chariot team at rest. (e) Painted limestone fragment depicting the stern of a royal ship with an aftercastle in the form of a vulture. Drawings by William Schenck. Courtesy of Stephen P. Harvey.



**Figure 1.7** Tentative reconstruction of the battle reliefs of King Ahmose from his pyramid temple at Abydos. Drawing by Tamara Bower, after Stephen P. Harvey. Courtesy of Stephen P. Harvey.

the horse's mouth, an important point because, as previously observed, this system of control has been queried. All in all, these recently discovered scenes indicate the interweaving of chariotry and ships. The attack depicted must be at the Hyksos capital of Avaris, and I cannot but conclude that the final conquest of the East Delta was at the heart of the action. Whether or not one can reconstruct the original scene of Ahmose with an advance on water, carved below (Nile channel; flotilla) with land above (king in chariot), is another matter. It is sufficient to lay emphasis upon the key elements of the army: navy and chariotry with the foot archers taking a secondary role. As in the Middle Kingdom, the latter stand on the ground aiming their bows upward, undoubtedly at the Hyksos citadel.

The war scenes of Ahmose thus reflect the older system of Egyptian tactics with the use of the new mobility caused by chariots. Yet the physical location of Avaris must be taken into consideration. It was a city located close to a water channel or river. One could lay siege to it with the help of the royal flotilla, and this was accomplished by the Pharaoh. Chariot battles would have been of secondary importance. There was no large expanse of dry land in the environs sufficiently broad enough to allow for a great clash of two presumed horse-driven armies. True, the heroic figure of Ahmose in chariot can be assumed to have been an integral part of the depiction. But unless his opponent chose to meet him in battle on the field, the actual encounter would have been different. Indeed, the final capitulation of Avaris would have come about through a lengthy siege, which is, in fact, what the biography of Ahmose son of Ebana indicates.

Thus the traditional interpretation of Hyksos, horses, and chariotry has to be revised in light of these facts. Just as earlier at the end of the Middle Kingdom there was no lightening descent of a hoard of semi-nomadic horse



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warriors upon the inhabitants of the Nile Valley, so too were there no later counter-attacks by enraged natives wheeling their fast-moving vehicles on wide plains and penetrating the footsoldier divisions of a hated enemy. Quite to the contrary, the outgoing XVIIth Dynasty and the beginning XVIIIth witnessed a perpetuation of the older form of local warfare, buttressed, of course, by the chariot. Let us not forget that the wars against the Hyksos were a series of campaigns led by three successive kings of Egypt that became more and more successful. The eventual success of the Thebans took a long time, with eighteen or so years a reasonable estimation. This does not indicate a quick victory, indeed it may hide a few setbacks, none of which would be allowed, either in print or in picture, to stain the escutcheon of the royal house.

If we examine this last phase of internecine warfare in Egypt solely from the geographical perspective, I believe that the tactics of Ahmose can be ascertained. The biography of Ahmose son of Ebana, laconic though it may be, indicates that a siege of Avaris took place. The Hyksos capital was isolated. The remnants of the enemy could not secure aid from outside; nor could they use their own ships as a counter-measure against the Egyptians. Thereafter, the Pharaoh marched upon Sharuhin in Southern Palestine and laid siege to that city.<sup>34</sup> This time the enemy withstood the Egyptian army for three years.

A second soldier, Ahmose Pen-Nechbet, tells us that he fought in Djahy, a vague term for what has to be southern and central Palestine.<sup>35</sup> More useful is a later insertion written on the center of the verso of the famous Rhind Mathematical Papyrus.<sup>36</sup> Dated to the eleventh regnal year of an unknown Pharaoh, a series of brief diary entries inform us that Heliopolis (north of Memphis) was taken, and then Sile on the extreme eastern border of Egypt.<sup>37</sup> The last Hyksos king must have originally controlled both areas. In this case it is relatively easy to ascertain that: (1) the Egyptian fleet was involved; and (2) that around ninety days had occurred between the fall of Heliopolis and the capture of Sile. No mention is made of Avaris.

Can we assume that Avaris fell in the interim or, more likely, that this account was written in the north by a follower of the Hyksos, and that the enemy capital still remained in enemy hands? The second interpretation has the advantage of the record. (The importance of this city was so paramount that surely the insert should have referred to that fact.) Nowhere in this tiny report is there any evidence of the capture of Avaris. In fact, the account states that "One heard that Sile was entered," thereby implying that the writer received message of the capture. I feel that these words refer to the effective isolation of the Hyksos capital. In addition, Heliopolis had to be seized before the assault upon Avaris, especially because Kamose did not seize the Hyksos capital during his earlier march north.

Tactically, then, Kamose was able to cut the Hyksos capital off from any of its territories. But he could not force the issue to a successful conclusion.

Ahmose, on the other hand, first mopped up the surrounding Hyksos strongholds and then took Avaris. The report in the Rhind Mathematical Papyrus indicates that the land northeast of the Hyksos capital as well as that in the southwest was seized. After this, the final blow took place. Yet if the end of Avaris was the final result of a protracted war, and the chronology of Pharaoh Ahmose supports this contention, the advance to Sharuhem was a logical outcome. But in this case the Egyptian fleet could not be of much use. The only means of insuring its collapse had to be by investing it.

## EXCURSUS

1. The social effects of the Egyptian military upon the state are frequently overlooked. This is in part due to prevailing research that has concentrated on the armaments, the historical texts as literature, or the prosopography of a specific time period. Owing to this, the social ramifications of the war machine have been overlooked, and key studies in the general field of warfare have been neglected. Stanislav Andreski's work, *Military Organization and Society*<sup>2</sup>, Routledge and Kegan Paul, London (1968), is useful to employ when covering the rise of the new chariot division of the New Kingdom and its connection with social stratification. This work should be read with the volume of Andrea Maria Gnirs, *Militär und Gesellschaft. Ein Beitrag zur Sozialgeschichte des Neuen Reiches*, Heidelberger Orientverlag, Heidelberg (1996), a study that I will refer to frequently.

Andreski emphasizes the warriors as a privileged stratum during the Ramesside Period (Dynasties XIX–XX), and he correctly notes that this elite was balanced by other corporate elements as well – for example, the priestly class and the bureaucrats (whom he labels “literati”). In other words, even when the new social elite of the army had become significant, it was unable to secure control over the state. At first, this might appear surprising insofar as the history of New Kingdom Egypt appears to lead inexorably to a military domination of the society. This was the thesis of Wolfgang Helck in his epoch-making volume, *Der Einfluss der Militärführer in der 18. ägyptischen Dynastie*, J. C. Hinrichs, Leipzig (1939). Yet the role of Pharaoh as military commander did not predicate that he was solely, or even primarily, a warrior. Various other factors of kingship, such as the connection to the main god, Amun of Thebes, were crucial. At the same time, religious leaders as well as the scribal bureaucrats remained in the key positions in the Nile Valley, a conclusion that is easily seen from the numerous tombs of the officials. I feel that a too rigid separation of the military's role and function had led to this misunderstanding, one that, in fact, Andrea Gnirs refutes in her publication.

2. Various detailed studies concerning the New Kingdom military can be listed at this point. Alan Richard Schulman's *Military Rank, Title and Organization in the Egyptian New Kingdom*, Bruno Hassling, Berlin (1968),

was a useful attempt to grasp the data of Dynasties XVIII–XX in relation to the actual military protocols and arrangements of battalions, divisions, and the like. It was, however, subjected to a critical review by Jean Yoyotte and Jesús López in “L’organisation de l’armée et les titulaires de soldats au nouvel empire égyptien,” *Bibliotheca Orientalis* 26 (1969), 3–19. The earlier work of Vsevolod Igorevitch Avdiev, *Military History of Ancient Egypt* II, Sovetskaya Nauka, Moscow (1959), is rarely consulted.

Subsequently, Ahmed Kadry, *Officers and Officials in the New Kingdom*, Kédült az ELTE szkoszorisítóüzemében, Budapest (1982), retraced the procedures of Schulman, although he still remained within the older methodological bounds of Helck. For a helpful list of New Kingdom military men, see now P.-M. Chevereau, *Prosopographie des cadres militaires égyptiens du Nouvel Empire*, Antony (1994).

A general overview of the Egyptian army, particularly during the New Kingdom, can be found in “Sheik ‘Ibada al-Nubi, “Soldiers,” in Sergio Donadoni, ed., *The Egyptians*, trs. Robert Bianchi et al., University of Chicago Press, Chicago–London (1997), 151–84. Three additional general surveys worth noting are: Ian Shaw, *Egyptian Warfare and Weapons*, Shire Publications, Haverfordwest (1991), with his later work “Battle in Ancient Egypt: The Triumph of Horus or the Cutting Edge of the Temple Economy?,” in Alan B. Lloyd, ed., *Battle in Antiquity*, Duckworth, London (1996), 239–69; and Andrea Gnirs, *Ancient Egypt*, in Kurt Raaflaub and Nathan Rosenstein, eds., *War and Society in the Ancient and Medieval Worlds*, Harvard University Press, Cambridge, MA–London (1999), 71–104.

For a more detailed exposition, I can refer to Robert B. Partridge, *Fighting Pharaohs. Weapons and Warfare in Ancient Egypt*, Peartree Publishing, Manchester (2002). This is a valuable survey of the art of war from the Predynastic Period up to the end of the New Kingdom. Unfortunately, while useful with regard to the technical aspects of weapons and other physical attributes of soldiers, the problems of tactics, strategy, logistics, and history needed to be expanded.

3. Much of the background to this chapter relies upon the work of Oleg Berlev, “The Egyptian Navy in the Middle Kingdom,” *Palestinskij Sbornik* 80 (1967), 6–20 (in Russian). This article, referred to in note 4, was the first to come to grips with the often-expressed position among scholars that Egypt in the Middle Kingdom had no standing army. His conclusions regarding the importance of the navy in Dynasties XI–beginning XVIII cannot be ignored. Moreover, Berlev specifically oriented himself to the hierarchy of the army at this time and so was able to reconstruct the social set-up of the early war machine of Pharaonic Egypt. His conclusions, with those of Gnirs’ major work cited in this excursus, allow one to reconstruct the various social and political transformations of the Egyptian military in the New Kingdom. It remains unfortunate that the research of Berlev has been ignored by later scholars, especially as he was able to understand the ramifications of the military elite within Pharaonic Egypt. The organization of the army during the Middle Kingdom, and its exact subdivisions (companies or divisions),

undoubtedly was the basis for the New Kingdom (or even the late Second Intermediate Period) system. The exact number of men per division at this earlier time, however, remains unknown.

Hitherto overdependence upon major inscriptions at the time of the outgoing XVIIth Dynasty and the newly established XVIIIth (e.g., the Kamose Stelae and the biography of Ahmose son of Ebana) often have led to a false emphasis being placed upon texts and inscriptions of a purely military nature. Berlev's detailed work has laid the basis for a new synthesis of the rich material of the Second Intermediate Period, a work that is now complemented by K. S. B. Ryholt, *The Political Situation in Egypt during the Second Intermediate Period, c. 1800–1550 BC*, Museum Tusulanum Press, Copenhagen (1997). Thanks to these two scholars we are now able to perceive more clearly the military aspects of the native rulers and the key social groupings of Dynasties XIII and XVII.

For a general analysis of the role, function, and social status of certain high military men, during the Second Intermediate Period, see Bettina Schmitz, *Untersuchungen zum Titel S3-njswt "Königssohn"*, Rudolf Halbert, Bonn (1976).

## NOTES

- 1 H. S. Smith and Alexandrina Smith, "A Reconsideration of the Kamose Texts," *Zeitschrift für ägyptische Sprache und Altertumskunde* 103 (1976), 48–76. This article is the best study of the inscriptions. The authors connect the two stelae of the king with the military and political situation at Buhen, the key fort located at the Second Cataract. The work of K. S. B. Ryholt, *The Political Situation in Egypt during the Second Intermediate Period, c. 1800–1550 BC*, Museum Tusulanum Press, Copenhagen (1997), 171–4, has added much to their analysis. His detailed survey of the military organization of Dynasty XVII – garrisons in key cities, warriors, the martial outlook of the kings and their sons – is extremely important. The earlier series of essays in Eliezer D. Oren, ed., *The Hyksos: New Historical and Archaeological Perspectives*, University Museum, Philadelphia (1997), provide an important background to the military situation at this time, but Ryholt's discussion of the Hyksos and Dynasty XVII remains crucial.
- 2 This fact was first pointed out by Alan Gardiner, "The Defeat of the Hyksos by Kamose: The Carnarvon Tablet No. I.," *Journal of Egyptian Archaeology* 3 (1916), 95–110. Later, "year three" was added: Donald B. Redford, *History and Chronology of the Eighteenth Dynasty of Egypt: Seven Studies*, University of Toronto Press, Toronto (1967), 40 and note 60.
- 3 This setting is often assumed to reflect the literary topos of the "King's Novel" (*Königsnovelle*), and in this case the emphasis is upon the deeds of the Pharaoh. According to Antonio Loprieno, such narratives focus upon the human characteristics of the monarch because he was the pivot between the political-social reality of Pharaonic Egypt and the mythical-literary one: "The 'King's Novel',"

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in Antonio Loprieno, ed., *Ancient Egyptian Literature. History and Forms*, Brill, Leiden, New York and Cologne (1996), 277–95.

Earlier, Aadrian de Buck discussed the military setting of Thutmose III at the Battle of Megiddo in *Het typische en het individuelle bij de Egyptenaren*, Boek- en Steendrukkerij Eduardo Ijdo, Leiden (1929), and the orientation of his work was expanded considerably by Alfred Hermann, *Die ägyptische Königsnovelle*, J. J. Augustin, Glückstadt, Hamburg and New York (1938). It is sufficient to note the two parameters of military setting and war conference. With Kamose, and earlier under his father Seqenenre II, the decisions were in the court. (See Hans Goedicke, *The Quarrel of Apophis and Seqenenre*, Van Siclen Books, San Antonio [1986], for a reevaluation of the latter account. I follow the analysis of Edward F. Wente, in William K. Simpson, ed., *Ancient Egyptian Literature*<sup>2</sup>, Yale University Press, New Haven and London [1973], 77–80.) A study of this literary account and its relation to the more sober historical data is presented by Donald B. Redford in “The Hyksos Invasion in History and Tradition,” *Orientalia* 39 (1979), 1–51.

De Buck covered the aspect of Egyptian art in connection with these literary settings. His position was that the Egyptians consistently depicted types or ideas rather than personalities or events, a conclusion with which we cannot entirely agree. Note the remarks of the Dutch historian Johan Huizinga, who followed De Buck: “Renaissance and Realism,” in his *Men and Ideas. History, the Middle Ages, the Renaissance*, Eyre and Spottiswoode, London (1960), 290.

From Dynasty XVIII onward the Egyptians developed various narratives of their Pharaohs’ wars. These accounts were often of a high literary form. See chapter XI of my *The Transformation of an Ancient Egyptian Narrative: P. Sallier III and the Battle of Kadesh*, Otto Harrassowitz, Wiesbaden (2002).

- 4 I am dependent upon the seminal article of Oleg Berlev, “The Egyptian Navy in the Middle Kingdom,” *Palestinskij Sbornik* 80 (1967), 6–20 (in Russian). His later study, “Les prétendus ‘citadins’ au Moyen Empire,” *Revue d’Égyptologie* 23 (1971), 23–47, is not a translation of the earlier Russian one.

P.-M. Chevereau in “Contribution à la prosopographie des cadres militaires du Moyen Empire,” *Revue d’Égyptologie* 42 (1991), 43–88, and in “Contribution à la prosopographie des cadres militaires du Moyen Empire B. Titres Nautiques,” *Revue d’Égyptologie* 43 (1992), 11–24, presents an extremely useful outline of the military men from Dynasties XI–XVII.

See as well, Peter Lacovara’s study “Egypt and Nubia during the Second Intermediate Period,” in Oren, ed., *The Hyksos: New Historical and Archaeological Perspectives*, 69–83.

- 5 An excellent translation of the text is by Miriam Lichtheim, *Ancient Egyptian Literature* II, University of California Press, Berkeley, Los Angeles and London (1976), 12–15.
- 6 See Berlev’s two studies cited earlier in note 4. Schulman, *Military Rank, Title and Organization in the Egyptian New Kingdom*, Bruno Hassling, Berlin (1964), 19–20, covers the ship contingents during Dynasties XVIII–XX. The example of P. Butler 534 (P. British Museum 10333) used by him (pp. 27–8 and no. 120; see now Kitchen, *Rameside Inscriptions* VII, Oxford, Blackwell [1989], 13–15) is important. In this account the first column enumerates the religious

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- contributes of at least one military company (*sa*) associated with a ship; see as well Jean-Yoyotte and Jesús López, *Bibliotheca Orientalis* 26 (1969), 6.
- 7 This will be indicated in more detail later when we consider that no Asiatic wars are known to have taken place under Amunhotep I. Berlev argued very strongly for this interpretation.
- Donald B. Redford, "A Gate Inscription from Karnak and Egyptian Involvement in Western Asia during the Early 18th Dynasty," *Journal of the American Oriental Society* 99 (1979), 270–87, published some key early Dynasty XVIII fragments that refer to Asia. They can be dated better to Thutmose I than to Amunhotep I.
- 8 In general, see the overview of Robert B. Partridge, *Fighting Pharaohs. Weapons and Warfare in Ancient Egypt*, Peartree Publishing, Manchester (2002), chapter 2. This book replaces the compendium of Yigael Yadin, *The Art of Warfare in Biblical Lands I*, McGraw-Hill, New York, Toronto and London (1963).
- For the social changes that were occurring in the New Kingdom up to the middle of Dynasty XVIII we now have at our disposal the volume of Andrea Maria Gnirs, *Militär und Gesellschaft. Ein Beitrag zur Sozialgeschichte des Neuen Reiches*, Heidelberger Orientverlag, Heidelberg (1996).
- 9 Gnirs, *Militär und Gesellschaft*, chapter 1.
- 10 This is not to deny that there were Nubians (the Medjay in particular) in the pay of the Dynasty XVII (and earlier). See most recently, Stephen Quirke, *The Administration of Egypt in the Late Middle Kingdom*, Sia Publishing, New Malden (1990), 21–2 (referring to a contingent of these men under Kamose, the predecessor of Ahmose, the founder of Dynasty XVIII). Quirke also discusses the Late Middle Kingdom titles and duties on the Egyptian military on pages 81–4 of the same work. He points out that "all officials in the lower sector of the lists [of the court at Thebes during early Dynasty XIII] belonged to the military sector" (p. 81).
- 11 The key theoretical works concerning these men are: S. E. Finer, *The Man on Horseback*, Frederick A. Praeger, New York (1962), especially chapters 2, 7, and 9; Stanislaw Andreski, *Military Organization and Society*<sup>2</sup>, Routledge and Kegan Paul, London (1968), 34–7, 42, 84–6, with chapter XI; and John Keegan, *The Mask of Command. A Study in Generalship*, Pimlico, London (1999), 5, 125, and 312–14.
- 12 For these peoples and others covered in this paragraph see our later discussion in chapters 13–16.
- 13 Finer's remarks in his *The Man on Horseback* are pertinent here.
- 14 In general, see M. A. Littauer and J. H. Crouwel, *Wheeled Vehicles and Ridden Animals in the Ancient Near East*, E. J. Brill, Leiden and Cologne (1979); Anja Herold, *Streitwagentechnologie in der Ramses-Stadt. Bronze an Pferd und Wagen*, Philipp von Zabern, Mainz (1999); and Joachim Boessneck and Angela von den Driesch, *Tell el-Dab'a VII*, Österreichische Akademie der Wissenschaften, Vienna (1992). Concerning the physical condition of chariots, see J. Spruytte, *Early Harness Systems. Experimental Studies*, J. A. Allen, London (1983); and Littauer and Crouwel, *Chariots and Related Equipment from the Tomb of Tut'ankhamun*, Griffith Institute, Oxford (1985).
- 15 To the sources listed in the last note add Louis Chaix, "An Hyksos Horse from Tell Heboua (Sinai, Egypt)," in M. Mashkour et al., *Archaeology of the Near*



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*East IV B. Proceedings of the fourth international symposium on the archaeozoology of southwestern Asia and adjacent areas*, ARC-Publicatie 32, Groningen (2000), 177–86; Angela von den Driesch and Joris Peters, “Frühe Pferde- und Maultierskelette aus Avaris (Tell el-Dab‘a), östliches Nildelta,” *Ägypten und Levante* 11 (2001), 301–11; and Louis Chaix and Brigitte Gratien, “Un cheval du Nouvel Empire à Saï (Soudan),” *Archéologie du Nile Moyen* 9 (2002), 53–64.

The Buhen Horse was anatomically described by Juliet Clutton-Brock, “The Buhen Horse,” *Journal of Archaeological Science* 1 (1974), 89–100.

- 16 I am following the research of Catherine Rommelaere, *Les chevaux du Nouvel Empire égyptien. Origines, races, harnachement*, Connaissance de l’Égypte ancienne, Brussels (1991), and “La morphologie des chevaux dans l’iconographie égyptienne,” in L. Bodson, ed., *Le cheval et les autres équidés: aspects de l’histoire de leur insertion dans les activités humaines, Colloques d’histoire des connaissances zoologiques* 6 (1995), 47–79.
- 17 See the article of Louix Chaix referred to in note 15 above.
- 18 Mary Aiken Littauer, “Slit nostrils of equids,” *Zeitschrift für Säugetiere* 34 (1969), 183–6. Subsequently, Littauer and Crouwel, “The Earliest Evidence for Metal Bridal Bits,” *Oxford Journal of Archaeology* 20 (2001), 333, noted the first depiction of metal bits in the reliefs of Ahmose from Abydos: see Harvey’s studies referred in note 25 below.
- 19 The classical treatment of the horse’s use as a mount is ably summarized by John Keegan, *A History of Warfare*, Vintage Books, New York (1993), 177–8.
- 20 See the key references in notes 14–15 above.
- 21 Lynn White, Jr., *Medieval Technology and Social Change*, Clarendon Press, Oxford (1962), 23–4, 27.
- 22 Ricardo A. Caminos, *Late-Egyptian Miscellanies*, Oxford University Press, London (1954), 201, 446. One tantalizing passage in that text refers to the provisioning of the ports for Pharaoh; see our comments in the following chapters.
- 23 *A History of Warfare*, 156–69. David W. Anthony has elaborated on these matters in a series of important articles, among which we may cite: “The ‘Kurgan Culture,’ Indo-European Origins and the Domestication of the Horse: A Reconsideration,” *Current Anthropology* 27 (1986), 291–313, (with Dorcas R. Brown), “The origins of horseback riding,” *Antiquity* 65 (1991), 22–38, (with Nikolai B. Vinogradov), “Birth of the Chariot,” *Archaeology* 48.2 (1995), 36–41, and “The Earliest Horseback Riders and Indo-European Origins: New Evidence From the Steppes,” in Bernhard Hänsel and Satefan Zimmer, eds., *Das Indogermanen und das Pferd*, Archaeolingua, Budapest (1994), 185–95.
- 24 *Medieval Technology and Social Change*, 59–60.
- 25 To the studies of Littauer-Crouwel and Herold referred to in note 14, add the significant work of Stephen P. Harvey, *The Cults of King Ahmose at Abydos*, University of Pennsylvania Dissertation, Philadelphia (1998), 303–72. Note as well W. Raymond Johnson, *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramesside Battle-Narrative Tradition*, University of Chicago Dissertation, Chicago (1992).

The last study of Harvey may be read with the tentative remarks from him: “Monuments of Ahmose,” *Egyptian Archaeology* 4 (1994), 3–5, with “New



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Evidence at Abydos for Ahmose's Funerary Cult," *Egyptian Archaeology* 24 (2004), 3–6; and Janine Bourriau, "The Second Intermediate Period (c 1650–1550 BC)," in Ian Shaw, ed., *The Oxford History of Egypt*, Oxford University Press, Oxford (2000), 213, figure on p. 213. The center top fragment has been inverted, as Stephen Harvey has gratefully indicated to me.

- 26 *A History of Warfare*, 176. See now Richard Beal, *The Organisation of the Hittite Military*, C. Winter, Heidelberg (1992), 148–52. There is now a more detailed study of mine, "The Battle of Kadesh: The Chariot Frieze at Abydos," *Ägypten und Levante* 13 (2003), 163–99.
- 27 In general, see Yadin, *The Art of Warfare* I, 7–8 and Partridge, *Fighting Pharaohs*, 42–4.
- 28 Yadin, *The Art of Warfare* I, 9, 164–5; and Partridge, *Fighting Pharaohs*, 45.
- 29 Yadin, *The Art of Warfare* I, 10–11 (with a stress upon its lack as a decisive weapon), 172–3; and Partridge, *Fighting Pharaohs*, 50–1.
- 30 This is the main argument of Littauer-Crouwel, 91–2. I have responded to this in the study referred to in note 26.
- 31 Johnson, *An Asiatic Battle Scene of Tutankhamun from Thebes*, 59, referring to Schulman, "The Egyptian Chariotry: a Reexamination," *Journal of the American Research Center in Egypt* 2 (1963), 88–9.

I still feel that the use of reins tied behind the back by the chariot driver would have led to major problems. Instead, can we propose that chariot attacks, outside of surprises such as happened under Ramesses II at Kadesh in Dynasty XIX (see chapter 13), were more of a "set piece" in which the two opposing chariot divisions were permitted to attack each other? If so, each would have avoided the almost suicidal results of such a measure. This speculation is not too far-fetched insofar as other epochs of human history have allowed their elite warriors a high degree of formal, or "ludic," behavior in war.

- 32 The problem that faces us when interpreting Egyptian pictorial evidence is a simple one. Namely, how far can we trust the evidence? People and objects (chariots in particular) can be represented moving to the left or to the right. It is well known that the direction to the right is the key one. For this problem, see Gay Robins, *Proportion and Style in Ancient Egyptian Art*, University of Texas Press, Austin (1994), 16–21.

The following two studies present detailed commentaries concerned with the New Kingdom war reliefs: Susanna Constanze Heinz, *Die Feldzugsdarstellungen des Neuen Reiches*, Österreichische Akademie der Wissenschaften, Vienna (2001); and Marcus Müller, *Der König als Feldherr. Schlachtenreliefs, Kriegsberichte und Kriegsführung im Mittleren und Neuen Reich*. Tübingen Dissertation, Tübingen (2001).

By and large, we can trust those war scenes in which the Egyptians are advancing to the right. For example, some depictions reveals two quivers, one on the left and one on the right, as well as a third, placed on the back of the Pharaoh. Others have only one located on the side of the cab. Although we should not over interpret this pictorial evidence, it is equally unwise to discount the differences automatically.

Johnson, *An Asiatic Battle Scene of Tutankhamun from Thebes*, 59, discusses the archer or spearbearer "who often has the reins of the chariot horses tied around his waist and is the driver as well."

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- 33 I refer the reader to the dissertation of Stephen Harvey cited in note 25.
- 34 I follow the interpretation of Nadav Na'aman, "The Shihor of Egypt and Shur that is Before Egypt," *Tel Aviv* 7 (1980), 95–109, but see his earlier remarks in "The Brook of Egypt and Assyrian Policy on the Border of Egypt," *Tel Aviv* 6 (1979), 68–90. Anson F. Rainey, "Sharhân/Sharuhen – The Problem of Identification," *Eretz-Israel* 24 (1993), 178\*–87\*, now proposes Tell Abû Hureirah. That latest detailed analysis is that of Eliezer D. Oren, "The 'Kingdom of Sharuhen' and the Hyksos Kingdom," in Oren, ed., *The Hyksos: New Historical and Archaeological Perspectives*, 253–83. The study is important, but I question whether there was a "state" (of Sharuhen) in this area.
- It appears probable that Sharuhen cannot be equated with modern Tell el-'Ajjul, directly south of Gaza. Whether Sharuhen is to be identified with Tel Gamma or Tel Haror in Southern Palestine is another matter. See also Patrick E. McGovern, *The Foreign Relations of the "Hyksos,"* Archaeopress, Oxford (2000), 73.
- 35 A translation of this biography will be found in James Henry Breasted, *Ancient Records of Egypt II*, University of Chicago Press, Chicago (1906), 10.
- 36 Ryholt, *The Political Situation in Egypt during the Second Intermediate Period*, 186–8. I assume that the "year eleven" refers to the last Hyksos ruler.
- 37 For the site of Sile, see most recently Mohamed Abd el-Maksoud, "Tjarou, porte de l'Orient," in Dominique Valbelle and Charles Bonnet, *Le Sinâï durant l'antiquité et le Moyen Âge. 4000 ans d'histoire pour un désert*, Editions Errance, Paris (1998), 61–5.