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Contents

Color plates including images from Penélopé Riboud, Pratapaditya Pal, and Frantz Grenet follow p. 34 in this volume.

Introduction to "Persia beyond the Oxus"

On April 22, 2010, an international symposium was held at UCLA on the theme "Persia beyond the Oxus: The Circulation of Iranian Languages and Cultural Practices in Central Asia," organized under the joint auspices of the Musa Sabi Term Chair of Iranian (2004–2009) and the UCLA Program on Central Asia (Asia Institute), and convened by Nile Green, History, UCLA; and M. Rahim Shayegan, Near Eastern Languages and Cultures, UCLA.

Bringing together specialists in philology, archaeology, art history, and religion, the conference strove to assess the contributions of both Iran and Central Asia to the dispersal and vigor of East Iranian languages and cultural practices, and thereby identify the processes and mechanisms of language dissemination and transculturation more generally in Iran and Turan. In particular, special heed was paid to factors favoring or adversely affecting the fortunes of Iranian and Central Asian languages, such as Bactrian, Sogdian, and Gāndhārī, and their distinctive cultures in Iran and Turan, as well as to the specific forces and mechanisms accounting for their circulation and eventual demise.

The wider implication of a conference on Iran and Central Asia in (Late) Antiquity is related to recent developments in major fields of Iranian Studies. Over past decades, Late Antique studies have come programmatically to encompass the Iranian world in reconstructions of ancient history, with mutual benefits to both disciplines, allowing one to integrate the imperial *other* (the Sasanian empire) into "world" history, and Iranian Studies to escape the isolating confines of "Oriental" studies. The understandable but inevitable westward inclination of scholarship devoted to Sasanian Iran and its antecedents, may occasionally lead to the neglect of the empire's eastern components, as well as the debt it owes eastern influences. Partially, in order to serve as corrective to this penchant, the conference provided a glimpse at the *stimuli* synchronic and diachronic perspectives on Iranian and Turanian exchanges could evince.

The organizers would like to take this opportunity to thank the distinguished speakers and discussants: Jason BeDuhn, Northern Arizona University; Carol Bromberg, *Bulletin of the Asia Institute*; Michael Cooperson, UCLA; Susan Downey, UCLA; Frantz Grenet, CNRS / École Pratique des Hautes Études, Paris; Stephanie Jamison, East Asian Languages and Cultures, UCLA; Daniel T. Potts, University of Sydney; Richard Salomon, University of Washington; Martin Schwartz, UC Berkeley; Nicholas Sims-Williams, SOAS, London; and Ursula Sims-Williams, The British Library. It is furthermore my pleasure to acknowledge the Sabi family for making this event possible, as well as for generously supporting the publication of the papers. I would also like to express my gratitude to, and admiration for, Carol Bromberg for graciously agreeing to publish them in the prestigious *Bulletin of the Asia Institute* with her usual care and excellence.

The following were among the papers presented during the symposium.

In "*Cataphractus* and *kamāndār*," Daniel T. Potts investigates the origins and diffusion of heavy cavalry, the so-called catafractarii (*kataphraktoi*), in ancient Iran and Central Asia. The four dominant schools of thought: Iranian, Turanian, Choresmian, and Parthian are considered. Potts, however, proposes to see in the Neo-Assyrian development of armor the predecessor of the

kataphraktoi. Assyrian armor technology, the author argues, may have penetrated into Iran in the wake of Assyrian campaigns against the Medes on the plateau, and thence into Central Asia, whence it was transferred *back* to Achaemenid Babylonia.

Frantz Grenet, in "Where are the Sogdian Magi?," draws attention to the relative inconspicuousness of Zoroastrian priests in Sogdian documentation and provides a survey of evidence, textual, visual, and archeological, attesting to their presence and activities. The visual evidence appears in funerary art (Sogdian ossuaries, tomb reliefs of Sogdian expatriates in China), where priests were clearly identified by their specific long dress, their mouth protection (*padām*), and their sacred girdle (*kustīg*), but on mural paintings, the representation of the magis is less marked, perhaps because of their adoption of an accoutrement similar to that of their patrons. Documentary evidence is provided by the fourth-century Sogdian Ancient Letter 1 and the mid-eighth-century Mugh material from Panjikent, in which two distinct titles, the *βγnpt* /*βaγnpat*/ "temple chief" and the *mγwpt* /*moγpat*/ "chief magus" are reported. The direct contribution of Sogdian magi to Sogdian literature is chiefly limited to several fragments, translated in appendices to the article. These consist of (1) two texts describing the ascent of Zarathustra to heaven and another on the prophet's questioning the supreme God *Āδβaγ* (= Ōhrmazd) about the reunion of family members in paradise; as well as (2) the longer Sogdian text P.3 that is concerned with rain-making, testimony to the efforts of late Sogdian magi to appropriate the influential position of "rain-maker" in the context of Turkic political dominion.

In "Gāndhārī in the Worlds of India, Iran, and Central Asia," Richard Salomon provides a sweeping and brilliant survey of Gāndhārī not only as an important administrative language *and* Buddhist literary vehicle in its Indian homeland but also as a significant frontier language in great parts of the eastern Iranian world in the first three centuries of the Common Era. The author, based on broad documentary evidence in Gāndhārī (Buddhist and other), clearly demonstrates how Gāndhārī rose to prominence, carried by the military might of successive states that occupied Greater Gandhāra before falling into disuse following the disintegration of the selfsame polities once responsible for its rise in the region.

While "Some Bactrian Terms for Realia," discussed by Nicholas Sims-Williams, differs from the original presentation of the author, it is included as its content proves to be of pertinence to the overarching themes of the symposium. In this study the author follows the intriguing journey of two Bactrian words, which although not attested in extant Bactrian documents, ought to be postulated, as they seem to occur as loanwords in other Middle and New Iranian languages; and a third, this instance an attested Bactrian word that the author derives from Chinese.

M. Rahim Shayegan
Guest Editor

Cataphractus and *kamāndār*: Some Thoughts on the Dynamic Evolution of Heavy Cavalry and Mounted Archers in Iran and Central Asia*

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"Their horsmen vse armour of mayle entrelaced with fethers: bothe for their owne defence, and the defence also of their horses. In times passed thei occupied no golde ne siluer, but only in their armour"
—Boemus 1555, p. 56, on the Parthians

Introduction

Technology transfer in ancient Eurasia is a challenging field. Whether one considers cultivation techniques, irrigation, mining and metallurgy, ceramics and kiln design, stoneworking, writing skills, or any of the many other domains in which human skill has excelled, fierce debates and divergent views surround the chronology of technological origins and the directionality of technology and knowledge transfers in antiquity (for some examples, see Potts in press). In the fields of weaponry and military tactics, many different views have been advanced over the years by scholars seeking to account for the origins and diffusion of heavy cavalry—*cataphractoi* or *catafractarii*—and mounted archers in Iran and Central Asia. The aim of the present contribution is to critically examine the main schools of thought in this field and to suggest an alternative perspective grounded in an ancient Near Eastern perspective.

Defining the Cataphract

In 1914 the German-American Sinologist Berthold Laufer characterized the heavy cavalry of late antiquity and their tactics as follows:

> The mail-clad warriors of the Persians and related nations became known in the antique world under the name cataphracti (κατάφρακτοι) or catafractarii, derived from cataphracta, the designation of their defensive armor. Sarmatians clad with such armor are represented on the Column of Trajan; actual fragments of armor of this sort discovered in graves of southern Russia, and, further, the notices of classical authors, enable us to form some idea of the appearance of these suits of armor. They consisted of a foundation of cloth or leather, to which scales or laminae of metal (copper or iron), more rarely of horn or bone, were sewed on in such a manner that the single rows overlapped, each row covering the upper part of the row immediately below. The result, accordingly, was a type of scale armor . . . singularly flexible, provided with sleeves, and enveloping the entire body except that portion of the thighs which grips the horse. It was well adapted to the form of the trunk, and permitted the soldier ample freedom of motion. The horses likewise were completely armoured with the same kind of scales, though they were frequently caparisoned with leather only (Ammianus XXIV.6), as they were handicapped by the weight of the metal. The man had to be lifted on his horse. He was equipped with a long spear, which was supported by a chain attached to the horse's neck, and at the end by a fastening attached to the horse's thigh, so as to get the full force of the animal's weight into the spear-thrust. At a given signal, the squadron composed of such horsemen dashed forth for the assault of the enemy, and was a formidable weapon against the infantry armed with bows, as the body protection rendered the horsemen

arrow-proof. . . It is clear that this troop could be efficient only as a united body and for the purpose of a surprise charge; when successfully repelled, the result must have been disastrous to the clumsy horsemen. The single ones were incapable of defending themselves; and we hear that the Gauls who accompanied the army of Crassus practised the stratagem of seizing their lances and pulling them off the horses. The difference in principle between the former mounted bodies of archers and this new system of cavalry is obvious: the mounted infantry soldier was an individual, and as such an independent fighting-unit, able and mobile on any occasion, be it charge, enduring battle, or pursuit; this troop did not advance at command in any regular alignments, but dispersed in open order, small bands suddenly sallying forth here and there, and as swiftly turning round, now attacking, then feigning flight, exhausting their opponents in pursuit, then rallying and pushing forward again till the contest was decided. The new cavalry troop was a machine set in motion by the will and word of a single commander. It was effective as long as the body preserved the agility of its members and worked with collective action as an undivided unit. Its success was bound up with the speed, security, and force of its assault; when the charge failed, its case was lost (Laufer 1914, 221).

In the scholarly literature, there are four major hypotheses respecting the origins of heavily armoured cavalry. For the sake of simplicity these are referred to here as the Iranian, Turanian, Choresmian, and Parthian hypotheses.

The Iranian Hypothesis

The Iranian hypothesis was perhaps best expressed by Laufer who, in his massive study of Chinese clay figurines from the Blackstone Expedition to China, formulated the problem as follows:

It is . . . from the history of tactics that we must derive our understanding of the technique of armor. The problem now set before us is, - What great movement in military tactics caused the radical transformation of arms experienced by the peoples of China, Central Asia, and Siberia around the centuries of our era? This movement, in my opinion, proceeded from ancient Irān. I shall endeavour to demonstrate that far-reaching tactical reforms were launched in Irān and deeply affected the entire ancient world, and that these innovations spread from Irān to the Turkish tribes of Central Asia, and were handed on by the latter to the Chinese (Laufer 1914, 217).

In Laufer's view, it was "essential to grasp the fundamental fact of the difference between mounted archers and true cavalry, and the development of these two different arms and means of tactics among the Iranians" (Laufer 1914, 218). Herodotus (*Hist.* 7.84), he felt, provided a clear indication that, during the 6th and 5th centuries B.C., the Persians used mounted archers, basically infantry on horseback, not true cavalry, when he wrote, "There are horsemen in these nations, but not all of them furnished cavalry. Only the following did so: the Persians, equipped like their infantry, except that some of them wore headgear of hammered bronze and iron." Thus, when they fought the Greeks, the Persians "were only a body of infantry mounted on horses and chiefly depending upon their bows, at which Herodotus expresses astonishment by remarking that, though horsemen, they used the bow; they were, accordingly, mounted archers" (Laufer 1914, 218). Herodotus also remarked upon the absence of armour in Xerxes' infantry at Plataea when he wrote, "what harmed them the most was the fact that they wore no armour over their clothes and fought, as it were, naked against men fully armed" (*Hist*. 9.63; cf. Plutarch, *The Malice of Herodotus* 43.874A, ed. Bowen 1992, 97). This contrasts with the Persian infantry at Doriscus who, according to Herodotus (*Hist*. 7.61) wore "on their bodies embroidered sleeved tunics, with scales of iron like the scales of fish in appearance" (cf. Jackson 1894, 96; Bittner 1985, 217–18). Examples of such armour may be represented by the clusters of armour scales, found mainly in the Treasury, at Persepolis (Schmidt 1957, pl. 77). The clusters and loose iron and bronze plates from the Tall-i Takht at Pasargadae (Stronach 1978, fig. 96) are both Achaemenid and post-Achaemenid, but it is not clear that any of these finds relate to horse armour (contra Gorelik 1982a).

By 401 B.C., however, when Cyrus the Younger was defeated by his brother Artaxerxes II at Cunaxa, a change had occurred. According to Xenophon (*Anab*. 8.6–7), Cyrus the Younger's cavalry were "armed with breastplates and thigh-pieces and, all of them except Cyrus, with helmets . . . And all their horses had frontlets and breastpieces,"' (cf. Jackson 1894, 117 and Gabrielli 2006, 31; for the corresponding Avestan terminology; also Malandra 1973, Tafazzoli 1994). "Here, then, for the first time is the question of real cavalry," Laufer suggested, "horse and man

being completely armored, and this new equipment being a sign of a new mode of tactics, while in the age of Herodotus the horse of the Persians was not yet caparisoned. Though the term 'cataphracti' is not used by Xenophon, the institution described him is either the forerunner of the latter or identical with them" (Laufer 1914, 219).

In contrast, Laufer and most other scholars (e.g. Gabrielli 2006, p. 111, n. 111) have considered the descriptions given by Xenophon in the *Cyropaedia* of "mailed horses and riders" (6.1.50); "horses also with frontlets and breastplates" and "saddle-horses . . . armed with thigh-pieces" (6.4.1); and the horses of Cyrus' staff "armed with frontlets [*promētopidios*], breast-pieces [*prosternidion*], and thigh-pieces [*paramēridia*] of bronze" which "served to protect the thighs of the rider as well" (7.1.1), as anachronistic, reflecting Cyrus the Younger's time, on the grounds that Herodotus, for example, never describes such heavily armoured cavalry horses when discussing the armies of Cyrus, Darius I or Xerxes. In Laufer's opinion, the *Cyropaedia* was "nothing more than an historical romance, and the attribution to the elder Cyrus of the new tactical principle is plainly an anachronism" (Laufer 1914, 220). An alternative explanation is also possible. Some scholars believe that Xenophon's discussion of Persian military tactics in the *Cyropaedia* constituted a subtle proposal for Spartan military reform in the 360s–350s B.C. (Christesen 2006). As such, it is possible that what seem, at first glance, to be anachronisms in this case are not anachronistic at all, since the description in question was never meant to be understood as a factual portrayal of Cyrus the Great's forces but a recommendation for how Spartan cavalry should be outfitted. If this were the case, then Xenophon may well have been describing the sorts of armour used by Cyrus the Younger's cavalry, just as he had done in the *Anabasis*. In the same way, Xenophon's recommendation in *The Cavalry Commander* (1.6–7), "that both horses and men must be armed, so that, while they are themselves thoroughly protected against wounds, they may have the means of inflicting the greatest loss on the enemy," is considered a recommendation for the reform of the Athenian cavalry against Boeotia, Athens' and Sparta's common enemy, perhaps similarly inspired by Xenophon's knowledge of Cyrus the Younger's cavalry (Christesen 2006, 62). Whatever the case may be, Laufer concluded his discussion of Xenophon's testimony by noting, "When and by whom this new mode of tactics was invented is unknown. We have seen that it existed in Persia at the time of Xenophon, and the idea seems to have indeed originated among Iranians. Subsequently we find it in the army of Antiochus Epiphanes; and from the time of Antoninus Pius it became common in the armies of the Romans, soldiers of this description being frequently mentioned in inscriptions of that period. Thus we see the Romans adopt the strategy of their adversaries. . . The Iranian mode of strategy with the peculiar body armor for man and horse spread likewise to the Scythians . . . and to Siberia as far as the Yenisei" (Laufer 1914, 221).

The Turanian Hypothesis

A complete contrast to Laufer's Iranian hypothesis is presented by the work of the Hungarian Byzantinist Eugene Darkó who, in 1935 and 1937, proposed the Turanian hypothesis. In a two-part article on Turanian influences on the military tactics of the Greeks, the Romans and the Byzantines (Darkó 1935, 1937; cf. 1948), Darkó emphasised the similarities in mounted warfare that united the entire region from Siberia to the Danube, and suggested that the tactics employed by the Scythians against Darius were fundamentally the same as those used by the Parthians against Crassus, Attila and his Huns, or the later Avars and Turcs. Highlighting the importance of the Turanian plain, which he defined as extending roughly from the Aral Sea and encompassing the area between the Oxus (Amu Darya) and Jaxartes (Syr Darya), Darkó felt it was impossible to assign the development of the "Turanian tactic" to a particular people or linguistic group within this region, emphasising instead what he called "a certain community of culture" (Darkó 1935, 444) that was responsible for the new battle tactics. Acknowledging the Scythians as the first mounted archers in history, Darkó, like Laufer, believed that the earliest Persian mounted archers were only infantry archers on horseback (Darkó 1935, 447), and that it was Alexander the Great's recruitment of east Iranian (Bactrian, Sogdian, Scythian, Zarangian, Arian, and Parthian) cavalry into his Companion cavalry (Darkó 1935, 453), as recorded by Arrian (*Anab.* 3.24.1, 5.12.2, and

5.16.4) , that introduced the Turanian tactics and battle formations to the army of Alexander, tactics that were later to have a profound influence on the armies of the Seleucids and the Romans as well (Darkó 1935, 454).

The Choresmian Hypothesis

In the 1930s, the Soviet archaeologist Sergei Pavlovitsch Tolstov (1907–1976) led a major expedition to Choresmia. Based on his excavation of a grave at Chirik Rabat that contained remains of lamellar armour in the form of a 7 × 7 cm square iron plate, as well as a stack of 14 iron plates, possibly belonging to the covering of the upper arm (von Gall 1990, 73), Tolstov hypothesised that heavily armoured cavalry was first developed in ancient Choresmia by sedentarized members of the Massagetae (Tolstov 1961). According to Herodotus, "These Massagetae are like the Scythians . . . they are both cavalry and infantry. . . They equip their horses similarly, protecting their chests with bronze breastplates" (*Hist.* 1.215). Hubertus von Gall has even suggested that the use of semi-armoured horses may have been decisive in the Massagetae victory over Cyrus in 530 B.C. which cost him his life (von Gall 1990, 73). Tolstov, however, did not date the Chirik Rabat finds to the late 6th but rather to the late 4th century, specifically to the time of Alexander the Great's campaign, and fancifully suggested that the grave with lamellar armour that he had excavated was that of the individual (or at least a member of the same tribe) referred to by Arrian when he described the death of a Scythian cavalryman "pierced right through his shield and corslet" (*Anab.* 4.4.4) by a missile from a Greek catapult during a battle with Alexander's forces near the banks of the Jaxartes.

In 1980, however, Paul Bernard pointed out that there was no compelling evidence to support the late 4th century date given to the Chirik-Rabat armour (cf. Dien 2000, p. 13, n. 15) and, although he did not suggest one himself, he did assert that the armour fragments from Chirik-Rabat post-dated the fragments of cataphract armour discovered in the arsenal at Ai Khanoum in 1978, which he dated to ca. 150 B.C. (Bernard 1980, 456). Writing at about the same time, F. Grenet, on the other hand, left open the possibility of a date in the 2nd century B.C. for the Chirik-Rabat finds, thus later than Tolstov had proposed but still possibly pre-dating the Ai Khanoum material (*apud* Bernard et al. 1980, p. 63, n. 4). Moreover, a sherd from Khumbuz Tepe in southern Choresmia (Uzbekistan) which seems to show a *paramēridia* and has been dated to the 4th or 3rd century B.C., might support an early date in the late Achaemenid or early Hellenistic period for the development of horse armour in this area (Gabrielli 2006, p. 31 and fig. 32; Nikonorov 1997, fig. 4-g).

The Choresmian hypothesis was taken up in 1955 by the German Byzantinist Berthold Rubin who acknowledged probable Assyrian influence on developments in Choresmia (Rubin 1965, 265), and suggested, on the basis of Tolstov's excavations and Herodotus' reference to the bronze breastplates of the Massagetan cavalry mounts (*Hist.* 1.215), that the Choresmian equivalent of the phalanx, "einer geschlossenen Ordnung von Reitern in Panzerhemden auf gepanzerten Pferden," was already developed during the 6th century B.C. by "seßhaft gewordene Massaget. . . Und von hier aus verbreitet sich die neue Kavallerietaktik im Laufe eines Jahrtausends nach allen Seiten, um das Heerwesen vom Westen bis zum Fernen Osten mehr oder weniger gründlich zu beeinflussen, paradoxerweise am oberflächlichsten im nahegelegenen Baktrien" (Rubin 1955, 264–65). However, in contrast to Darkó and Tolstov, Rubin also suggested that native Choresmian cataphracts underwent a further phase of tactical evolution in reaction to the tactics used by Alexander the Great. In Rubin's opinion, the Choresmian lancer and archer cataphracts of the pre-Hellenistic period fought as separate units, whereas after Alexander's campaign, they fought together (Rubin 1955, 265).

The Significance of Alexander's Tactics

The notion that Alexander was both an innovator in his own army and an agent of change in the armies of his opponents is hardly new. In 1930 W. W. Tarn suggested that, following battles of Granicus and Issus, the Persians and the Greeks both "borrowed from the other" (Tarn 1930, 71–72) and indeed the reforms introduced by Darius III in 332 B.C. (Diodorus, *Hist.* 17.53.1–3; cf. Bittner 1985, 293–94) are usually seen in this light. That Darius deployed both horses and riders

at Gaugamela with sewn, iron lamellar armour is clear from Quintus Curtius ("Equitibus equisque tegumenta erant ex ferreis laminis, serie inter se connexis," *Hist.* 4.9.33). As noted above, both the Scythian cavalrymen and their horses who made up part of the Persian army defeated on the banks of the Jaxartes wore defensive armour, according to Arrian (*Anab.* 4.4.4, cf. Herodotus, *Hist.* 1.215). After the death of Darius III, the situation evolved rapidly. Prior to the battle of the Hydaspes, Alexander recruited Bactrians, Sogdians, Scythians, Zarangians, Arians, and Parthians into his Companion cavalry, both *hippakontistai* (*Anab.* 3.24.1), or mounted javelinmen, and *hippotoxotai* (*Anab*. 5.12.2, 5.16.4), or mounted archers, perhaps, as G. T. Griffith suggested, as "an answer to problems raised by the conditions of warfare first in Sogdiana and later in India, requiring the army to operate more often divided than united, and with frequent demands for detachments of cavalry (among others) from the main body" (Griffith 1963, 73).

Conversely, it has been suggested by a number of scholars, including the late Galina Pugachenkova, that cataphracts were an innovation of the Hellenised monarchies of Central Asia—the Parthians and the Greco-Bactrians (Pugachenkova 1966; cf. Bernard et al. 1980, p. 63, n. 4). In the words of Marius Mielczarek, "the appearance of the cataphract was the *response* of the East, where cavalry were [the] dominant arm, to the Macedonian phalanx" (Mielczarek 1998, 104; cf. 1993). In support of this view one can point to the cataphract armour discovered in the Arsenal of Ai Khanoum in 1978 and noted above. Although their date is uncertain, they have been provisionally placed by the excavators in the mid-2nd century B.C. The finds clearly come from a Greek context, not a native Central Asian one, and Grenet has suggested that the Eucratids of Bactria may have been the first to adopt this new technology (Bernard et al. 1980, 62). Similarly, in 1992 Nikonorov and Savchuk suggested apropos some bronze fragments of body armour from Kampyr Tepe that the "corselet was undoubtedly introduced into the Middle East by the army of Alexander the Great" (Nikonorov and Savchuk 1992, 52). The Kampyr Tepe finds have a *terminus ante quem* in the form of a silver drachm of Heliocles I, who reigned from ca. 145–130 B.C., which was found on a floor just above the level in which the armour fragments were discovered.

The Parthian Hypothesis

The last hypothesis to be considered is the Parthian. While acknowledging that the modernisation of eastern cavalry traditions was a response to the Macedonian phalanx, Marek Olbrycht has suggested that it was the participation of Parthian units in the armies of Alexander's successors, such as Antigonos Monopthalmos when he fought against Eumenes, that exposed the Parthians to new battle tactics and troop formations, leading ultimately to the development of the Parthian cataphracts (Olbrycht 1998, p. 75, n. 150). Indeed, Olbrycht explicitly attributed the later success of the Parthians against the Seleucids to their adoption of Seleucid battle tactics (Olbrycht 1998, 75). In a slight variant of this view, Miroslaw Michalak has pointed to the presence of cataphracts in the armies of Antiochus III at Panion in 201 B.C., and of Antiochus IV, according to both Polybius and Livy (*Hist.* 16.18.6, Rattenbury 1942, 113). Michalak suggested, "It is here . . . we should look for the prototype of the Arsacid cataphractarii, who appeared after the Parthians had captured the Seleucid properties in the East in the second half of the 2nd century B.C.—Western Iran and Mesopotamia" (Michalak 1987, 75).

Clearly, this explanation is diametrically opposed to that of Tarn. Rather than the Parthians learning new tactics from the Seleucids, Tarn suggested it was the other way around, arguing that Antiochus III "made the acquaintance of the cataphract . . . when he invaded Parthia" (Tarn 1930, 76). A similar position was adopted by Grenet in 1980 when he suggested that Antiochus III came away from his campaign against the Upper Satrapies with not only the idea, but quite probably also some of the actual cataphracts deployed in vain only a few years later against the Romans. Whether Antiochus acquired this new innovation from the Parthians, the Greeks in Bactria, or both, Grenet could not say (*apud* Bernard et al. 1980, p. 62, n. 4). Be that as it may, in seeking a Central Asian source for the cataphract, Tarn, like Laufer and Darkó, stressed the importance of Herodotus's reference to the Massagetae, who protected the chests of their horses with bronze breastplates (*Hist.* 1.215), and, to Xenophon's description of Cyrus the Younger's cavalry as having "frontlets and breast-pieces" (*Anab.* 1.8.7). Thus, Tarn suggested that the

origin of cataphract cavalry, "goes back to some of the nomad or semi-nomad peoples of Central Asia . . . principally horse-archers," suggesting, "When the Parni from the steppes originated the Parthian monarchy, their aristocracy must have brought this mode of fighting with them" (Tarn 1930, 73). Although he felt the Parthians brought the idea of cataphracts to the West, Tarn also sensed they were drawing on a much older tradition of armoured cavalry in the steppe region, as Darkó had with his Turanian hypothesis and Tolstov with his Choresmian hypothesis.

Ancient Near Eastern Antecedents

There is, however, in all of these reconstructions, a missing element. None of the scholars who have written on this topic have acknowledged that, from the 15th to the 10th century B.C., the use of scale armour was widespread throughout the Near East, from Egypt and Cyprus to Syria and Anatolia, northern Mesopotamia and northern Iran.

In Iran, lamellar armour fragments have been found at both Choga Zanbil and Marlik. The finds from Choga Zanbil were discovered in the eastern part of the Kiririsha temple along with a number of bronze spear or lanceheads and arrowheads (Ghirshman 1966, 101). Although Roman Ghirshman was of the opinion that the bronze weaponry and armour in the Kirririsha temple had been gathered together by Assyrian soldiers when Assurbanipal sacked the city in 647 B.C., this was pure speculation. More recently, the Hungarian scholar Tamás Dezsö has supported a Middle Elamite, late 2nd millennium B.C. date for the Choga Zanbil armour and indeed the Choga Zanbil finds probably date to late 14th or 13th century B.C. (Dezsö 2004, 320). The finds from Marlik are similar and come from tombs 36 and 44. In the latter case, the plaques, about 8.5 cm long, were found together with textile fragments (Negahban 1996, 312–13), suggesting they formed part of a lamellar armoured shirt or tunic. According to Piller, tomb 44 dates to the late 12th or 11th century (Piller 2007, 239). Thus, Marlik and Choga Zanbil both clearly participated in the broad trend of using lamellar armour that characterised the Near East in the Late Bronze and Early Iron Age.

The Assyrians and their northern neighbours the Urartians (Barnett and Gökce 1953, 125–26; Taşyürek 1975) were undeniably heirs to these developments. Although scholars like Darkó (1935, 448), Eadie (1967, 161–62), and Michalak (1987, 75), not to mention Laufer, Tarn, Tolstov, and Rubin, were certainly aware of the older Assyrian tradition of heavily armed cavalry, none of them ever managed to successfully integrate this into the history of the cataphract. In fact, the use of helmets and lamellar armour of bronze or iron covering the torso was extensive amongst both the Assyrian heavy infantry, which included slingers, archers, spearmen, and bodyguards, and the cavalry (cf. in general Postgate 2000). It is generally believed that the cavalry of Assurnasirpal's time wore no armour, unless one includes their wide bronze belts. However, in 1967 Richard Barnett suggested that on a relief of Assurnasirpal's from the NW palace at Nimrud (BM 124559, Room B, Slab 27), which he believed showed the Assyrian cavalry and chariots in battle against an Iranian group in the western Zagros—identified as such mainly because of the backward turning, "Parthian shot" being offered by the non-Assyrians—both the Assyrian and Iranian horses appear to be wearing breastplates (Barnett 1967), a point taken up by Irene Winter 30 years ago in her publication of a high-relief bronze horse breastplate from Hasanlu (Winter 1980, p. 4, n. 8). One should add, as well, that this recalls Herodotus' reference to the use of bronze breastplates on their horses by the Massagetae (*Hist*. 1.215) referred to above.

The first mounted spearmen wearing lamellar armour and an armoured skirt extending down to the knees appeared in the reign of Tiglath-Pileser III (Dezsö 2006, 115). The horses of this period, however, wore horse trappings but no armour. Similarly, in the reign of Sargon II the horses were unarmoured, and apart from helmets, the riders themselves were as well. A possible reform, however, occurred in the reign of Sennacherib (704–681 B.C.). While horses remained unarmoured, the cavalrymen wore lamellar armour and helmets as well as boots (Dezsö 2006, 117). Finally, in the reign of Assurbanipal (668–627 B.C.) horse armour was introduced for the first time, a development which "reduced the loss in horses, increased the safety of the cavalry in battles, and improved the supply of horses during campaigns" (Dezsö 2006, 117). Horse armour, covering both the neck and the body of the horse, in this relief from Nineveh, was made in multiple pieces, probably of leather, fastened by hooks at

the neck, chest, and back of the horse, offering the enemy only small targets for attack. It was not until much later, for example on the audience hall relief at Khalchyan in Uzbekistan, from ca. A.D. 50 (Pugachenkova 1971, pl. 3; Gorelik 1982b; Litvinsky 1987; Dien 2000, 12), or at Dura-Europos in the 2nd or 3rd century A.D. (James 2010, 129–32), that we find bronze and iron lamellar armour housings for horses. Though heavy, they were not as long as the famous graffito from Dura suggests, and hence would not have interfered with the free movement of the horse's legs. The question is, is there a way to bridge the ancient Near Eastern traditions, going back to the Late Bronze Age and the Neo-Assyrian period, and the Central Asian, so as to account for the appearance of partly armoured Massagetan horses in the 6th century and armoured Scythians in the 4th, at the time of Alexander?

Tentatively, it may be suggested that Esarhaddon's reign in the early 7th century provides that bridge. The Assyrians were obsessed with divination and in this regard Esarhaddon was no exception. He regularly posed queries to the sun god Shamash seeking answers to questions like you see here (Starr 1990): would the Scythians attack Assyria; would they plunder what there is to plunder, loot what there is to loot; would the Assyrian officials sent to collect tribute in the form of horses escape from the troops of the Scythians and Medes? One query to the sun god shows that Esarhaddon contemplated a raid to collect horses from the Medes as far as the salt desert. It asks,

> [Should Esarhaddon, king of] Assyria, strive and plan?. . . Should he sum[mon] the governor of [. . . along with men, horses and ar]my, as (great as) he wishes, and send [them to collect a tri]bute of horses? Should they go [from the city . . . *paka* to the city Andarpati[anu, . . .] [. . . .] as far as the salt desert?. . . If he sends them and they go, will they march about for as many days [as they wish] and collect [hors]es? Will they escape, or save themselves from the[troops of the Medes, from the troops of the Sa]pardeans, from the troops of [the . . . , or from a]ny other [enemy]? [Will they stay alive and safe, and will they return] alive [and well, and set foot on Assyrian so]il? (Starr 1990, 73–74)

The reality of that expedition is confirmed by a royal inscription, associating the salt desert with Patusharra and Mt Bikni (Borger 1956, 34 and 54). Many scholars identify Mt Bikni with Mt Demawand (Zadok 2002, 55), and if this is correct then the salt desert referred to by Esarhaddon is probably the Dasht-e Kavir or Kavir-e Namak, the Great Salt Desert of eastern Iran (Vallat 1987).

Moreover, another query to the sun god shows that Esarhaddon received a request from Bartatua, king of the Scythians, probably identical with the Scythian king Herodotus called Protothyes (1.103), for one of his daughters in marriage (Starr 1990, 24–25). There is no confirmation that this marriage ever occurred, but the query is also important in that it refers to a treaty and to the movement of messengers between the Scythian king and the Assyrian court. Whether these Scythians lay to the north, towards the Caucasus, or towards the east, as suggested by their consistent association with the Medes, is not clear but it is in the context of these contacts, with the eastern Medes and Scythians, that the armour technology of the Assyrians may have reached the Massagetae and others in Central Asia.

As noted above, some scholars, like von Gall, have suggested that it was the armour of the Massagetae that provided a tactical advantage over the forces led by Cyrus the Great in 530 B.C. Interestingly, Ran Zadok has suggested Cyrus initially conquered Choresmia early in his career, possibly *before* Babylonia (Zadok 1981, 658). Zadok based this deduction on the fact that a Choresmian in royal service named Dadaparna is attested in Babylonia already in 534 B.C., just 5 years after the submission of Babylon to Cyrus. Similarly Muhammad Dandamaev has suggested that Dadaparna "could have been in Babylonia only as a subject and a soldier of the Persian king. . . And there can hardly be any doubt that Dadaparna had been a soldier of the Persian army that occupied Babylonia in 539 BC" (Dandamaev 1992, pp. 164–65). Achaemenid-period cuneiform sources attest to the presence of other Choresmians—^{LÚ}*Ḫur-zi-ma-a-a*—and Scythians—^{LÚ}*Gi-mir-a-a* (Zadok 1977, 113) in Babylonia as well (Dandamaev 1992, 159–65; Potts 2006, 268). In fact, Donald McCown famously identified the burial of an adult male at Nippur (1B 134) found with a "cloth sash at waist, traces of leather perhaps indicating shoes, breeches, shirt and cap" as possibly that of a Mede or east Iranian subject of the Achaemenids (McCown et al. 1967, 128, 146; Potts 2006, 269). Were the expatriate Choresmians or Scythians responsible for the introduction of armoured cavalry in Cyrus the

Younger's time? Given that we cannot otherwise demonstrate a derivation of Cyrus the Younger's innovation via Assyria, because of the time gap, a transfer of Assyrian technology to Choresmia as a result of Esarhaddon's campaign against the distant Medes, and then of Choresmian technology *back* to Achaemenid Babylonia, is certainly a possibility.

Thereafter, it is certainly probable that the appearance of the Macedonian phalanx in Central Asia stimulated further technological developments which led to refinements in Central Asian armour that were eventually introduced in the West when the Parthians, conquered Iran and Mesopotamia. The cataphracts of the Seleucids and Romans, Parthians, and Sasanians were the inheritors of those refinements. But stimuli and technology moved in many directions over the course of a millennium and the story of technology transfer between Iran and Central Asia, at least in the realm of heavy armour for both horse and rider, was never a simple matter of diffusion from East to West or West to East.

Note

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