

THE POSITION OF

OLD-WORLD PREHISTORY (Conclusion)

Part I of this survey was published in *Diogenes* 5.

III

The pioneers of European prehistory marched under a banner inscribed *Ex Oriente Lux*, assuming as an axiom that all the fundamental inventions and discoveries like farming and metallurgy were brought to Europe from the East. The Frenchman Salomon Reinach first challenged the dogma, branding it as *le mirage orientale*, and then the Germans set about inverting the roles of Europe and Asia till under Hitler it was seriously contended that conquering invaders from Europe had spread to the valleys of the Nile and of the Tigris in time to create there the Sumerian and Pharaonic civilisations! Only now is it really possible to test the conflicting claims of the opposing schools by reference to objective data.

As far as the 'Neolithic Revolution' is concerned the claims of the orientalists have been finally vindicated: food production or farming, as contrasted with the parasitic economy of hunting and collecting, did originate in the Orient. Of course this thesis was never a mere postulate; botanists agreed that the wild ancestors of the cereals, cultivated by neolithic farmers in Europe, grew naturally only in Asia, and zoologists held that the neolithic sheep of Europe were descended from Asiatic species. Yet nothing comparable to the rich neolithic industries and villages of

The Position of Old-World Prehistory

Europe was known in the Near East till 1920. No counterpart to the Egyptian settlements and cemeteries then discovered at Badari and Merimde and in the Fayum had been detected in the Tigris-Euphrates valley till 1944. Then Lloyd and Safar at Tell Hassuna reached beneath a sequence of 'chalcolithic' villages an encampment that they could fairly term 'neolithic'. Five years later Braidwood⁶ had uncovered a neolithic village of commodious mud houses and covering some three acres at Jarmo on the edge of the valley in Kurdistan. In 1952 Kathleen Kenyon had proved that the neolithic settlement at Jericho, sealed beneath many metres of superimposed village ruins all anterior to 3000 B. C. was defended by a stout 'town wall'. But the most decisive result is due to the Danish botanist Hans Helback⁷, who examined the impressions of cereals in clay from Jarmo. The wheats and barleys cultivated there, though already showing some results of domestication, proved to stand much closer to wild forms than any corn hitherto examined; for even the neolithic barley from the Fayum is a fully domesticated plant differing little from that grown in North Africa today. At Jarmo then we approach very near the decisive moment in the Neolithic Revolution itself.

C 14 counts on three samples from Jarmo point to a date about 4700 B. C.—the Fayum neolithic had been similarly dated about 4150. This date is considerably lower than had been expected for an early neolithic site, but in no way impairs the Orient's claim to priority over Europe. The popular notion of a European Neolithic Age extending back ten or more thousand years is due to geologists who equated 'Neolithic' with 'Holocene', ignoring the 'Mesolithic Age' that archaeologists interpolate between the end of the Palaeolithic and the beginnings of farming. Zeuner's⁸ geochronological date for the latter is about 3000 B. C. in Denmark while the only radio-carbon date available—for the English lake-dwelling on Ehenside Tarn—is the same.

Secondly, the earliest farmers at Jarmo and Jericho made no pottery, and a 'prepottery neolithic' has been recognised also in Cyprus and Baluchistan. Hence not all farmers were potters. Conversely not all potters need be farmers. In the taiga zone of northern Eurasia, that is ill adapted for farming, hunter-fishers, who bred no animals for food and cultivated no plants, yet made pottery vessels long after the new productive

⁶ *The Near East and Foundations of Civilization* (Condon Lectures), Eugene, 1952.

⁷ 'Archaeology and Agricultural Botany', University of London Institute of Archaeology, *Annual Report IX*, 1953.

⁸ *Dating the Past*, London, 1946.

economy had been established in Denmark and South Sweden. In Denmark itself most of the 'mesolithic' Kitchen-Middens that have yielded pottery turn out to have been occupied after the arrival of the first farmers, but the Danish National Museum's excavations in Aamose⁹ did produce some—not quite conclusive—evidence for the manufacture of pots before the neolithic colonisation. Even in the Old Stone Age clay was deliberately fired to make durable models of animals but not vessels as the latest excavations in the mammoth-hunters' camp at Dolni Vestonice (Moravia)¹⁰ have proved.

Again in the Sudan near Khartoum, Arkell¹¹ excavated a camp site where excellent pottery was manufactured but where he could find no evidence of plant-cultivation or animal husbandry. This 'Khartoum Mesolithic' culture developed into or was succeeded by another, characterised by related pottery associated with remains of small sheep and goats, presumably tame. The latter culture, if either of two radio-carbon dates—3100 and 3500 B.C.—be accepted, should be at least five centuries later than the Lower Egyptian neolithic of the Fayum. So it looks as if the Sudan in the 4th millennium, as throughout historical times, was a cultural backwater where progress was dependent on impulses from Egypt. But if even the neolithic elements there might thus be derived via Egypt from Asia, the Khartoum pottery, 'mesolithic' and 'neolithic' alike, is thoroughly African, related on the one hand to the Badarian and Amratian wares of predynastic Egypt, on the other to fabrics found in the central Sahara of still indeterminate age.

To temperate Europe the neolithic economy must indeed have been diffused, but the methods for establishing this diffusion may need revision. It was doubtless effected by some infiltration of neolithic peasants across the ecological frontier represented by the Balkan, Alpine, and Pyrenaean ranges. The immigrants must have brought with them cereals and sheep and some farming lore, but not necessarily a distinctive ceramic style nor even a full-fledged funerary cult. Phenomena in these domains, common to the Mediterranean and the Temperate Zones, need not therefore always be older in the latter. The 'Vardar-Morava' culture that in 1938 the present writer hailed as positive evidence for the immigration of neolithic farmers into Central Europe is no doubt common to Mediterranean Macedonia and a corner of the Temperate Forest Zone in Serbia

⁹ Mathiassen, *et al.*, *Stenalderbopladsen i Aamosen*, Copenhagen, 1943.

¹⁰ *Arch. Rozhledy*, IV, Praha, 1953, pp. 193–7.

¹¹ *Early Khartoum*, Oxford 1949; 'Excavations at Esh Shaheinab', *Proc. Prehist. Soc.*, XV, 1949.

The Position of Old-World Prehistory

and the Banat. It is probably not the oldest neolithic culture in the latter region¹² and cannot be regarded as the ancestor of the Danubian I culture further northwest. The latter is the true representative of the earliest farmers recognisable on the loess lands of Central Europe. It certainly absorbed Mediterranean elements in the course of its development. But, judging from pot-forms, decorative patterns, figurines and fundamental tools, in its later phases Danubian culture spread east and south as well as north and west, both into the Ukraine and across the ecological frontier into Italy; in the cave of Arene Candide on the Riviera, Bernabo Brea¹³ found an occupation layer, characterised as Danubian by such criteria, following and superimposed on others wherein a quite different, Mediterranean, culture was dominant. In the light of these observations 'Danubian' elements, long suspected in the pottery of Malta and even Greece, may after all turn out to be due to immigrant families from Central Europe.

Nor can the hypothetical 'megalith-builders' who have left their tombs along the coasts of the Atlantic and the North Sea now be regarded as prospectors and missionaries from the East Mediterranean implanting a cult and a rural economy among mesolithic savages with the same confidence as by Montelius and Elliot Smith. The first clearance of plots of Danish soil by neolithic farmers—the *Landnam* deduced by Iversen¹⁴ in 1941 from ash-layers, cereal pollen, and potsherds bearing grain impressions observed in peat bogs—preceded the erection of the earliest megalithic tombs, the simple dolmens. These themselves, as Becker¹⁵ has shown, began as single graves designed to contain one extended corpse and can plausibly be regarded as translations into the sole available stone of plank or slab cist-graves in a native north European mesolithic tradition. Only in the later passage graves need we admit as likely the inspiration of southern funerary architecture and for its source there are no convincing grounds for looking beyond Portugal.

It is true that on the banks of the Nile near Helwan, Zaki Saad¹⁶ has excavated First Dynasty tombs built of great—but not 'rude'—stone slabs. But these chambers, erected at the bottom of a deep pit to house the remains of a single noble with his possessions, agree neither in function

¹² Cf. V. Milošević, *Chronologie der jüngeren Steinzeit Mittel- und Südosteuropas*, Berlin, 1949.

¹³ *Gli Scavi nella Caverna delle Arene Candide*, Bordighera, 1946.

¹⁴ 'Landnam i Danmarks Stenalder', *Dansk. Geol. Undersøg.*, R. II, No. 66, Copenhagen, 1941.

¹⁵ 'Mosefundne Lerkar', *Aarbøger f. nord. Oldkyndighed og Historie*, Copenhagen, 1947.

¹⁶ 'Royal Excavations at Saggara and Helwan (1941-5)', Supplement to *Annales du Service des Antiquités, Cahier 3*, Cairo, 1947.

nor in significant architectural details with the monuments, built above ground of undressed orthostats to serve as family vaults in the Western Mediterranean, least of all with the polygonal passage graves of Portugal. In plan at least these latter do recall corbelled tombs, built with dry stone masonry in the Aegean. And in South Spain and Portugal there are also corbelled tombs, resembling in plan at once the orthostatic passage graves of Portugal and some Aegean corbelled tombs, but the Mycenaean tholoi rather than the Early Aegean vaults of Attica and the Cyclades.

Now, however, G. and V. Leisner have refuted the theory, favoured among diffusionists, that the orthostatic passage grave must be just a barbarised version of corbelled or rock-cut tombs such as occur in the Eastern Mediterranean. Some megalithic tombs at least are really earlier, and not just poorer, than corbelled tombs of the type of Los Millares-Antequera-Alcalà; for the furniture of one, found still intact, is purely 'neolithic', free from the 'Copper Age' types invariably associated with the latter. In two other tumuli corbelled tombs had been built up against, and were therefore later than orthostatic megalithic passage graves.

The architectural resemblances of the corbelled tombs of Alcalà and Antequera to the Mycenaean tholoi of Greece remain striking. But the evolution of the latter cannot be completely traced in Greece while in southern Spain a convincing typological series may illustrate every step in the development of the typical tholos from closed circular cist-graves containing a strictly neolithic furniture. Hence if the architectural agreements are to be explained by intercourse between the Balkan and Pyrenaean peninsulas, the inspiration is more likely to have come from the west than vice versa. In the same way the long cist tombs of Apulia, judged by their contents, should be later than, and so derived from, similar tombs in France.

In a word, though the primary impulse came from the Orient, temperate Europe did develop vigorous neolithic cultures of its own and was not always a passive recipient even in the Stone Age. After all, that is not surprising in the light of its congenial climate, peninsular character, and water-ways offering channels of intercourse between societies adapting themselves to varied environments both within and beyond the continental frontiers. The untraceable immigrants who introduced cereals and sheep into the uncongenial zone of temperate forest not only had to devise a novel rural economy but also found the area inhabited, however sparsely, by bands of hunters, fishers, and collectors. Some of these mesolithic societies at least had displayed much originality and ingenuity. In

The Position of Old-World Prehistory

Northern Europe in any event exceptionally favourable circumstances have preserved the equipment of the 'Maglemoseans' for exploiting the resources of the post-glacial pine woods—even wicker fish traps survive!—and well-planned systematic excavations at judiciously selected sites in Denmark, England, and southern Sweden have now documented the progressive adaptation of Maglemosean cultures to the changing environment from the Pre-Boreal climatic phase—radio-carbon dated at Star Carr in Yorkshire about 7500 B. C.—through the Boreal till neolithic farmers began to clear patches in the Danish forests at the end of the Atlantic. Naturally neolithic farmers mingled with, and inherited the achievements of, such mesolithic precursors. In the British Isles, Atkinson¹⁷ and Piggott have distinguished four 'Secondary Neolithic' cultures in addition to the Primary Neolithic or Windmill Hill culture. The latter is due to immigrant farmers, traceable by their pottery to France. But the equipment of the former preserves many traits inherited from the native mesolithic. And many of the most striking monuments of British prehistory—the neolithic village of Skara Brae, the precursor of Stonehenge and other sacred circles, the Stonehenge 'cursus' and others, subsequently recognised in Dorset, Oxfordshire, and Yorkshire, as well as the oldest cremation cemeteries in Europe prove to have been due to Secondary Neolithic folk.

In the Bronze Age the relations of Europe to the Orient look much the same. The Orient can still claim absolute priority in the development of intelligent metallurgy. In Hungary indeed neolithic peasants may have hit upon the region's rich supplies of native copper, discovered at least the metal's malleability and thus created such original types of tool as the axe-adze. But the earliest exponents of intelligent metallurgy, smiths who had mastered the arts of casting and alloying copper with tin, had been trained in the Orient. In the Unětician culture of Bohemia they reproduced distinctive types of pin, neck-ring and earring that had been fashionable in Hither Asia, but soon transformed the Asiatic pins, made of twisted wire, into a peculiarly Bohemian variant formed by casting. Schaeffer¹⁸ has recently suggested that the pioneers of Continental metallurgy were prospectors and craftsmen from the Levant (the later Phoenicia) who reached the Central European lodes of copper and tin via the Adriatic and the Brenner Pass. The tell-tale types of ornament are in fact missing in peninsular Greece and the Islands, but common in North Syria.

¹⁷ *Las Antas de Concelho de Reguengos de Monsaraz*, Lisboa, 1951; cf. *Die Megalithgräber der iberischen Halbinsel*, Berlin, 1943.

¹⁸ *Excavations at Dorchester, Oxon*, Oxford, 1951.

There the neck-rings in particular are associated with a group of metal-workers—their patron deity is apparently depicted wearing such a neck-ring—who were active locally between 2100 and 1800 B. C. (This would thus be the limiting date for the beginning of the Central European Bronze Age.)

In the sequel European smiths, though trained by Asiatic immigrants, displayed more originality than their masters at least in respect of tools and weapons. Most striking is the creation of a distinctively European kit of efficient but economical wood-chopping implements. Even in our Early Bronze Age the Central European industry spread south across the Alps into upper Italy; at the pile dwelling on Lago di Ledro (north of L. Garda) described by Battaglia¹⁹ in 1943, pure Unetitian pins and other bronze objects were current side by side with distinctively Italian vessels in pottery and wood (the latter, being unusually well-preserved, explain the origin of some curious forms long familiar in pottery). By the Middle Bronze Age the whole Apennine Peninsula was dominated by Central European traditions in metal work; indeed between 1300 and 1225 B. C. an Italian bronze-smith went to work for the lord of Mycenae itself; Wace found his mould in a house of that period during 1952.

Minoan Crete and Mycenaean Greece may well have provided the capital for the regular trade whereby metal ware was distributed among the barbarians of cisalpine Europe or at least have offered a reliable market to guarantee a livelihood to those engaged in the perilous traffic. In any case this commerce undoubtedly stimulated progress both in Central and Northern Europe and in the British Isles. But the originality of the preliterate Britons has just been dramatically demonstrated. *The Times* of July 15 announces the discovery on the trilithons of Stonehenge of carved representations both of typical British Bronze Age axes and of a typical Mycenaean dagger or rapier. Together they at last date this part of the monument. Now, as is familiar, the lintels joining the uprights have been carefully shaped to compensate for perspective foreshortening. So this optical principle, not otherwise known to have been applied before the classical age of Greece, was known in England by the middle of the second millennium B. C.

Again in the manufacture of war-gear Central European armourers by this time equalled or excelled their Near Eastern masters and could equip barbarian bands to challenge the armies of Oriental monarchies. For

¹⁹ *La Palafitta del Lago di Ledro nel Trentino*, Trento, 1943.

The Position of Old-World Prehistory

instance, a bell helmet lately found buried with a warrior near Knossos about 1425 B.C.²⁰ can be matched by one from the hoard of Beitzsch in Saxony²¹, now known to belong to the Early Bronze Age. The dated Cretan piece may be of Central European origin, alternatively the helmet from Beitzsch may be itself an import from Mycenaean Greece. Even in the latter case the model was soon reproduced successfully by Hungarian bronze-smiths whose products were eventually exported to or copied in Italy just as were their buckets and cups. So it now seems quite likely that the barbarian hordes, who ravaged Hither Asia between 1225 and 1190 B.C., reaching the frontiers of Egypt and overthrowing the Hittite Empire, included at least contingents from Europe. Indeed the raiders, depicted as carrying round shields and called S. k. l. s, C. rd. n. and T. wr.s in the Egyptian records, actually came from Sicily, Sardinia, and the Tyrrhenian coast of Italy.

IV

That Chinese civilisation did not arise in isolation independently of the older civilisations of the Near East has long been treated as an axiom. It could only be objectively tested, if not demonstrated, after the publication of finds from the Chinese excavations at Anyang²² and of the data collected by Russian archaeologists in Siberia and Kazakstan. Anyang is of course the site of Yin where the first historical Chinese dynasty, the Shangs, established their capital about 1300 B.C.; from it come the inscribed 'oracle bones', witnesses to the birth of a literate civilisation. Excavations by the Academia Sinica, before the Japanese invasion but still in course of publication, disclosed that the Shangs fought with bronze weapons from chariots, fitted with four-spoked wheels and drawn by paired horses attached on either side of a central pole. It is *a priori* too much to suppose that the alloy of copper and tin should have been discovered, the wheeled car invented and attached by pole and yoke to a pair of draft animals in two centres independently.

Now all three devices were used by the Sumerians of Mesopotamia nearly 2000 years before the Shangs founded Yin. Presumably then they acquired them from the west, and we might reasonably suppose that they

²⁰ S. Hood & P. de Jonghe, 'Late Minoan Warrior Graves . . . from the New Hospital Site at Knossos', *Annual of the British School at Athens*, XLVII, 1952.

²¹ H. Hencken, 'Beitzsch and Knossos', *Proc. Prehistoric Soc.*, XVIII, 1952.

²² Karlgren, 'Weapons and Tools of the Yin Dynasty', *Bull. Mus. Far Eastern Antiquities*, 17, Stockholm 1945; Shih-chang-ju, 'Recent Discoveries at Yin-hsü'—in Chinese. *Anyang, Chinese J. of Archaeol.*, No. 2, 1947.

were enabled to establish a stable State precisely by their control of these new means of warfare and of communications. But the Sumerians' chariots were drawn by onagers (wild asses), not horses, and had solid disc wheels. The horse is at home only north of the Tigris-Euphrates basin and seems to have been introduced into Mesopotamia a little after 2000 B.C.; spoked wheels came into use there about the same time. It looks then as if the horse-drawn chariot reached China from some secondary centre north of Mesopotamia. Moreover the bronze tools and weapons from Anyang have nothing Mesopotamian about them. On the other hand the socketed celts (axes and adzes) and the ring-handled knives have close parallels in the Late Bronze Age of Northern and North-Central Europe from the Odra to the Rhine. And by that time a horse-drawn chariot with spoked wheels was being depicted on the walls of a tomb in Sweden. Even on the revised chronology outlined above, there are quite serious difficulties in envisaging a transmission of this equipment from Sweden or Saxony to the banks of the Yellow River by 1300 B.C. Can we locate an intermediate centre from which it might have been diffused to east and west?

Owing to the nature of the archaeological record, evidence for chariots is not to be expected; for they can be made entirely of wood which can be preserved only by some very exceptional accident. But there are plenty of bronzes on both sides of the Urals, on the northern fringes of the deserts of Kazakstan and on the Minussinsk steppe on the upper Yenesei. From among them it would be possible to illustrate a logical evolution of the celt with cast socket from a wide-spread and demonstrably ancient implement with a folded socket. The crucial intermediate stage in this hypothetical evolution is represented only between the Volga and the Urals, in eastern Kazakstan, round Minusinsk, and on the Ordos steppe just south of the Great Wall, but not at Anyang. Now by a systematic study of the relics from the barrows on the Minussinsk steppe Kiselev²³ succeeded by 1950 in dividing the local Bronze Age into four stages. In his second—Andronovo—stage the graves still contain skeletons of 'Europeoid' type and relics of occidental aspect, but no socketed celts. The 'transitional' type is assigned to the next or Kara-Suk stage when we find also Mongols buried with many Chinese-looking relics. Some of the latter, such as knives with animal handles, might be parallel or even ancestral to those found at Anyang, but others are almost certainly derived from Shang

²³ *Drevnyaya Istoriya Yuzhnoi Sibiri*, Moskva, 1951.

The Position of Old-World Prehistory

types. Finally Kiselev assigns normal socketed celts to his fourth or Tagar stage, a long period which lasted into the Iron Age, and to which should belong also ring-handled knives.

The Kara-Suk stage certainly lasted after 1300 B. C., but if its beginning could be put a century or so earlier, our intermediate centre might be sought in that direction or perhaps rather further south, near the tin deposits of Kazakstan. Such a high dating would hardly be accepted by Russian authorities and still less by their Western colleagues. Moreover the absence of ring-handled knives round the Urals is a serious obstacle to any attempt to link China and Saxony by a northern steppe route. The evidence up to date certainly does not suffice to indicate an intermediate centre in eastern Kazakstan nor yet to exclude such an assumption.

Still it must be remembered that the western ends of the classic route to China along the Tarim basin are still unexplored. Prehistoric Afghanistan is totally unknown; the zone of irrigation cultivation between the Iranian plateau and the deserts in the Tajik, Uzbek, and Turkmen S.S.Rs. remains a virtual blank though rich finds from its cis-Caspian extension in Azerbaijan and Georgia, none yet very precisely dated, point to a flourishing bronze industry. At least one type, the lugged adze of Maxwell-Hyslop's²⁴ form III at home in this region and northern Persia, did penetrate as far into China as the Ordos steppe. And by the Iron Age characteristic Iranian products and motives can be recognised in China as well as in Siberia.

But in Siberia by the Late Bronze Age we have already encountered specifically Chinese elements in the Kara-Suk culture on the Yenesei and seen that Mongols had already invaded the Minussinsk steppe.

The Kara-Suk bronzes already illustrate a Beast Style with parallels at Anyang in China and, perhaps rather later, at Turbino in the Urals and at Seima in central Russia. In Scythian art, motives derived from the Boreal forests, from Iran, from China, and from Greece are so tangled up that analysis becomes highly subjective. A treasure, unearthed by peasants at Ziwiye in Kurdistan, already shows distinctively Scythian stylisations juxtaposed to Iranian and Assyrian themes. In publishing the find in 1950 Goddard²⁵ proposed to date the decisive piece on stylistic grounds to the ninth century, but other authorities prefer the seventh. If Goddard's attribution be sustained, 'Scythian' culture, as defined by

²⁴ 'Bronze Lugged Axe—or Adze Blades from Asia', *Iraq*, XV, London, 1953.

²⁵ *Le Trésor de Ziwiye*, Paris, 1950.

its artistic expressions must be allowed a higher antiquity than that deduced from Greek imports in the barrows of the Kuban and its origins pushed further into Asia—in the modern, rather than the classical, sense—than is admitted by Russian specialists. In a masterly paper ‘On the Problem of Scythian Origins’ (in *Vestnik Drevnei Istorii*, 1950, 2) Artamanov traced its genesis from autochthonous Europeoid elements represented in the Bronze Age ‘Srubno culture’ of sedentary farmers on the parkland steppe, west of the Urals. He admits indeed as attractive the possibility that the Srubno culture may have been pushed westward by that of Andronovo from Kazakstan, yielding in its turn to the pressure of Karasuk in Siberia. But he seems to believe that horse nomadism, the distinctive feature of Scythian culture as described by Herodotus, developed independently at several points on the steppes. In fact the earliest bits, used by the nomads to control their steeds, in the Altai do diverge significantly from contemporary Pontic types, while in China there is no evidence for bits at all.

By 450 B.C. the princely barrows of Pazyryk in the Altai²⁸ illustrate a like diversity of influences—as well as of racial types—among the nomads of upper Eurasia. In these barrows the bodies of men, some tattooed, and of high-bred horses with their specially cultivated fodder still in their stomachs, articles of dress and horse trappings of leather, felt and woven stuffs, pile carpets and tapestry curtains, wooden furniture and other perishable objects had been preserved literally on ice. Some corpses belonged to Mongols, one to a woman of European type. Mirrors, silks, and lacquered cups had been imported from China, textiles from the Persian Empire. The mirror and textiles from barrow V can be dated to the fifth century; the lacquered cups from a cognate burial at Shibe can best be matched in China between 86 and 48 B.C. Some ornamental motives are plainly Achaemenid Persian, others purely ‘Scythian’ or Boreal.

Thus art documents from South Russia, Siberia, Ordos, and China proper demonstrate the role of the Eurasiatic steppes in the diffusion of ideas—at least after the rise of that peculiar way of life termed equestrian nomadism. This according to Russian experts cannot be detected before 800 B.C. Perhaps that is only because till then the nomads used no distinctive equipment that could survive in the archaeological record. The same possibility affects our last set of problems.

²⁸ English summary down to 1950, Jettmar, ‘The Altai before the Turks’, *Bull. Mus.Far. East. Antiqu.*, 23, Stockholm, 1951; for Kurgan V, see Rudenko.

V

Bittel's discovery in 1952 of cremation burials in urns accompanied by the bones of horses at the Hittite capital of Boğaz Köy offers prehistorians the first really tangible clue to the identification in the archaeological record of that philological construct, the Indo-Europeans. For the Anatolian Hittites have left the oldest extant documents, written in any Indo-European language. The curiously composite character of their language, reminding us forcibly of English in this respect, at the same time suggests that they were a conquering aristocracy ruling over a population of alien, 'Asiatic' speech. The rite of cremation, quite novel in Anatolia, and the horse, not previously attested there but integrally associated with Indo-Europeans both by linguistic palaeontology and comparative ethnography, can fairly be connected with the conquerors.

Now at the dawn of written history two great blocks of Indo-European speech are disclosed in Europe on the one hand and between the Euphrates and the Ganges on the other. They can hardly have developed where we find them out of a prehistoric continuum of kindred dialects, as Russian prehistorians seem to have imagined while they mistook Marrisism for Marxism; the area is too vast and too diversified to have constituted a continuum and is cut in two by Hither Asia where Semitic and other non-Indo-European languages were written before Indo-European. On the other hand a mass migration, involving substantial change in population and presumably in culture, from one province to the other or from a third area into both, can be excluded. The implantation of Indo-European languages in one or both areas must then have been effected by conquerors who imposed political unity (or inter-tribal co-operation) and a new medium of intercourse on previously discreet groups whose local dialects may well have been mutually unintelligible. Miss Hermes suggested that the conquering minority may have owed their success to their control of the horse-drawn chariot as an engine of war and a means of rapid communication. As she remarked, such a conquest need leave no mark in the archaeological record in the form of changes in pottery, nor even in durable weapons and toilet articles.

Bittel's discovery may be hailed as a confirmation of her thesis. The burial rite offers a clue more useful to archaeologists than chariots or horses. Chariots can hardly ever survive; the bones of draft horses will not necessarily be represented in the food refuse that provides prehistorians with most of their osteological data and cannot be confidently distinguished from those of wild animals. The distribution in nature of wild horses does

of course limit the 'cradle', but as it comprises most of Eurasia north of the Balkan-Caucasus-Elburz-Hindu Kush-Tien Shan ranges, the limitation is not very helpful. Does inurned cremation point more explicitly to Temperate Europe or to Central Asia?

In Central Europe and upper Italy cremation burial in urnfields was regularly practised in the Late Bronze Age in the course of which period bridle-bits begin to attest unequivocally the domestication of horses for driving or riding. In Hungary alone some urnfields begin in the Early Bronze Age. On Schaeffer's limiting dates for the European Bronze Age these Hungarian urnfields could begin a century or so before the first Hittite cremation graves. Moreover horse bones are plentiful even on neolithic sites in the region. Still the priority in time of the Hungarian urnfields is a little precarious. In 1947 I was able to paint a not altogether unpalatable picture of cremationist charioteers invading Europe through Anatolia from Central Asia.

Today Central Asia is no longer a *terra incognita* from which almost anything might be extracted. In the last five years Russian publications²⁷ have made known a series of encampments and small cemeteries, sparsely scattered all over Kazakstan and south-western Siberia from the Urals to the Altai and from the forest fringe to the margins of the deserts and even to the Oxus delta on L. Aral. Save in the last-named area, the earliest all seem to be Early Bronze Age though metal finds are exceptional. They belong to small groups of mixed farmers who bred—or hunted—and ate horses as well as sheep and cattle and engaged in some sort of tillage. The hand-made pots vary from place to place, but all exhibit a general resemblance to those found in the forest zone further north or in the earlier—Yamno—steppe graves west of the Volga, and none at all to the wheel-made products of the irrigation farmers south of the deserts. Then in the Late Bronze Age the whole case area from the Yenisei and Ili to the Volga and as far south as the lower Oxus is united in a single province dominated by what our Russian colleagues call the Andronovo culture. This is characterised everywhere by a very distinctive pottery decorated with meander patterns which has parallels in the later—Srubno—steppe graves between Volga and Don. Burial rites are not so uniform, but cremations occur in many cemeteries in Kazakstan. Though there is no direct evidence for wheeled

²⁷ In addition to Kiselev's book cited on p.93, especially Bernstam, *Sovietskaya Arkheologiya*, XI, 1949, 341–9; Cernikov, *ibid.*, XV, 1951, 141–158; Formazov, *Kratkie Soobsheniya Inst. Istor. Mat. Kul'tury*, XXXIX, 1951, 5–15; Gryaznov, *ibid.*, XL, 105–112; Sal'nikov, *Mat. i Issled. po Arch.Rossii*, 21, 1951, 100–125 and 24, 1952, 51–70.

The Position of Old-World Prehistory

vehicles in upper Asia till the Kara-Suk stage, their kinsmen west of the Volga had possessed carts on solid wheels from even the earlier phase; specimens have been almost miraculously preserved in chieftain's barrows both of the Yamno and of the Srubno phase. The Andronovo peoples were Europeoid in physical type and lived as more or less settled farmers, not as nomads. Tolstov²⁸ in 1948 explained the surprising uniformity of their culture in terms of a 'confederacy of warlike tribes' and suggested it marked a 'transitional stage in Indo-European glottogenesis in Central Asia'. Writing before the exposure of Marrism as a deviation he probably did not mean to imply that the Andronovo confederates were the linguistic ancestor of other Indo-European peoples. Be that as it may, even Tolstov's date of 1500 B.C. for the formation of the confederation is too late to allow of deriving the Hittites from Andronovo, and, viewed from the European end, that date seems too high.

But even if we must derive the conquering Hittites from Hungary, that would not of course necessarily mean that Hungary was 'the cradle'. If we took cremation as the thread to guide us back to the Indo-European's 'home', it would apparently lead us to the British Isles, as Secondary Neolithic cemeteries there can claim to be the earliest cremation cemeteries yet known. Yet not even the exhilaration inspired by the dating of Stonehenge should inspire a British Kossinna seriously to imagine chariots racing up and down the Cursus and after that training careering across seas, mountains, and forests to convey Proto-Indo-Europeans to Asia Minor and Greece!

Greece indeed seems likely to expose the fallibility of cremation as a guiding clue in the quest. For the language of Mycenaean Greece will quite probably turn out to be Indo-European, and cremation was not practised by the Mycenaeans. M. Ventris has just presented to the Hellenic Society a tentative decipherment of tablets, inscribed in 'Minoan' linear script B, from Mycenae and from Nestor's Pylos, that has already received some endorsement from English and American philologists. It implies that the tablets are written in an archaic form of Greek that still preserved, like Latin, the *kw* sound that even in Homeric Greek became *pe* (*te*). If Ventris' readings be confirmed, the Mycenaean tablets will turn out to be the oldest written memorials of an Indo-European language after the Hittite documents, and the Mycenaean culture will be the archaeological counterpart of a Greek-speaking society.

²⁸ *Drevnyaya Khorezm*, Moskva, 1948.

But which layer in that composite culture should be associated with the Indo-European component? The replacement of shaft graves by tholos tombs at Mycenae is generally accepted as reflecting a change of dynasty, and that might well coincide with a change of language. However, on the strength of the horses and chariots depicted on shaft-graves stelae, the earlier dynasts are generally regarded as already Indo-European. The Early Mycenaean Shaft Grave culture in turn, apart from obvious borrowings from Minoan Crete, can be satisfactorily explained as a direct development of the Middle Helladic. Though this step is plainly not beyond dispute, the language of Middle Helladic Greece would then likewise have been Indo-European Greek. Now the Middle Helladic culture appears abruptly after the violent destruction of Early Helladic townships. The general catastrophe is reasonably attributed to invaders, and these are thought by many to have been responsible for the introduction into the peninsula of the Indo-European speech that became Greek. 'The origin of the Greeks' would then be equivalent to 'the origin of the Middle Helladic invaders'. Now the latter introduced into Greece the practice of inhumation burial in cists or jars among the houses of the settlements. The practice contrasts with collective burial in ossuaries, favoured in Early Helladic Greece, and with interment of the dead in cemeteries apart from the abodes of the living that was the rule in Western Anatolia, but it was regularly followed in Central Anatolia, northern Mesopotamia and northwestern Iran from very early times. The invaders likewise introduced the very characteristic grey pottery termed since Schliemann 'Minyan' ware. About the same time Minyan ware became fashionable also at Troy with the foundation of the Sixth City, but there Minyan vases were used to contain the cremated human remains in the urnfield of the fourteenth century—the only cemetery yet discovered near Troy... Vases in grey ware, technically similar to Minyan but of different shapes, occur at Boğaz Köy and more frequently in northern Iran and on the Turcoman steppe.

But if a prehistorian were to invoke this sort of archaeological data as arguments for an Asiatic cradle, he might provoke the citation in rebuttal of parallels from north of the Balkans to Middle Helladic and early Mycenaean stone and bronze weapons. He would in any case be transgressing the cautionary rules laid down by Hermes. It might indeed be questioned how far archaeology may usefully concern itself with a primarily linguistic problem. Another branch of prehistory, comparative philology, has already demonstrated the vast diffusion of ideas embodied

The Position of Old-World Prehistory

in Indo-European languages. Archaeology might more profitably concentrate on the diffusion of ideas expressed in its own kind of material data, on identifying and evaluating the contributions to the total pool of human culture made by preliterate societies, and on correlating, for example, 'rate of progress' with the extent and intensity of intercourse between such societies. In these directions at least it has achieved substantial successes as indicated here in sections II to IV.