

The Corridors of Time · IV .

PRIESTS & KINGS

By HAROLD PEAKE and HERBERT JOHN FLEURE

OXFORD: AT THE CLARENDON PRESS

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PREFACE

WHEN cultivation leads to permanent settlement and this, again, to intercourse and trade, villages may grow into cities and written records may be kept; kings and priests then become prominent features of civilization.

The present volume sketches this phase of evolution, and the authors have ventured to use the reckoning of the earliest records, with a few adjustments that have been explained. The dates given must, however, be considered quite tentative, however exact they may appear, for the authors have felt it unwise to reduce them to 'round figures'.

The rise of kings and priests in the old riverine lands is followed by great spreads into Europe and Asia of peasants and traders; the descriptions of these movements make use of much recently published work. These descriptions are supplemented by a short sketch of the drifts of mankind and of his racial types, because these later but supremely important drifts seem to be linked up with the great spreads of civilization here described.

Many thanks are due to the authors, editors, and publishers of the following works and journals for permission to reproduce figures: Mémoires de la Société Royale des Antiquaires du Nord, 1908-9 (Gyldendalske Boghandel Nordisk Forlag, Copenhagen), for fig. 1 (right); Vorgeschichte Nordamerikas, 1894, by E. Schmidt (Friedr. Vieweg & Sohn, Brunswick), for fig. 2; The Royal Tombs of the Earliest Dynasties, Part II, by W. M. Flinders Petrie (Egypt Exploration Society), for figs. 4 and 34; Beni Hasan, Part I, by P. Newberry (Egypt Exploration Society), for fig. 40; The Babylonian Expedition of the University of Pennsylvania: Series A: Cuneiform Texts, vol. xx, part I, by H. V. Hilprecht (Dept. of Archaeology, University of Pennsylvania), for fig. 5; Vasiliki, by R. Seagar (The Museum of the University of Pennsylvania), for fig. 57; Annual of the British School at Athens, vol. vii, for fig. 65; vol. x, for figs. 58, 59, and 66; and vol. xxii, for figs. 73 and 74; A History of Egypt, 2nd edition, by J. H. Breasted (Scribner's Sons, U.S.A.; Hodder & Stoughton, Ltd., England), for figs. 11, 46, 47, 53, and 54; A History of Sumer and Akkad, by L. W. King (Chatto & Windus), for

figs. 15, 22, and 26; Report on the Excavation of the 'A' Cemetery at Kish, Mesopotamia, Part I, by E. MacKay (Field Museum of Natural History, Chicago), for fig. 16; Corpus Vasorum Antiquorum, Paris, Louvre, Fasc. 2 (Oxford University Press), for fig. 17; Découvertes en Chaldée, by E. de Sarzec (Librairie Ernest Leroux, Paris), for fig. 19; Nouvelles fouilles de Tello, by G. Cros, L. Heuzey, and F. Thureau-Dangin (Librairie Ernest Leroux), for fig. 23; Chaldea, by Z. A. Ragozin (Benn, Ltd.), for fig. 24; The Dawn of Mediterranean Civilization, by A. Mosso (Benn, Ltd.), for fig. 56; From Tribe to Empire, by A. Moret (La Renaissance du Livre, Paris), for fig. 28; Studies in Early Pottery of the Near East, Part I, by H. Frankfort (Royal Anthropological Institute), for fig. 30; Veröff. der Ernst von Sieglin Expedition in Agypten, vol. i: Das Grabdenkmal des Königs Chephren, by U. Hölscher, L. Borchardt and G. Steindorff (Verlag J. C. Hinrich'sche Buchhandlung, Leipzig), for fig. 38; The Ancient Egyptians and their Influence upon the Civilization of Europe, by G. Elliot Smith (Harper & Brothers), for fig. 42; Ancient Times, by J. H. Breasted (Ginn & Co., Ltd.), for figs. 43 and 48; Tombs of the Third Egyptian Dynasty at Regagnah and Bet Khallaf, by J. Garstang (Constable & Co., Ltd.), for fig. 44; History of Art in Ancient Egypt, vol. ii, by G. Perrot and Ch. Chipiez (Chapman & Hall, Ltd.), for fig. 45; A History of Egypt, by W. M. Flinders Petrie (Methuen & Co., Ltd.), for fig. 49; Unpublished Objects from Palaikastro, 1923, Supplementary Paper I (British School at Athens), for fig. 55; The Vaulted Tombs of Mesara, by S. Xanthoudides (University Press of Liverpool, Ltd.), for figs. 62 and 64; Prehistoric Aegean Pottery, by E. J. Forsdyke (British Museum) for fig. 69; Prehistoric Thessaly, by A. J. B. Wace and M. S. Thompson (Cambridge University Press), for figs. 75-8 and 80; Scythians and Greeks, by E. H. Minns (Cambridge University Press), for fig. 103; Ilios, by H. Schliemann (John Murray), for figs. 81 and 92; Troja, by H. Schliemann (John Murray), for fig. 82; Explorations in Turkestan, vol. i, by R. Pumpelly, W. M. Davis, R. W. Pumpelly, and E. Huntingdon (Carnegie Institution of Washington), for figs. 83-6; Wiener Praehistorische Zeitschrift, vol. i, for fig. 93; Berlin Praehistorische Zeitschrift, vol. ii, for fig. 91; Zeitschrift für Ethnologie, 1911 (Julius Springer, Berlin), for fig. 100.

We wish also to thank the Kyrle Enlarging Company of Stanford Dingley for permission to reproduce the photographs forming figure 62 in Peasants and Potters.

> H. J. E. P. H. J. F.

October 1927.

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The Discovery of Metal

IT was natural that the pioneers in the study of early history should have roughed out a scheme of successive ages of Stone, Bronze, and Iron; and that, having gone thus far, they should soon have noted that some groups of stone implements showed chipping only, while others included specimens that were ground and often polished as well. Thus, they were led to the idea of the Palaeolithic and Neolithic Ages, both lying within the Stone Age and preceding the Age of Bronze. This old framework is showing signs of strain at many points as exploration progresses, and the transitions between these ages are appearing as important phases in themselves. Most of what was classed as Early Neolithic is now considered a Palaeolithic survival, while a great deal that was looked upon as Late Neolithic is now held to belong to the period when metal was first entering into use. It is known that the finely chipped flint arrow-head, long held to be Neolithic, was used by peoples in the early days of metal. It is also becoming increasingly probable that the axe of ground or polished stone spread from the centre which, at a not very different time, learned to use copper as well, though the spread of the axe of ground stone was more rapid and more general than that of metal. The axe of ground stone was often superior in practice to a copper axe, and its use continued in some places even after bronze was known near by.

The Neolithic Age is thus losing its distinctness. It must be remembered that, while some peoples were still in the Palaeolithic stage, others had advanced beyond it. The Neolithic Age is thus becoming a rather loose term applicable to certain

regions, and covering a period when modified survivals of the Palaeolithic Age prevailed, together with ideas that filtered in from more advanced regions. These ideas originated in centres that included metal among their elements of culture, but spread more rapidly and to more distant regions than did the knowledge of metal. For the production of metal some organization is desirable, and we do not need to emphasize the idea that a caste of metallurgical craftsmen would not be likely to make its methods public.

There seems little doubt that gold was the first metal to attract interest; the attraction may have developed independently among many peoples at many places. Elliot Smith suggests a start by the finding of a small nugget to serve as a bead in place of an older-fashioned shell or stone in a necklace. We would recall the glittering grains in the sands of sunlit streams and would suggest that they might be collected, at first on the hand and later on a fleece placed in the water to catch the flakes borne down. Collecting the flakes and hammering them into little plates or leaves to be used as covers for various objects would be simple developments. The crushing of quartz veins for the extraction of gold is a later invention, more likely to have had a single origin than the earlier and simpler process.

However attractive gold might be, its softness and its rarity precluded at first the possibility of its working a revolution in everyday life. It was only when in the course of time its attractiveness and rarity combined to make it a standard of exchange that it acquired its enormous influence. From the first, however, it may well have tempted prospectors far afield.

It was otherwise with copper. This metal is hard enough to be used as material for certain tools, and these, by their fineness, made possible more delicate work than could well be executed with stone or bone. The hardness of ground stone axes,

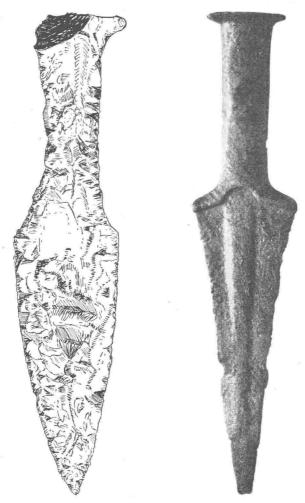


Fig. 1. Stone dagger with metal prototype.

however, led to their retention for many purposes until the alloying of copper with tin to secure hard bronze was mastered. It was also possible to hammer out new shapes of tools in copper,

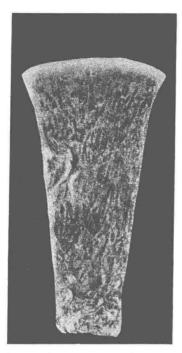


Fig. 2. Axe of hammered copper.

to make casts, to perforate lumps and, generally, to open up endless new possibilities. It was thus the introduction of copper and especially of its harder alloys that made a revolution in civilization.

Elliot Smith imagines that copper was discovered by an early Egyptian, who threw into the fire a lump of malachite that proved too refractory to be ground upon his palette, and who subsequently discovered in the ashes a copper bead. This is but one of many possibilities. For a long time men had had reasons for putting stones into a fire, and no doubt already knew how to get an air-draught to brighten the fire's glow. They would naturally build their fires on a stone base rather than on wet earth, and in many regions, before cauldrons were known, they

heated stones red hot and poled them into a trough to warm the water for cooking. With stones thus put into fires it might well happen that a piece of native copper might be melted into beads which would be afterwards found in the ashes, or that malachite, or even copper pyrites, might be reduced to metallic form in the same way. These lumps of metal would

attract attention if only by their brightness, and they would be found malleable; so men would experiment with stones until they learned the source of this new treasure. Its discovery was thus an opportunity for the liberation of initiative in the direction of prospecting for the raw material, and this activity in turn seems to have been an important factor of the impetus to develop means of communication and transport. These served to multiply contacts between peoples of different traditions, leading to the weakening of old habits and the invention of new schemes of work and life.

We would urge that the idea of a sharp distinction between the Neolithic and Bronze Ages is superannuated, and would picture a transition in several successive phases. A knowledge of shiny malleable beads and even of the ores whence they could be obtained may surely have arisen more than once. The hammering of copper was undoubtedly the first means of shaping implements in that material, and this again may well have been adopted independently by different peoples; but, when the details of the copper implements of two regions are very similar, we picture a transmission of the art from the one to the other, or contacts leading to a joint development. We may note in passing that the shaping of copper implements by hammering already gave opportunities, unknown to workers in stone, of varying the shapes and the methods of hafting the implements; this led to a liberation of initiative beyond that already noted. Tempering is another addition to the copper workers' art, and casting another and later stage; finally the art of alloying was added. These refinements of early metallurgy are less likely than the initial processes to have arisen independently at more than one centre.

Alloying was not, however, established all at once. Almost every source of copper contains other metals admixed even if

only in small proportions, and among these accessories tin sometimes occurs. These impurities differ in the different copper ores, and it may be possible to trace the source of the material of copper and bronze implements by quantitative analyses. Up to the present very few of these have been made, but a Committee of the Anthropological Section of the British Association has taken up this interesting line of research. Though it is still too early to draw conclusions, there is a possibility that a very early source of copper may have been the deposits of native copper which still exist at Arghana, about seventy-five miles north-west of Diarbekr. Several other deposits, some of which are known to have been worked at an early date, occur in the neighbourhood of Diarbekr and Erzeroum, while others are being worked at the present time between Sinope and Trebizond. Thus, the discovery of copper may well have taken place somewhere in the upper basin of the Tigris and Euphrates, probably not far from the places at which they emerge from the hills on to the Fertile Crescent.

However this may be we cannot doubt that the establishment of the standard alloy, with 10 per cent. of tin, came only through many experiments and after frequent observation of the special hardness of the metal derived from ores that happened to include a fair proportion of tin. The establishment of such a standard, the invention of standard bronze, seems to us a step that is likely to have been made by one group of inventors only, and to have spread from one centre. Where that centre was it is still too early to argue, but indications are accumulating which seem to suggest that it may possibly have been in the Aegean or in Spain, though the Fertile Crescent cannot be entirely disregarded. Langdon has suggested that Kuki is an ancient form of the name 'Cyprus', for Ku in his opinion is an ancient word for copper; a number of other scholars, however,

believe that Ku stood for tin or possibly lead, and note that there is another Sumerian word for copper.

If our argument has been followed it will be seen that we are inclined to use as a hypothesis the idea of the spread from a single centre of what may be called the complete art of bronze making. We picture it spreading to regions some of which were

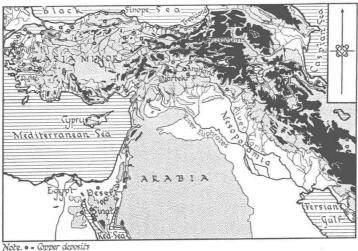


Fig. 3. Map showing the distribution of copper ores in the Near East.

already acquainted with copper; in some of these regions the inhabitants already made implements from this metal, in others, perhaps, beads only of this substance were used. The knowledge of bronze may also have spread to regions in which until then only wood, stone, and bone had been used, though they may, in some cases, have felt the influence of other waves of culture allied, as we believe, to that of metal working. These would be waves which introduced the cultivation of grain, the domestication of animals, the grinding and even the polishing of stone axes, and the fine flaking of barbed flint arrow-heads.

In the Eastern Mediterranean, Egypt, and the Fertile Crescent, a copper age preceded that of bronze, and the same fact seems established for the Danubian lands and, with less certainty, for Switzerland. The same is true for South Italy, Sicily, Spain, and Western France, and, so some think, for Ireland. In the last case some of the copper implements are by no means early in form. The island, too, was rich in copper, but apparently dependent on outside sources for tin. It seems likely, therefore, that the natives of Ireland made copies in copper of the implements made for them or brought to them by immigrants from lands where bronze was more easily pro-The possibility of an analogous interpretation of copper implements elsewhere, as in South Spain, should be borne in mind. In England and Scandinavia, on the other hand, we seem to have little indication of a copper age, and it is worth noting that it was the scholars in these lands who first established the classification of periods as Neolithic and Bronze Ages.

The method of tracing by quantitative analyses the sources of the copper used for implements has been applied in a remarkable fashion to the identification of one of the ancient sources of gold. It has been noticed, for example, that a fragment of gold, found in the tomb of King Khasekhemui of the third dynasty of Egypt, has a red antimoniate crust. Antimony combines with gold, so far as is known, only in the presence of tellurium, and the only region in the Old World in which gold and tellurium occur mixed is within the ring of the Carpathian mountains. The only rich gold-field within this ring is in Transylvania, where gold has been worked at least from

Roman times onwards. In the eastern part of Transylvania lies the valley of the Alt, and the precious metal is still found near this basin, while there is a copper-mine close to the source of the river. At various places in this valley have been found important early settlements, the inhabitants of which knew both gold and copper. Another early settlement, with a different culture, has been found at Tordos, in the Maros valley, in the very heart of the gold region. We must leave a fuller description of these settlements to a later chapter, though it

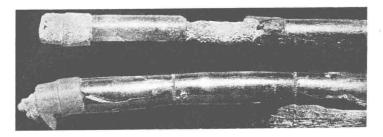


Fig. 4. Portions of sard and gold sceptre of Khasekhemui.

will not be possible to make this as full as we could wish until an important manuscript, giving a full account of the excavation of some of these sites, has been published. Meanwhile, we note the possibility that gold from Transylvania found its way to Egypt about 3,000 B.C.

Of the early use of silver we know little. It does not seem to have come into general use much before the discovery of bronze. From the little that we know at present we may suspect that it was first found and used in Asia Minor, probably in the west of that province, though it is found more abundantly in the eastern mountains, where, as we have seen, copper ores are not uncommon.