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ARTICLE NO. I.

Hellenism in North-West India.

By COLONEL D. H. GORDON.

(Communicated by Dr. B. S. Guha.)

It is unlikely that this article will solve any of the riddles of Indian Hellenism, nor has it been written with that intention, but it may contribute something to a fuller understanding of the issues involved and present a wider range of material evidence than has as yet been assembled. Some of this evidence has been included in the chapter on Hellenistic Terracottas in a Memoir on Early Indian Terracottas compiled by the writer for the Archaeological Survey of India, the issue of which has unfortunately been postponed indefinitely by the paper shortage.

Enquiry into the extent that Indian art is laid under contribution to Greek art has for the most part been so clouded by national and political bias that the wood has been obscured by the trees of controversy, often on matters so trivial as to be unworthy of consideration except as debating points. Without plunging profitlessly into the morass of the art controversy which has raged intermittently in India during the last thirty years or more, as to the extent which Indian art may borrow from the West and not lose its essential characteristics, it may be urged that the elements of this controversy apply with equal force and cogency to Western influence during the early historic period, from the time of the eclipse of the Mauryas to the end of the Gupta dynasty.

Western influence is unfortunately only too often mixed up with Western taste, and some Indian art purists go so far as to eliminate from their works items of sculpture which experience has shown make the greatest appeal to that taste. In this there are faults on both sides, as what could be more irritating than for a European to praise a particular figure with the words—'I like such and such a sculpture, it isn't a bit Indian looking'. It may not be so typically Indian as, in the mind of the observer, many others, but at the same time it is Indian, and owes little if anything to European art influence. In art, though they may be more rare in Nature, the modern, more particularly the modern European, likes his women to have long legs, even disproportionately so. The figures in the triptych shrine of the River Goddesses in the Kailas Temple at Ellora have nice long legs, as also have an attendant on the River Goddess at Dumar Lena. In consequence most volumes by the Indian purists do not show these attractive ladies. In

the same way the admirable Shiva and Parvati shaken by Ravana, the attractive though somewhat sentimental Sālabhanjikā,[1] and the 'Rukhmini' of Nokhas[2] might easily disappear as being too suspect for retention as purely Indian.

First of all it will be as well for us to examine the extent of Hellenistic influence, and then attempt to determine from what sources this influence derives. Tarn, who though no doubt an excellent Greek historian is a most indifferent archaeologist, speaks of the art of the Indo-Greeks for themselves and cites certain well-known art objects from North-West India.[3] Whether there was in fact any art of the Greeks for themselves in India is a matter which needs closer examination. It will be as well to remember that relatively little of the original sculpture of the golden age in Greece has survived. Of free-standing statues nearly all we have are copies made in Hellenistic and Imperial Roman times, and popular pieces were copied over and over again. It is only those sculptures of which we have literary descriptions that can be ascribed with any real degree of certainty as being copies of a famous statue by one of the great masters. As for the others, art critics and historians see in certain pieces the revealing touches which indicate the master hand that executed the original. Unfortunately opinion on these matters is far from unanimous, and, while one appreciates that there is controversy on such points, it is distinctly shaking to find that so famous a statue as the Aphrodite of Cyrene is ascribed by so eminent an art critic as Roger Fry to the fifth century B.C.,[4] while an equally eminent classical archaeologist, A. W. Lawrence, dates it to late second or early first century B.C.[5] The Aphrodite may be a copy of an earlier piece, and the disparagement usual to creations of the Hellenistic period no doubt favours this, but there is no evidence for it. The same discrepancy may be found in the torso of Nike which Fry ascribed to the same circle as the work of the Parthenon, but Lawrence to possibly the Monument of Euboulides. This indicates that, even close to their place of origin the dating of the art objects of the Hellenistic period is far from settled.

The beginning of the Hellenistic age is put at about 334 B.C., and closes historically with the fall of the Seleucid and Ptolemaic kingdoms, but artistically it continues for varying and almost indefinable periods, for it is doubtful whether art influences once created ever wholly die. The perpetuation of Hellenism is not to be found in Greece itself, but primarily in Magna Grecia, Asia Minor and Syria and the islands fringing these countries, and in Italy and Sicily. The impulse spread

[1] Pl. XLV, Indian Sculpture, Stella Kramrisch.
[2] Pl. LXX, Hist. of Indian and Indonesian Art, A. K. Coomaraswamy.
[3] The Greeks in Bactria and India, W. W. Tarn, p. 394.
[4] Last Lectures, Roger Fry, p. 202.
[5] Later Greek Sculpture, A. W. Lawrence, pp. 45, 126.

to the whole of the Seleucid Empire and thence to Bactria, India and China. It was kept alive by those arch-copyists and philo-hellenes the Parthians, and traces survive in India as late as the seventh century, and in China into T'ang times. Moreover it can now be said with a considerable measure of confidence that the peak period of Hellenism in the Middle East was from 150 B.C. to 120 A.D., and to date any piece with exactitude within this period is a matter of some considerable difficulty.

We should now review what there is of Hellenistic material stretching from Asia Minor and Syria to Bactria and India. In Asia Minor we have abundant remains of considerable merit, especially as regards sculpture, ranging from the Pergamene Battle of gods and giants to the Augustan sculpture at Aphrodisias. Palmyrene sculpture shows a more considerable measure of local influence, similar to that which we shall find further East. In Mesopotamia, along the trade routes to Central Asia at Dura Europos and Seleucia, sculpture is scarce and we have to rely on painting and particularly on terracotta figurines for our evidence. Bactria was proclaimed by Foucher to be void of art objects though this must be qualified in the light of more recent research. Our review moving eastwards now brings us to the region we intend chiefly to examine, the Paropamisadae and Gandhara. Here again, though sculpture in stone and in stucco is abundant it is to the terracottas that we shall chiefly look to give us the evidence we require. For it is of terracottas in particular that Evert Barger is speaking when he suggests that they, together with beads, seals, and pottery, might become an international currency in the hands of archaeologists.[1]

Let us now examine those objects which are reputed to have been made for the Indo-Greeks by themselves: the silver repoussé Dionysus and the bronze statuette of Harpocrates from Taxila. Marshall dates the former to the second century B.C. and the latter to the first century B.C.[2] The objects were found together among articles which were possibly buried at the time of the Kushan invasion, so they date not later than about 50 A.D.[3] but as they are almost certainly imports, particularly the Harpocrates which is suggested by Lawrence as being of Alexandrine origin, an upper date can be purely conjectural and of no real importance to the matter under discussion. Tarn instances one other object as being a product of Greeks for Greeks, this is the Athena in the Lahore Museum. Being a blue schist carving, this attribution has considerable

[1] Mem. Arch. Survey of India, No. 64. Excavation in Swat and Explorations in the Oxus territory of Afghanistan, E. Barger and P. Wright, p. 4.

[2] A.S.I. Annual Report, 1912-13, p. 27.

[3] A Guide to Taxila, Marshall, p. 92.

bearing on the matter under discussion, or would have if it meant anything. Tarn has obviously not seen this figure, nor had the writer when he read Tarn's book, and so it was a statuette, possibly in bronze, displaying an Athena of the type found on the coins of Azes which was anticipated. The actual Athena is distinguishable as such only by her helmet, and is as definitely Indian as is more than ninety per cent of Gandharan sculpture. There is no evidence for the production of any art object whatsoever by the Greeks for themselves in India.

Tarn is very persistent that the art of Kushan Gandhara must be in some way connected with the Bactrian Greeks.[1] Foucher dug with a large number of workmen for eighteen months on the site of Bactria but found nothing to indicate a high level of Hellenistic culture. The idea that every city which displayed on its coinage a goddess with a turretted head-dress was a Greek polis, and that as it was a polis it must have had a theatre, a gymnasium, et cetera, is one that is not likely to be upheld by the evidence of the spade. Experience of sites of this general period, i.e. 250 B.C.–400 A.D., convinces the writer that, if there was much to be found at the site of Bactria, material would have been forthcoming in sufficient quantities to justify a verdict from Foucher very different from that which he gave. Very considerable familiarity with the site of Pushkalavati, in the general vicinity of Charsadda, has not indicated that this city is likely to differ to any extent from that of Sirkap at Taxila. Tarn, quoting Hargreaves in Foucher's Ancient Geography of Gandhara, speaks of the Stupa of the Eye-Gift towering aloft on the acropolis of Pushkalavati. This has no real meaning, as the mound of the Bala Hissar, the whole mass of which was thought by Foucher to be the Stupa of the Eye-Gift itself, is in reality nothing but one of those Dheris, Daros or Tels which cover the Middle East, and which are the artificial product of the debris of continued occupation and the collapse and rebuilding of mud wall buildings. Anyone viewing this mound in the light of modern knowledge can see quite clearly the main habitation levels, floors, hearths, sump-pits, the whole studded with pottery. Foucher's sneer that one might as well call it a pigeon cote as the Bala Hissar, shows incredible lack of observation, not only archaeological but ornithological as well, as the birds which inhabit this and all other mounds of the Peshawar plain are minas.

The only thing that we know for a certainty in Colonial Greek style for Colonial Greeks in this region was their coinage. The superiority of Colonial Greek coinage over that of the homeland is a strange phenomenon, but the fact remains that the Colonial Greeks produced the finest coins ever minted in any

[1] Tarn, *op. cit.*, p. 395.

age, no other coins have excelled them. The writer was once of opinion that a certain style of Hellenistic terracotta, found fairly plentifully throughout Gandhara, were also relics of the Bactrian Greeks, but such archaeological evidence as we now have does not support this idea. It is, however, these and other terracottas which are going to be of the greatest value in solving the Hellenistic problem.

Terracottas formed the sculpture, sacred or profane, of the ordinary household. Throughout the Near and Middle East, terracotta figurines have an unbroken history dating back almost indefinitely. They have provided the household gods and votive offerings for hundreds even thousands of years. During the period 200 B.C. to 200 A.D., throughout the Greco-Roman world, a Hellenistic female type, often in the postures and nakedness of the oriental Mother Goddess, became popular alongside with other and more definitely local and oriental manifestations. Great quantities of these figurines have been unearthed at Seleucia on the Tigris, and they are found also throughout the Gandhara region from the Kunar Valley on the West to Taxila on the East, South as far as Akra near Bannu and North into Bajaur. Along with these figures and of an inclusive date are to be found primitive peg-shaped female figurines having the characteristic applied and incised eyes which distinguish them from all others. The date of these latter figures is now definitely established by excavation, and while the earliest found may be as early as 200 B.C. the latest are as late as 250 A.D. and possibly later. They have a Syro-Mesopotamian origin, but a recent one, which dates in all probability no earlier than the conquests of Antiochus the Great. It is therefore a little short of horrifying to find that A. K. Coomaraswamy, not content with labelling such figures with a middle 2nd millennium dating in his article in IPEK 1927, which was excusable with regard to the state of knowledge on this subject at that time, well knowing that these figures come from the Gandharan region, produces one of them as an 'Indus Valley figurine' in his article in the *Encyclopaedia Britannica*. This is a most disingenuous misrepresentation. These crude figurines are very common, being present in many hundreds possibly thousands throughout Gandhara, Hellenistic ones being much more scarce but suffering a ready deterioration. It is difficult to determine what this deterioration is due to, but it is more likely that demand produced careless workmanship than that the deterioration shows any progressive lack of skill.

There is a strong similarity between terracottas of Hellenistic style found in Gandhara and those found at Seleucia. Miss Wilhelmina Van Ingen's excellent monograph [1] on these

[1] Figurines from Seleucia on the Tigris, Wilhelmina Van Ingen.

latter finds is a mine of stimulating information on the subject of the terracottas of this period in general. Her remarks concerning the mass production methods of the image makers of Seleucia apply with equal force not only to those of Gandhara, but, as the writer pointed out many years ago, to those of Mathura as well. So long as the image makers had a mould, they turned out their mass produced article with a moderate efficiency; even so, as Miss Van Ingen points out, their assembling of double mould figures was often slap-dash and crude. Without a mould they were lost, and could only produce the primitive style of figurine which has deluded so many wishful thinkers into endowing them with a quite fictitious antiquity. Figs. 1–4 show typical Hellenistic terracottas, which by analogy with those from Seleucia, are to be dated from some time in the period first century B.C.–first century A.D. The evidence of the heads of this type found at Taxila points, however, to the Saka-Parthian as being the more exact period of production, that is from about 50 B.C. to 50 A.D. After 50 A.D. there is reason to believe that the mould-makers developed a more varied and individual style, and a number of terracottas were produced which showed much more of life and character.

Terracottas are most disobliging from the point of view of conforming to contemporary sculpture, and this makes them even more difficult to place. Moulded terracottas typical of late Sunga times are found widely distributed from Sar Dheri in the North-West, eastwards through Muttra to Kosambi, Bhita and Basarh, and it is on the heels of this type that we get the influx of moulded Hellenistic terracottas. These also appear as far East as Basarh, where previously, on the authority of Dr. Spooner, such terracottas were attributed to Persian influence in Mauryan times. There is no evidence to support this, and Parthian influence at the turn of the millennium B.C. to A.D. fits the archaeological facts much closer.

The Hellenistic figurines are almost entirely female and show a nude goddess with a wreath or diadem headdress, the hair drawn back into a single thick braid, and at the top of the braid at the back a plate-like head ornament. In good specimens the hair is clearly indicated, the plate has a pattern on it, the wreath or diadem is carefully applied, the features are well defined, and the body has depth. As the work deteriorates the braid disappears and with it the plate, or they become merely a tuft at the crown of the head. The features become more blurred until in some exceptionally poor pieces they disappear altogether. The body, which is in two pieces back and front, loses depth owing to the two portions being moulded flat and stuck together like a sandwich.

Fig. 5 shows a definite orientalization of this female figure, which is on the whole a great improvement. The head is not fixed with complete frontality, thus giving the whole figure

a more lively appearance. This figure, unlike those just described, is the product of a single mould, and the arms are not wholly free from the sides, gradually this type deteriorates through examples employing only a single mould, with the figure becoming steadily flatter and the arms merging more and more into the background of the plaque. It is doubtful whether we shall ever know for a certainty just to what cause this deterioration in terracottas should be attributed; it is observable, however, very clearly in at least four different types, possibly more. One thing appears to be quite certain, it is not due to a falling off in the skill of local craftsmen. Demand one feels produced a lowering of standards, and cheap reproductions of popular types were turned out on mass production lines to serve the needs of the poorer classes.

Such terracottas as we have been describing are relatively scarce in the West, a few have been found at Tarentum, but eastward from Myrina, which is famed for its terracottas, they are plentiful. Few of the Hellenistic terracottas from Gandhara have any counterparts outside the Middle East. The exceptions are a class of terracotta, and a single figure from that amazing site Sar Dheri, which has produced a more striking variety than any other site in Northern India. The single terracotta is represented only by the head and torso, from waist to knees, of a small statuette of the familiar Western Hellenistic Venus de Milo type, having drapery slipping from the hips. The class is even more interesting as it has excellent dating value. Shallow bowls having a design, usually a portrait, embossed in the centre, known to classical archaeologists as 'emblemata bowls' were popular in Italy in Augustan times. These Indian terracottas, of which specimens are shown in Fig. 6, are of exactly this type. The examples show two similar portraits, a young man right and a girl left, and in the centre a philosopher. Another example has Cupid and Psyche, and one in the Lahore Museum has two figures holding a drinking cup. These are by no means common as only some seven or eight specimens are known to the writer, but they are securely dated, allowing for a few years for this fashion to spread, to the first half of the first century A.D. In addition to these are some bearded male heads, some of which, as for instance that in Fig. 4, are of the style which do duty for philosophers or ascetics, and others such as Fig. 7 are of the actor's mask type. A figure with a tragic mask, of a type found also at Seleucia, was unearthed in the vicinity of Swabi, possibly at the large mound near the village of Turlandi, where a large number of terracottas have come to light. As anything of true Gandharan type in terracotta appears to be at a higher level than these terracottas of Hellenistic style, and a sufficiency of true Gandharan types have been found to make such a juxtapositioning possible, it looks as though the earliest Gandharan sculptures are unlikely

to be older than early in the first century A.D. This is not proof conclusive, for, as has been already pointed out by Barger, the terracottas on the habitation sites and remains of Gandharan sculpture are not much found together.

Let us now examine the Gandharan sculpture itself and see how much of Hellenism there is in it. Influence is of course undeniable, but anything that suggests the copying of Greek originals is very scarce. There are three or four reliefs which show considerable Western influence, and which are copies or memories of existing examples. The lack of full comprehension is obvious in the instance of the frieze of River Genii, having the most extraordinary display of pectoral muscles rendered by a series of small circular bosses. In addition to the above, certain bearded figures in seated or crouching postures, mostly of the type designated as Atlantes figures, are closely of the type exemplified by similar figures supporting portions of the Theatre at Athens. The so-called Apollo type of Gandhara Buddha, except for the straightness of the nose, bears no real resemblance to any Apollo produced in Greece. The writer has a particularly fine head with a far firmer and more masculine look than is found in practically any other specimen he has seen either in the Lahore or Peshawar museums, but there is nothing particularly or peculiarly Apollo-like about it if one were to set it beside the Apollo Belvedere.

Compared to those of the sculptures at Sanchi and Barhut these faces look more European. But the faces of Gandhara did and do look more European. This is purely fortuitous, people of that sort lived there, and from Vedic times when the Gandharas were considered to be regrettably mixed up with Mlechchhas, they have mingled more with the outside world, been more receptive to outside influences, and rightly or wrongly considered themselves for a variety of reasons, which it shall be no business of ours to specify here, much superior to those who live South and East of the Indus and its tributaries.

When dealing with Gandharan sculpture we are up against a formidable array of difficulties. We have a mass of material, a very great deal of it of extremely indifferent quality, which presents no real clue that is going to help anyone in dating it or even in arranging it in any acceptable art sequence. From the fourth to the eighth centuries, when the influence of Gandharan art finally faded away, dating is now on a firm basis, but in the earlier periods there is as yet little to guide us. To fit the facts however, one must accept as a working hypothesis the contentions of Dr. C. L. Fabri. As he points out in his most important article in 'Asia' the introduction of Hellenistic features would, as the history of such influences in India shows, come gradually, and the so-called Indianizing of Gandharan sculpture would not therefore be a deterioration, but itself the original basis of this art evolving directly from the Indian art of Barhut and

Sanchi; it is therefore Indian and not Indianized.[1] Only in this way can one show that continuity which is inevitable in art history, as Fabri says—'There are no gaps in human history', and the art of Gandhara evolves naturally, absorbing such influences as were then current in the Middle East.

Only the patronizing air he adopts towards Bachhofer induces one to examine the amazing statement that Tarn makes about the stucco heads from Hadda. Tarn, with his exiguous knowledge of art history in general, expects that Bachhofer should have some inkling of the explanation as to why these heads, which are of the fourth-fifth centuries A.D., should look like Hellenistic work of the second century B.C.; and then in a footnote he makes his masterly expositions, namely that—'The stucco heads were cast in old Hellenistic moulds and then attached to the fourth century A.D. bodies.'[2] Firstly, were there any old Hellenistic moulds, if so, what evidence have we for their existence? If there were, did the makers of these Hellenistic moulds, presumably in the first or second century B.C., make them so that they might be used for the first time four hundred years later? If second-hand Hellenistic head moulds were employed, what then is the explanation of the excellent Hellenistic bodies, such as that of the young man with flowers in the lappet of his robe and the child with its robe looped into a hood?[3] There is nothing in stucco made from such moulds in these regions at an earlier date, and there is much to show that there is excellent work in the second and third centuries A.D., both in terracotta and stucco, leading up to these types. In fact, Tarn reveals nothing except the fact that he has no knowledge of Gandharan art at all.

It will be as well if we attempt to work back from the terracotta heads of Akhnur and Ushkar and the stucco heads of Hadda, the date of which is accurately known, to the earlier more debatable work in Gandhara. The terracottas of Ushkar are in the opinion of Dr. Fabri the very last remains of Hellenism in N.W. India, and he places them a generation later than those of Akhnur. This has geographical considerations in its favour taken as an assumption that the last traces of Gandharan culture retreated further and futher North from Taxila through Akhnur in Jammu into Kashmir. Relics of Buddhism have been found at Ushkar, Harwan and Avantipur. The terracottas of Ushkar are, however, far less rococo than those of Akhnur and may for the most part be distinguished by the steeply flaring, sharply marked brow ridges. The terracottas of Akhnur are loaded with ornamentation and are of soft podgy types, wholly

[1] Buddhist Baroque in Kashmir, C. L. Fabri, *Asia*, October 1939.

[2] Tarn, *op. cit.*, p. 398.

[3] L'Oeuvre de la Delegation Archeologique Francaise en Afghanistan, Hackin. 1933. Figs. 5 and 11.

lacking in any virility. The terracottas of Ushkar can be dated by the Monastery of King Lalitaditya, 700 to 736 A.D., and those of Akhnur may well, as Fabri suggests, precede them by a generation.

At Taxila a fair number of Late Gandharan terracotta heads have been found, the most common type being that of a youth with head inclined sideways, having a diadem and a fringe of conventional curls, and wearing rather a sickly smile. This type is also common at Hadda, so that these terracottas and the terracotta Buddha heads found with them can be dated to the fourth and fifth centuries A.D., and are contemporary with the stucco work at Jaulian and Mohra Moradu, at which latter place many of them were found. There is, however, a great deal of stucco work all over Gandhara much of which, as Fabri has pointed out, is quite indistinguishable in a photograph from the sculpture in schist. It is only the fact that the finding of a coin of Theodosius II at Hadda, in such circumstances as to date at least a portion of the stucco work there, has tended to label the whole stucco output of Gandhara with a fourth-fifth century dating, which has obscured the possibility that some of this work is almost certainly at least a century earlier. The magnificent stucco head of Buddha in the India Museum, South Kensington, shown as a 'Head of Bodhisatva' on Pl. X *b*, in Dunbar's History of India, is in all probability work of the third century, and it is probable also that many other pieces such as the Kuvera and Hariti at Takht-i-Bhai [1] are of the same date. The most striking heads at Hadda are those which strangely enough present the least Hellenistic characteristics. The bearded head resembling a mediaeval Christ and the monk with most sensitively rendered features owe no real debt to Hellenism, nor does the vivid female figure grasping two plaits. Influences were at work producing a fresh vital art which stamps with an even clearer mark of absurdity the contention that these heads were cast from moulds made originally in the second century B.C. That this vitality was confined to the art of Hadda is an idea which has gained considerable currency, and it has been fashionable to belittle the achievement of Gandharan art to the point of selecting those least admirable and lifeless examples and putting them forward as typical of the best that Gandharan artists could produce.

To show what could be done, here is the head of a bearded ascetic in terracotta (Figs. 8 and 9). It bears no relation to the plump-cheeked pseudo-ascetics of Ushkar and Akhnur. There may be something of what is termed 'expressionism' about this head, but it has that intensity and vitality which are essential to a true plastic interpretation of the subject. Such a

[1] The Mother Goddess of Gandhara, Gordon, *Antiquity*, March 1937. Pl. I.

head is almost certainly a product of the third century and comes from the Charsadda area. If there is anything Hellenistic about it, such traces are only perceptible to those who, willy-nilly, are set on finding them. Where Hellenistic models suit the purpose of the Gandharan craftsmen, they employ them, but by far the majority of the finest works of art from this region show only those traces which pervaded the whole Middle East at that date.

Figs. 10 and 11 show a unique head from the vicinity of Tangi, the most northerly of the Hashtnagar villages; it is a large terracotta head, a copy of a Hellenistic barbarian type, it is the hair treatment, however, which is the most striking feature, as these wavy tangled locks, so common in Hellenistic statuary, normally disappear in the conventionalized whorls and ridges found on the stucco heads at Hadda, Taxila and elsewhere. Good Hellenistic types are therefore not the prerogative of Hadda, but were produced whenever and wherever the Gandharan artist felt that they suited his purpose. It is impossible to shut off the work in stone from that in stucco into separate watertight compartments, and it cannot really be doubted that they co-existed, and that the monasteries more remote from the Swat hills, such as those little establishments at Askaru Dheri, Kula Dheri and on the ridge of the Marble Rocks, north of the Kabul river just outside Nowshera, were turning out images in stucco at the same time as the monks of Loriyan Tangai and the monasteries, known only to image traffickers, north of Mian Khan and Sangao were producing the best work in the blue schist of the hills in which they lived.

It is now possible to arrive at some tentative conclusions. In N.W. India, Hellenistic terracottas are found which follow closely on the heels of late Sunga terracottas of about 120–80 B.C. Similar ones are found at Seleucia where the majority can be dated 140 B.C.–120 A.D. and at Memphis in Egypt where they can be dated by the style of local contemporary Indian terracottas to the first century A.D. The Seleucia dates give extreme marginal limits for this style of figurine, but the Taxila finds indicate 80 B.C. as being the highest date for them in Gandhara. Bactria produced no Hellenistic art, but Barger discovered piller bases of Corinthian style at Kunduz,[1] and in the same neighbourhood stucco heads and fragments were discovered at a monastery site; these have been dated by M. Hackin as being somewhere in the period first century B.C. to first century A.D., though there seem to be no very strong grounds for such a conclusion. The Gandharan carvings of a more definitely Indian style, deriving clearly from the art of Barhut and Sanchi, are as Fabri maintains the earliest, and both in stone, stucco and terracotta Hellenistic influences pervaded N.W. India

[1] Barger, *op. cit.*, p. 43, and Pl. IX, 4.

from late first century A.D. up to their final disappearance in the seventh century.

All the terracottas of the Saka-Parthian period are not of Hellenistic style. In the same way as at Seleucia there are primitive products, and also local types such as male figures with moustaches, beards and pointed Iranian caps. Male types with headdress knotted up on one side, such as are found at Muttra, persisted over a long period showing a continuity of this type from late Sunga to late Kushan times. Kushan terracottas show greater variety than their predecessors, but continuity can be shown late on into Gupta times, and in Kashmir at the site of Avantipur possibly as late as the tenth and eleventh centuries, when the iconographic terracottas of Northern India seem to come to an end.

It is unlikely therefore that the Hellenistic characteristics were produced by any specially imported artists or craftsmen, but were part of widespread art influences throughout the Middle East, the inevitable consequence of the Hellenistic dynasties set up as a result of Alexander's conquests. Much, if not the greater part, of the spreading and continuance of this Western influence was the result of the deliberate fostering of such art by the philo-hellenic Parthians, and it is not until they are firmly settled in India that we get art objects of Hellenistic style appearing alongside local primitive products, and succeeding the sculptures with influences from Sanchi and the terracottas of Sunga style. Though we have a mass of material of all types at our disposal, we have a great deal yet to learn about it, and new objects are continually appearing which do much to upset established notions. In fact the whole matter of Gandharan dating calls for review and revision in the light of recent discoveries and ideas, and also one hopes in the light of fresh extensive excavation, as yet not attempted, at the site of the Bala Hissar at Charsadda.

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O

(1) sarvabudhana puya dhamasa (2) puya saghasa puya

P

(1) sarvasa Sak(r)asta (2)nasa puyae

Q

(1) Khardaasa (2) kshatravasa

R

(1) Takshilasa (2) Kroninasa

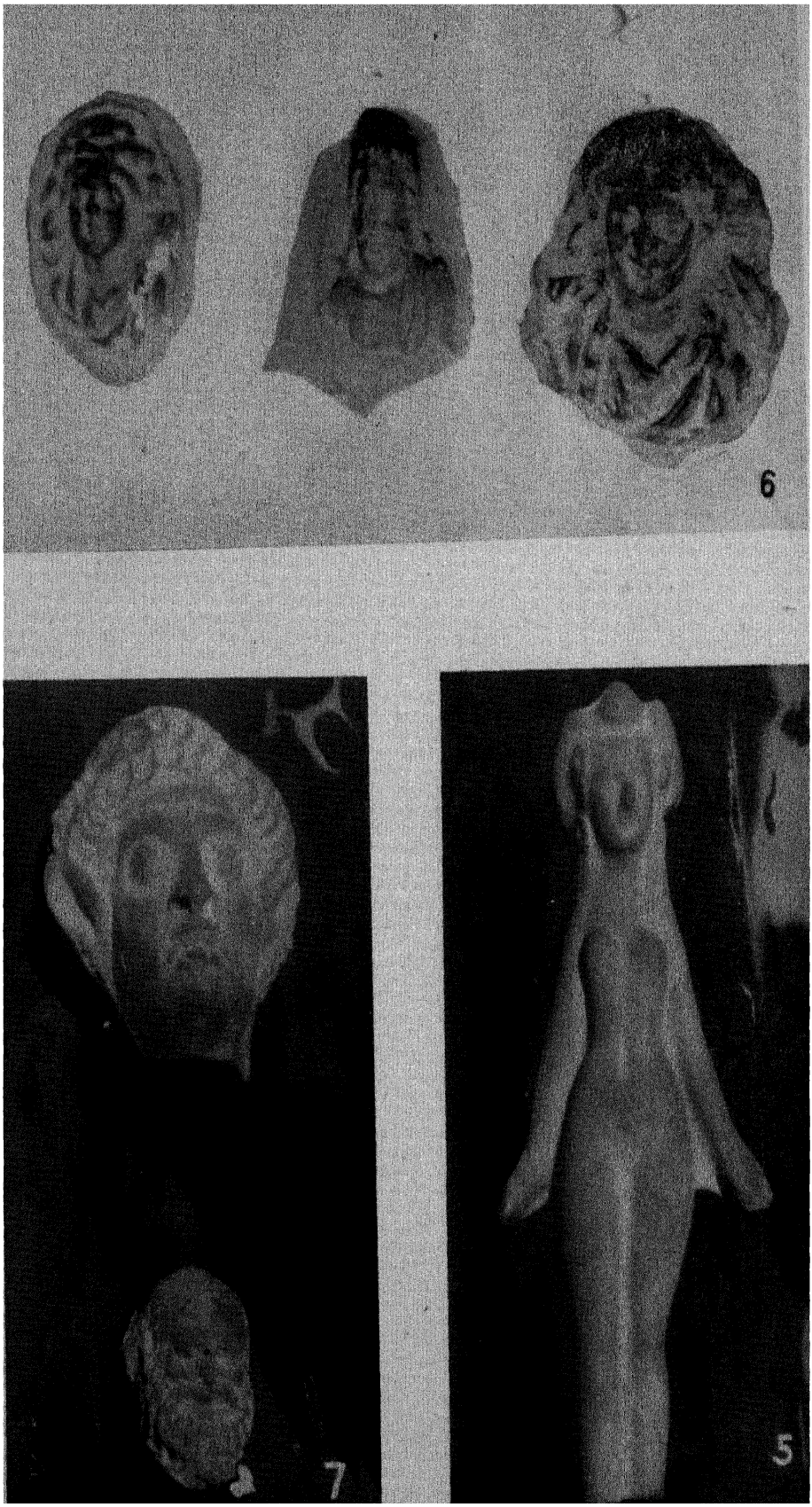
J'

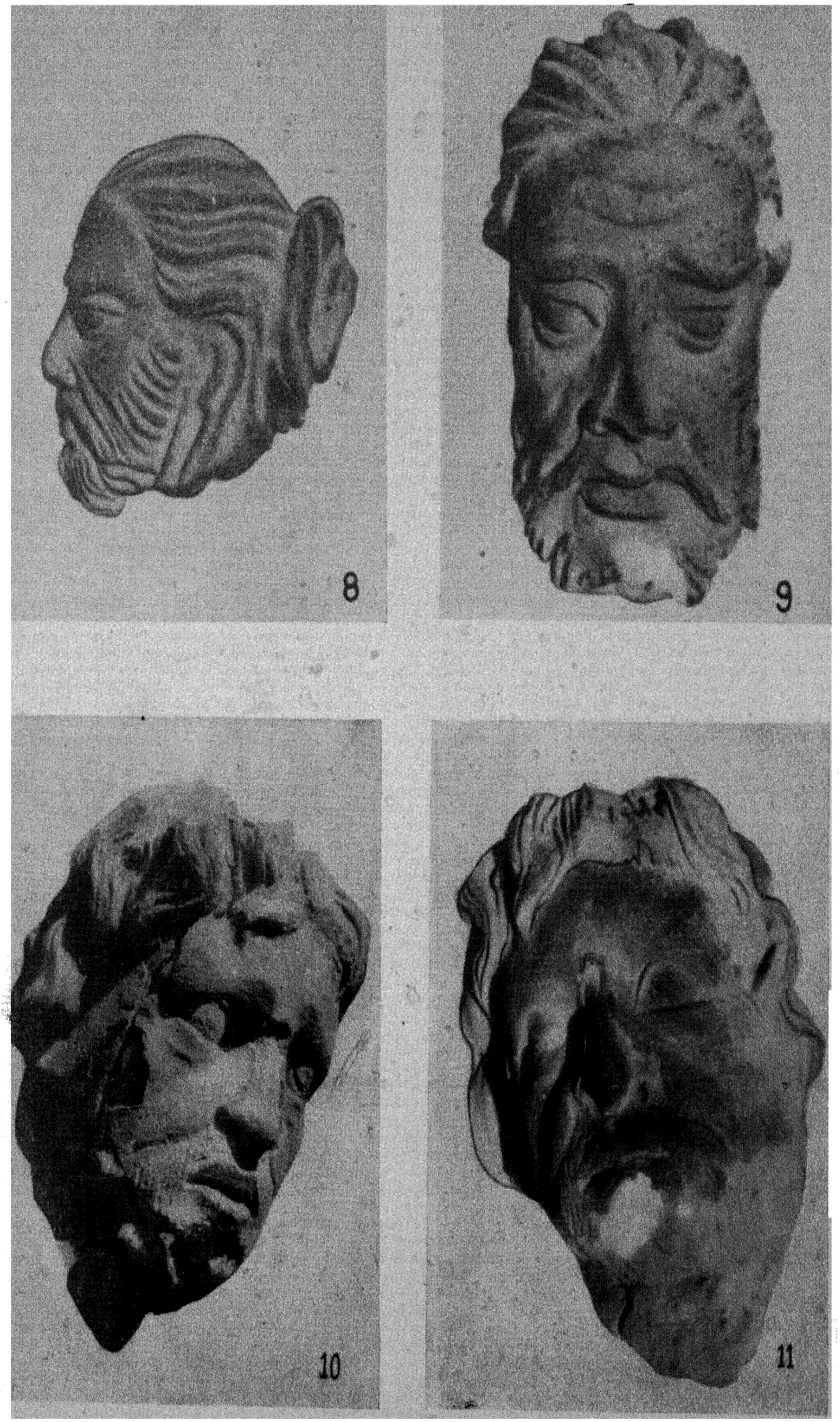
(1) Khalaśamu (2)śo.

PROFESSOR KONOW'S TRANSLATION.

'The chief queen of the mahākshatrapa Rajula, Ayasia Kamuïa, the daughter of the yuvarāja Kharaosta, the mother of Naḍa Diaka, by her, together with her mother Abuhola, her father's mother Piśpasi, her brother Hayaüra with his daughter Hana, the harem and the almslord chapter, was established in this piece of land, which is just outside the (saṁghārāma) border, the relic of the Lord Śākyamuni, the Buddha—after having performed the solemnities over the illustrious king Muki and his horse,—and a stūpa and a saṁghārāma, in the acceptance of the order of the four quarters of the Sarvāstivādins.

The Yuvarāja Kharaosta, Kamuïa, having made prince Khalamasa (and) Maja, the youngest, assenting parties, by the mahākshatrapa Rajula's son,—the younger brother of Kaluï—, the kshatrapa Śuḍasa, Naüluda,—by the kshatrapa Śuḍasa this piece of land, (viz.) the encampment Veyaüdirna, and also the encampment Busapara, limited by Urvarapara, was granted, after having made it (an appurtenance just) outside the limit—as a religious gift in the cave-monastery,—having given it, with (libations of) water, to the teacher Buddhadeva: to Budhila from Nagara, the Sarvāstivādin monk,—in honour of the mahākshatrapa Kusuluka Patika (and) the kshatrapa Mevaki Miyika,—in trust of the Sarvāstivādins: to the teacher Budhila from Nagara, the Sarvāstivādin monk, a khalula (dialectician?) to teach the foremost Mahāsāṁghikas the truth; as honouring of all the Buddhas, honouring of the Law, honouring of the Order; in honour of the whole Sakastana, of the kshatrapa Khardaa, of Takshila Kronina. Khalaśamuśa.'


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ARTICLE No. 2.

Mathura Lion-Capital Inscriptions.

By HARIT KRISHNA DEB.

The remarkable Lion-Capital, covered over with Kharoshṭhī writing, found at Mathurā by the late Pandit Bhagwanlal Indraji and bequeathed by him to the British Museum, has from time to time been made a subject of discussion by Indologists who have expressed divergent opinions on the reading and interpretation as well as upon the fundamental question of the manner in which its different parts are to be inter-related. For instance, M. Barth held that what we have before us is not one single record, composed or engraved at the time the pillar was set up, but a series of records not all contemporaneous with the first consecration. Professor Lüders, on the other hand, expressed the view (*SBAW*, 1913, pp. 415ff.) that it is one single inscription. The latest treatment is due to Professor Sten Konow who, in editing the record in the *Corpus Inscriptionum Indicarum*, Vol. II, Part I, pp. 30–49, opines that, at all events, there can hardly be any doubt that the whole has been executed at the same time. But I venture to differ. The capital was damaged when section I was engraved, as will be evident from the fact that there is a large chipped-off surface avoided by the engraver.

Professor Konow's reading and translation, marking in many respects an advance on previous attempts, may most conveniently be cited as bases for discussion herein. I may add that I have had the advantage of a close inspection of the plaster-cast in the Indian Museum.

PROFESSOR KONOW'S READING.

A

(1) mahaksha[tra]vasa Rajulasa (2) agramahesh(r)i Ayasia (3) Kamuïa dhit(r)a (4) Khar(r)aostasa yuvaraña (5) mat(r)a Nada Diakasa [taye] (6) sadha matra Abuhola[e] (7) pitramahi Piśpas(r)ia bhra (8) tra Hayaürana sadha Hana dhi[tra] (9) a[te]-urena horakapa (10) rivarena iś(r)a pradhraviprat(r)e (11) ś(r)e nisime śarira prat(r)iṭhavit(r)o (12) bhak(r)avat(r)o Śakamunisa Budhasa (13) Muki[śri]raya saśpa [a]bhusavi[ta] (14) thuva cha sagharama cha chat(r)u (15) diś(r)asa saghasa sarva (16) stivat(r)ana parigrahe.

E

(1) Khar(r)aosto yuvaraya (E′) Kamuło (2) Khalamasa Kumara (3) Maja kaniṭha (4) saman[u]mot(r)a(E″)k(r)a karita

B

(1) mahakshatravasa (2) Va(ra)julasarputra (3) Śuḍase kshatrave

C

(1) Kaluï a (2) varajo

D

Naüludo

M

(1) kshatrave Śuḍi(ḍa)se (2) imo paḍhravi (3)prat(r)eś(r)o

I

(1) Veyaüdirna kadhavaro Busapa (2)ro kadha (3)varo (4) vi ya u

J

(1) rvaraparena palichhina (2) nisimo karita niyat(r)it(r)o

H′

dhamadana

H

guhavihare

KL

(1) ayariasa (2) Budhat(r)evasa (3) ut(r)ȧena ayimi[ta]

F

(1) Budhilasa nak(r)araasa (2) bhikhusa sarvastivat(r)asa

G

(1) mahakshat[r]avasa Kusul[u]asa Patikasa Mevaki[sa] (2) Miyikasa kshat[r]avasa puyae

J3

sarvastivat(r)ana parigrahe

N

(1) ayariasa Budhilasa nak(r)arak(r)asa bhikhu (2)sa sarvastivat(r)asa pagra (3)na mahasaghiana pra (4)ma ñavit(r)ave Khalulasa

READING.

Upon the reading, I venture to propose a few modifications:—

A

L. 5. [*taye*]—The letters are not visible, and the space may have been left uninscribed.

L. 8. *Hana dhi*[*tra*]—Read *Habanisa*; cf. *bu* in *Abuhola*, line 6, *na* (wavy) of section D; the *i*-mātrā of *ni* partly coalesces with the lower half of the curve of the next akshara *sa* which again is distinct.

L. 7. *Piśpaśri*—Read *Pishpaśri*; there is, in *shpa*, a continuation of the upper curve to the right.

L. 9. *a*[*te*]*urena*—Read *ast*[*r*]*aürena*. What K. reads as [*te*] was left unread by Bhagwanlal; and Dr. Thomas, after stating that it looks like *tra*, takes it to be miswritten for *te*. To my eyes it is clearly *stra* though the *r*-hook is indistinct. The form 𑀢 found on Indo-Greek coins is cursive; in Aśokan records, we find an alternative form of *sta* (Bühler's Chart, Tafel I, col. IV. 39) showing the non-cursive way which is seen to be followed in our *stra* here.

L. 13. *Muki*[*śri*]*raya saśpa* (*a*)*bhusavi*[*ta*]—Read *Ma*(?)-*śakitri-rayasaśpae bhusaṁvi*(*ta*). The indentations at the edge are misleading. Thomas read *ma* (? *mra*) *kiṭe*. K.'s plate shows a break in the continuity of the vertical line of his supposed *mu*; if we recognize the break, we may perhaps read *maśa* in place of his *mu*, said to resemble the *mu* of the Taxila copper-plate. Upon the Lion-Capital itself the syllable *mu* is thrice employed—in A(3), A(12) and E′—and, on all three occasions, the shape is cursive and radically different from the shape found in the Taxila copper-plate. Regarding the next letter *ki*, there can be no two opinions; then follows a letter read as [*śri*] by K. 'with every reserve' (p. 39). Setting apart the *i*-mātrā recognized by K. (p. 39), we may discern a compound with what appears to be a subscript *ra*. It seems best to read the syllable as *tri*. Then follow *rayasaśpae bhusaṁvi*(*ta*)-*thuva cha sagharama cha*. The *saṁ* of *bhusaṁvi*(*ta*) seems certain. Instead of *rayasaśpae*, K. reads *rayasaśpa-a*, with diffidence, and he proceeds to combine the supposed *a* with the subsequent *bhusavita* to form *abhusavita*, arriving at an explanation which he frankly admits as 'highly hypothetical' (p. 40). We must read *e* after *śpa*, following Bhagwanlal and Dr. Thomas.

B

Vajulasa—Read *Rajulasa*. *Ra* is clear on the Indian Museum cast.

D

Naüludo—Read *Naülube*. The last akshara, had it been *do*, would not have exhibited the short upward stroke at the left end of the horizontal. The presence of this stroke has hitherto been apparently ignored. Syntactically, *Naülube* agrees best with *Śuḍase kshatrave*, while *Naüludo* with the *o*-ending would hardly go in with *Śuḍase* or with *kshatrave*, both with the *e*-ending which probably denotes a short form of the instrumental *-ena*. We shall see below that *Naülube* is derived from *Naulibi*, a town in Gandhāra.

G

Kusulua—Read *Kusullaa*; cf. *lu* in *Naülube*, section D.

I-J-H'-H

L. 1. *Veyaüdirna*—Read *Veyaüdaka*. The supposed *i*-stroke is in reality one of the sculptured lines indicating folds of flesh, about which I have satisfied myself by an inspection of the plaster-cast in the Indian Museum. For *ka*, in place of K.'s *rna*, compare the other *ka*'s in the same section written cursively by two strokes, reserving the lower portion of the left vertical for the second stroke.

After *veyaüdaka*, I go on to what I consider the next line, incised just below line 1, consisting of *ro kadha*, then (like Prof. Konow) to *viyaa*; differing from K. only in reading (with Bühler and Thomas) the last akshara as *a* instead of as *u*. The akshara is in shape essentially divergent from the other *u*-s found not only in the record under discussion but usually in all records of the post-Aśokan period.

Having thus read—(1) *veyaüdaka*, (2) *ro kadha*, (3) *varo*, (4) *viyaa* (the four lines following naturally one below the other, all incised on the body of one lion out of the two composing the capital), I go on to the top-line incised on the body of the other lion and continue down to the lines below, incised on the body of this other lion. The resultant reading is: *veyaüdakaro kadhavaro viyaakadhavaro Bubusaparvat(r)aparena palichhina nisimo karita niyat(r)it(r)o*. There is an akshara *bu* of small size, incised after the first *Bu*, to which Prof. Konow attaches no value. According to him, 'the record was first drafted in small letters on the stone, and then executed in larger size. The akshara *bu* has then not been cancelled with the rest of the draft and then subsequently engraved through misunderstanding'. The assumption seems quite gratuitous, and no parallel instance has been cited in support of it. It is more reasonable to regard the small letter *bu* of *Bubusa* as an addition by way of correction, like the small letter *e* of *puyae* in line 3 of the

Taxila copper-plate: in both cases, the diminutive size is clearly conditioned by limitation of space. Upon the same analogy, we should recognize the positive value of the small aksharas *viya* on the hip of the left lion, just before the large *-rva* of J(1), which are explained away by Prof. Konow as 'a remnant of the first draft' and interpreted by Prof. Thomas as possibly 'an insertion to show that the large *rva* is an error for *vya* = *viya*'. I look upon the letters *viya* as a continuation of H′, H (*dhamadana guhavihare*) incised in equally small letters above M-I-J and evidently appended later than M-I-J. More letters after *viya* are discernible on the hip of the left lion; the Plate IV facing p. 142 of Rapson's *Ancient India* (Cambridge, 1916) seems to disclose three letters below *viya*—namely, *akadha*, of which the *ka* is distinct and the *a* and *dha* are slightly blurred. We can, I think, read *viya*[*a*]*ka*[*dha*] and then suppose that two more letters, *varo*, were engraved thereafter but have since disappeared. Sections H′-H should then read: *dhamadana guhavihare viya*-[*a*]*ka*[*dha*](*varo*). I may add that the body of the left lion shows a large chipped-off surface which must have suffered the damage already before section I was engraved; it necessitated separating *va*° from *t*(*r*)*aparena palichhina* and compelled the engraver to commence the next line (*nisimo karita*....) very much to the left.

The portion *veyaüdakaro*....*niyat*(*r*)*it*(*r*)*o* seems to be metrical,—a quatrain with sixteen syllabic instants to a line, usually known to prosody as *Mātrāsamaka* (var. *Pādākulaka*):—

veyăüdăkărō kādhā-vā-rō
vĭyăākādhāvārō Būbŭsă-
parvăt(ra)ăpărēna pālĭchhīnā
nĭsĭmō kārĭtă nĭyăt(r)ĭt(r)ō

N

pagrana—Read *sag*(*r*)*are*. The first akshara has been misread as *pa* owing apparently to a flaw in the stone; from the general level of line 2 we should be led to expect that the akshara began from below the *sa* of *Budhilasa* in line 1, even as the next akshara *gra* or *g*(*r*)*a* started from below the *Na* of *Nak*(*r*)*ara* in line 1. Following this indication, we can see that the letter before *g*(*r*)*a* is not *pa* but *sa*, very like the *sa* engraved just before it. The second akshara can be read as *g*(*r*)*a*, i.e. as a *ga* with fricative sound denoted by a curved *r*-hook; we may compare *k*(*r*)*a* appearing with the same kind of *r*-hook. The third akshara, with which line 3 begins, cannot be read as *na*; it is quite unlike the *na* after *Mahasaghia* in the same line; it has a left-hand element with a slightly curved top, and we should read it as *re*, since a short-curved *ra* is found in *Rajulasa* (section B) as well as in *Veyaüdakaro* (section I).

Mahasaghiana—Read *Mahasaghia na*.

K(r)oṅinasa—Read *K(r)ochh(r)anasa*. The second akshara may be compared with *chhi* in *palichhina* (section J) and *chhi* in line 10 of the Mansehra inscription (*Corpus*, pl. IV); abstracting the *i*-mātrā, the only noticeable difference is an additional curved *r*-hook, apparently denoting a modified sound like *k(r)a*, *g(r)a*, *t(r)a*, in these records.

J′

Khalaśamuśo—Read *Belaśamuśo*. There is a projection to the left of the first letter which has escaped notice hitherto and which guarantees the reading *Be*.

Interpretation.

(I)

In regard to the interpretation, much depends upon determining the proper sequence for the different sections designated by scholars as A, B, C, D, etc.

What goes most strongly against the supposition that all the sections form part of one single record engraved at one and the same time is the circumstance that the letters vary considerably in size and in shape. Dr. F. W. Thomas notes the sizes. Without insisting on the proposition that the sections must be arranged absolutely according to the sizes of the letters, we may observe that far bigger letters are employed in M-I-J, engraved on the front, than in A, engraved on the top and the back. If, moreover, we recognize that a natural commencement is to be sought on the front, we shall not be disposed to accept the current view that the 'chief inscription' is comprised in section A. In point of shape, also, there is marked variation between section A and the group M-I-J. To note major divergences: in the latter record, the vowel *u* has its loop to the right, the medial *o* is likewise formed with a loop, the *ka* is peculiarly written by first cursively combining the top-angle with the right-hand angle and afterwards adding the lower portion of the left-hand vertical, and the *ya* has a straight left limb; in section A, the vowel *a* has a curved right-hand element, the vowel *u* has an open loop to the left, the medial *u* has likewise an open loop, the *ka* has a slanting right-hand element, the *ma* is flat at bottom almost forming angles with the verticals, and the *ya* (except once) has the shape of an approximate semicircle. The hand that wrote out section A could hardly have written out sections M-I-J. A peculiarly shaped *sa*, we may add, isolates section G from the rest. And the small lettering in sections H′, H, C, D, E is due, as we have seen, to their having been crowded in by way of additions and corrections.

Commencing then with the group M-I-J, incised on front in bold lettering distinguished in shape from the lettering in other portions of the Lion-Capital, we read:—

(M)	(I-J(1)(2))	
kshatrave Śuḍise imo paḍhravi -prat(r)eśo	Veyaüdak- -ro kadha- -varo viyaa-	-kadhavaro Bubusa pa- -rvat(r)aparena palichchhina nisimo karita niyat(r)it(r)o

The name *Veyaüdakaro* might be a derivative of *vi-udagra*, 'very exalted'. *Udakaro* for Skt. *udagra* would be normal; the dialect employed shows a tendency towards the substitution of surds for sonants, as in *prat(r)eśo* for *pradeśaḥ*, *Nak(r)araasa* for *Nagarakasya*; and *-kara* for *-gra* might illustrate the rule of dissolution (cf. *Prākṛitalakshaṇam*, III. 30). That *kadhavaro* can stand for Skt. *skandhāvāraḥ* has been established by Prof. Konow (*Corpus*, p. 43). There is thus no difficulty in taking *Viyaakadhavaro* as Skt. *Vijayaskandhāvāraḥ* ('Encampment of Victory')—an expression not unfamiliar to ancient Indian land-grants. We may compare the Nasik cave inscription of Gautamīputra Śātakarṇī,[1] where the expression occurs. The comparison is justified not only because that record and the Mathura Lion-Capital Inscriptions belong practically to the same period (first century B.C.–first century A.D.), but also because Nasik was and still is, like Mathura, a place of strategic importance; military cantonments are even now located at Mathura and at Deolali, near Nasik. That is why Śātakarṇī's military exploits are mentioned with special emphasis in the Nasik inscription recording his mother's cave-dedication: the donation was inspired by some recent military success. The same explanation seems applicable to the Mathura dedication. *Palichchhina* may be connected with *pāli*, 'boundary', and *chhinna*, 'limited'; compare *sīmāvachchhinna* of later land-grants. In the Kauṭilīya Arthaśāstra (II. 1), we read of rocks (*śaila*) and caves (*darī*) being made to serve as boundaries (*sīmā*) of villages. Similar prescription is found in regard to Buddhist parishes. As noted by Kern[2]: 'The Buddha prescribed to mark out the boundaries of a parish, *sīmā*, in this way: first, the marks are to be mentioned, such as a *mountain*, a stone, a forest, a tree, a road, an ant-hill, a river, a water-sheet. This being done, a competent monk has to bring forward a motion that the Saṁgha may decree to fix by such marks the boundaries of a parish for common residence and common celebration of the Uposatha.' *Bubusa-parvataparena palichchhina* would thus sig-

[1] *Epig. Ind.*, Vol. VIII, pp. 60–74.
[2] Kern, *Manual of Buddhism*, p. 82.

nify 'limited in boundary by what is beyond Mount Bu(b)busa'. *Nisimo* has been clarified by Prof. Konow with Pāli citations furnished by Mr. Helmer Smith; it implies '(an appurtenance just) outside the limit (of a *vihāra* or *saṁghārāma*)'. The words *dhamadana guhavihare, viya[a]ka[dha](varo)*, constituting sections H'-H and forming a sort of heading to the group M-I-J [1] show that there was a pre-existing *vihāra* known as *guhāvihāra*, 'cave-monastery', to which the *dhamadāna* or 'pious gift' set out in M-I-J appertained: it is likely that H'-H was added by way of correction like the second *bu* of *Bubusa*, both corrections being in small letters as demanded by the exigencies of space. *Karita* I take to represent Skt. *kāritaḥ*; loss of terminal *-am* and *-aḥ* is quite common in the dialect, and there can be no inconsistency in making *karita* agree with *niyat(r)it(r)o*, 'given', and *paḍhraviprat(r)eśo*, in view of the admitted apposition of *śarira* with *prat(r)iṭhavit(r)o* in section A and other similar instances. Prof. Konow's proposal to treat *karita* as a gerund cannot be accepted in the absence of any acknowledged analogy; his proposition that intervocalic *t* 'always becomes *tr*' on the Lion-Capital is itself founded on his supposition that *karita, bhusavita, ayimita* are gerunds,—a supposition without any support.

If, therefore, H'-H sets out the nature of the donation and M-I-J(1)(2) contains the denomination of the d o n o r as well as a description of the land given, we may expect that somewhere on the Lion-Capital there is reference to the denomination of the d o n e e. This reference we must evidently recognize in J(3) which reads:—

Sarvastivat(r)ana parigrahe.

'For the acceptance of the Sarvāstivādins.' We meet with the same expression towards the close of section A which, as we shall presently see, is concerned with another grant to the Sarvāstivādins. The fact that J(3) is inscribed vertically on the body of the left lion seems to indicate a desire to preserve some sort of symmetry with M which is inscribed vertically on the body of the right lion.

Acceptance of the gift is recorded in sections K, L: (1) *ayariasa*, (2) *Budhat(r)evasa*, (3) *ut(r)aena ayimita*, 'Of the ācārya Budhat(r)eva. Received with water'. The equivalence of *ut(r)aena* with Skt. *udakena* has been pointed out by Prof. Lüders. *Ayimita* I propose to regard as the past participle of root *yam* preceded by the prefix *ā*; the roots *yam* and *dā* being synonymous, *ā-yam* would be synonymous with *ā-dā*, signifying 'to accept'. It was customary to accept donations of this character with water poured on the hands of the donee; for instance, we hear of Anāthapiṇḍika pouring water over the

[1] Cf. *danamukha* in Mount Banj Inscr. (*Corpus*, Pl. XI).

hands of the Buddha when giving away Jetavana-vihāra to the Saṁgha.[1]

The group H'-H-I-J(1)(2)(3)-K-L-M thus represents a record complete in itself. It is a public record of the charter of land-grant, in favour of the Sarvāstivādin community, by the kshatrapa Śuḍisa.

(II)

We may now consider section A, inscribed on the top and back of the central block. It contains the phrase *sarvastivat(r)ana parigrahe*, 'for the acceptance of the Sarvāstivādins'—the same as in J(3) pertaining to the group recording Śuḍisa's land-grant. There cannot be the shadow of a doubt that section A is concerned with another grant in favour of the same (Sarvāstivādin) community. It records in fact the establishment of the relics (*śarīra*) of the Buddha, the interment thereof inside a *stūpa*, and the laying-out of a *saṁghārāma* for 'the saṁgha of the Four Quarters'. Its connexion with and posteriority to the land-grant of Śuḍisa will appear at once from its reference to 'the *nissima* piece of land' as the place of deposit of the relics: as we have seen, the inscription on the front records the fact that the land granted by kshatrapa Śuḍisa was made *nissima* with reference to the *guhāvihāra* or cave-monastery previously existing.

The donor here is a lady named Ayasi, with the epithet *Kamui*, described as 'chief queen of *mahākshatrapa* Rajula', 'daughter of *yuvarāja* Khar(r)aosta' and 'mother of Nada Diaka'. It will be observed that she is not described as 'mother of Śuḍisa' who, we know, was the son of Rajula. She was apparently Śuḍisa's step-mother. Associated with her in the donation are: her mother Abuhola, her father's mother Piṣpa-śrī, her brother Hayaüra and 'the body of star-observing astrologers' of Habani (*Habanisa astraürena horakaparivarena*). The word *astraürena* (hitherto read as *atraürena*, *ateürena*, etc.) I take to be instrumental singular of **astraüra* compounded of two Greek words, ἄστρον, 'star', and ὅρας, 'observe'.

The term *horaka* seems to have been derived from *hora* in the same way as the term *mauhūrtika* was derived from *muhūrta*. Astrologers, as noted by Alberuni,[2] used the unit of time known as *horā*, an interval of 60 minutes; and modern scholars, like Alberuni, feel no hesitation in recognizing its identity with Greek ὥρα and Latin *hora*. The *muhūrta*, as we know, is an interval of 48 minutes; and *muhūrta* was a unit employed by Hindu astrologers prior to the advent of *hora* under Hellenistic influence. Just as the earlier astrologers were called *mauhūrtikas* because

[1] Kern, *Manual of Buddhism*, p. 28.

[2] *India* (Sachau), I. 343: 'Nobody in India uses the hours except the astrologers. . . . They call the hour *hora*.'

they calculated in terms of the *muhūrta*, the later astrologers seem to have been designated *horakas* because they calculated in terms of the *hora*. The form *horā*, with the long *ā*, is probably due to popular etymology which sought to derive the word from Skt. *ahorātra*, with the initial and final syllables (*a* and *tra*) omitted! Such a derivation is seriously cited by Varāha Mihira in his *Bṛihajjātaka*, ch. I, verse 1—*horetyahorātravikalpameke vāṁchhanti pūrvāparavarṇalopāt* ('some take *horā* to be an optional form of *ahorātra* by reason of omission of the first and the last syllables').

It is noteworthy that, in a chapter entitled 'Encampment' (*Skandhāvāraniveśaḥ*) of the Kauṭilīya Arthaśāstra (X. 1), *mauhūrtikas* are mentioned as part of the staff accompanying every military expedition; and the *horaka-parivara* appears on the Lion-Capital in connexion with the foundation of a *stūpa* on a piece of land described therein as an 'Encampment of Victory' (*viyaakḍdhavaro*), *vijaya-Skandhāvāra*.

There is western classical testimony showing the special association of *stūpa*-worshipping *śramaṇas* with astrology at a period not far removed from the age of the Mathura Lion-Capital Inscriptions. Clemens Alexandrinus (third century A.D.) notes the circumstances that the S e m n o i 'make predictions about futurity and worship a kind of pyramid beneath which they think the bones of some divinity lie buried.... They observe closely the heavenly bodies, and, by the indications of futurity which these offer, make some predictions.' The S e m n o i have been recognized as Ś r a m a ṇ a s, and the p y r a m i d as the s t ū p a.[1]

The name *Habani* reminds us of the 'Indian' merchant alluded to in the *Acts of St. Thomas*; his name is spelt *Ḥabān* in Syriac, *Ἀββάνης* in Greek, and *Abban* or *Abbanes* in Latin. The *Acts* associated Ḥabbān with G u n d a p h a r, 'King of India', who, as recognized long ago, is doubtless the Indo-Parthian ruler known to Indologists as Gondophares—Gondophernes.

Regarding the expression I tentatively read as *Maśakitri-rayasaśpae*, the element *raya* should be explained as *rājan*, 'King', since the mention of Kharaosta as *yuvarāja* presupposes the existence of some *rājan* to whom Kharaosta stood in the relation of yuvarāja. In *saśpa*, I propose to see Skt. *śasya*, 'corn', confounded with Skt. *śashpa*, 'young grass'; the figurative sense of *śasya* being 'merit'. A similar idea is conveyed by the expression *kuśalamūla*, 'root of virtue' occurring in other Kharoshṭhi records (Manikiala, Hidda, Wardak). It is worth noting that, after *rayasaśpae*, we get *bhusaṁvi(ta) thuva* which I take to represent Skt. *bhū-saṁvītaḥ stūpaḥ*, 'stūpa covered over with earth'—a rhetorically appropriate nuance, with perhaps an allusion to the original sense of *stūpa*. If we took the syllable *tri*

[1] McCrindle, *Ancient India* (1901), pp. 183-4.

along with *rayasaśpae*, we would have to think of 'three Kings' whom Ayasi wanted to benefit spiritually by her 'establishment'. *Maśaki-tri-rayasaśpae* might in that event be construed as 'for merit to the three Maśaki Kings', where M a ś a k i could be plausibly connected with M a s s a g a, the chief city of the Assakenoi, which had been stormed by Alexander. And such a connexion would be supported by the occurrence of epithets like *Naüliba, Kamui, Nak(r)araa*, derived from place-names not very far from Massaga, in other sections of the same record. The initial *Ma*, however, is doubtful; and the interpretation must consequently remain uncertain.

Ayasi thus established, in the *nissima* land conferred by her step-son Śudisa on the Sarvāstivādins, not only the *śarīra* of the Buddha, covered over by a *stūpa*: she also laid out a *saṁghārāma* 'for the Four Quarters of the Saṁgha'. The *nissima* land appertained to the already existing *guhā-viḥāra*. A distinction evidently existed between v i h ā r a and s a ṁ g h ā r ā m a; by the former term we are probably to understand 'a dwelling' for the monks, intended specially for use during the rainy season; while by the latter term we are presumably to understand 'a park (*ārāma*) for the assembly (*saṁgha*)' of monks. This distinction vanished in later times, apparently because to every *vihāra* there came to be attached a *saṁghārāma*; so that what was in truth a v i h ā r a - *cum* - s a ṁ g h ā r ā m a could, for brevity, be designated by either name. That the distinction was still being maintained during the Kushān period will appear from the Peshawar casket-record mentioning a 'pious gift' (*deyadhaṁma*) 'in Kanishka's *vihāra*, in Mahāsena's *saṁghārāma*',—in other words, in the *vihāra* founded by Kanishka to which had been attached a *saṁghārāma* by Mahāsena.[1] A Buddhist cave-inscription at Kanheri records the construction of a *saṁghārāma* beside a pre-existing *vihāra*.[2] Yuan Chwang (Hiuen Tsiang), who visited India in the seventh century A.D., speaks of *vihāra* and *saṁghārāma* side by side; for instance, writing about Kanauj, he says: 'Before each *vihāra* is a little *saṁghārāma*.'[3] And it is not impossible that, as has been already suggested, the Chinese pilgrim actually saw at Mathura the very *vihāra*-cum-*saṁghārāma* which we are discussing.[4]

Assent to this gift from Ayasi is recorded in the group, incised on the back of the right lion, consisting of sections E and B. What is called E″ (*k(ra)karita*) is, as recognized by Prof. Konow, a continuation of E(4) (*samanumot(r)a*), the two together reading—*samanumot(r)ak(r)a karita*, i.e. 'made co-

[1] *Corpus*, pl. XXVI. 'Mahāssena' seem to denote Huvishka who appears to have adopted the style in the same manner as Vima adopted the style 'Mahiśvara'. Huvishka's portrait occurs on the casket.

[2] Lüders' *List of Brāhmī Icrs.*, No. 988 (*Epig. Ind.*, Vol. X, App.).

[3] Beal, *Rec. W. World*, Bk. V, p. 222.

[4] *Ibid.*, Bk. IV, p. 181.

assenters'. E should be read before B, since E occupies a position to the right of B, and the direction of Kharoshṭhī writing is from right to left. Additions in smaller letters are embodied in E′, D and C(1)-C(2); of these, E′ and D seem to have been inserted by way of correction, while C(1)-C(2) were added by way of supplement, because C(1)-C(2) are preceded by a caret-mark. We may thus read the group:—

(E(1)) Kha(r)raosto yuvaraya
(E′) Kamuio
(E(2)) Khalamasa kumara
(E(3)) Maja kaniṭha
(C(1)) Kalui a
(C(2)) varajo
(B) { mahakshatravasa / Rajulasa putra / Śuḍase kshatrave }
(D) Naülube
(E(4)) s a m a n u m o t(r) a k(r a) k a r i t a (E″)

The spelling in Ś u ḍ a s e is noteworthy as showing that the group does not appertain to the land-grant recorded in M-I-J where the spelling is Ś u ḍ i s e; for we cannot well suppose two variant spellings of the satrap's name in the same document. This inference is corroborated by the different forms of *u*-mātrā employed in *Śu* of *Śuḍisa* and *Śuḍasa*.

It will be observed that just as the word *Kamuio* is added against *Kha(r)raosto yuvaraya*, evidently to indicate that Khar(r)raosta was *Kamuia*, i.e. (as perceived by Konow) 'native of Kamboja', the word *Naülube* is added against *Śuḍase kshatrave*, evidently to indicate that Śuḍasa was N a ü l i b a, i.e. (as I suppose) 'native of Naüliba'. The name N a u l i b i occurs in Ptolemy's geography[1] as a town-name along with P r o k l a i s or *Pushkalāvatī* (mod. Charsadda), in connexion with the G a n d a r o i, i.e. Gandhāras, 'between the Souastos and the Indus'; and, immediately before this mention of Naulibi, occurs the enumeration of a group of town-names including N a g a r a (mod. Jelalabad), 'also called D i o n y s o p o l i s',[2] a designation showing that it was re-founded as a Greek city (*polis*). The identification of Naüliba harmonizes with the circumstance that Aśoka, in his Rock Inscription, associated the Y o n a s (Greeks), Kambojas and Gandhāras. The expression *Śuḍase kshatrave Naülibe* thus means, 'by kshatrapa *Śuḍasa*, native of Naüliba'.

The co-assenters are: the *Yuvarāja* Kha(r)raosta, Khalamasa (styled *kumāra*), Maja (described as *kaniṣṭha*) and—as the supplement (C) added with a caret places on record—Kalui (styled *avaraja*). The styles show that the enumeration comprises Kha(r)raosta and his brothers. *Yuvarāja* denotes 'sub-king' (*lit.* 'young king' or 'junior king'); the Kauṭilīya (I. 17),

[1] McCrindle, *Ancient India as described by Ptolemy* (Bombay, 1885), p. 115.
[2] *Ibid.*, p. 112.

in discussing the topic 'Protection of Princes' (*Rāja-putrarakshaṇam*), recommends that the king should establish a wise son as *Yuvarāja* or *Senāpati* (*ātmasampannam saināpatye yauvarājye vā sthāpayet*); the Kauṭilīya further prescribes (V. 2), in discussing the topic 'Subsistence to State-servants' (*bhṛityabharaṇīyam*), that the *yuvarāja* is to receive an allowance of 48,000 (paṇas), while the *kumāra* is to receive an allowance of 12,000 (paṇas). Maja is called *kaniṭha*, Skt. *kanishṭha*, 'youngest', while Kalui is, in the supplement, described as *avaraja*, i.e. 'afterborn'. Kalui was thus evidently born afterwards; and Maja had been the youngest of the brothers at the time of Ayasi's donation when, Kalui being yet unborn, his name could not be entered as an assenting party.

Such assent must clearly have been deemed necessary to invest the gift from Ayasi with a strictly legal character. The assent of her father, the *yuvarāja* Kha(r)raosta, was alone apparently considered insufficient; the assent of every one of his brothers was so essential that the name of the afterborn Kalui had to be inserted afterwards. We may understand this in the light of the circumstance that 'succession among the Sakas sometimes passed from the ruling prince to his brother' (Konow, *Corpus*, p. xxxvi; Bühler, J R A S, 1894, p. 532): the brothers of Kha(r)raosta being expectant reversioners, legal formalities were felt to be incomplete without their assent. Or, perhaps, the government was akin to the *kula-saṁgha* type—a *yauvarājya* where the rulership resided in the *yuvarāja* and his brothers.

Acceptance of the gift from Ayasi to the Sarvāstivādin community is registered on behalf of Budhila in section F which reads—*Budhilasa Nak(r)araasa bhikhusa Sarvastivat(r)asa*, 'Of Budhila, native of Nagara, a Sarvāstivādin *bhikshu*'. It was in the fitness of things that section F should be engraved near sections K-L recording acceptance by Budhat(r)eva of the land-grant from Śuḍisa to the Sarvāstivādins. That F is posterior to K-L is proved by their disposition; the prior presence of K-L(1) prevented F(1) beginning further to the right, and the previous existence of K-L(2) stood in the way of F(2) commencing further to the right.

Prof. Konow's proposal to identify Budhila with Budhat(r)eva cannot be supported. Had the two been identical, we would have expected a more absolute identity between the names. We cannot imagine tautologous allusion to the same person at such close quarters. Moreover, Budhat(r)eva is expressly styled *āchārya* (*ayaria*) in K-L, while Budhila is simply designated *bhikshu* (*bhikhu*) in F, implying deliberate distinction.

The group A-B-C-D-E-F thus represents the second charter in favour of the Sarvāstivādins, recording the establishment of the *śarīra* (corporeal relics) of the Buddha, together with a *stūpa* and a *saṁghārāma*, by Ayasi, upon the land granted previously by Śuḍisa.

The disposition of section G, coming as it does after section F, will be most conveniently discussed now. That it was engraved by another hand is evident from its employment of a peculiar form of *sa*. That it was inserted later than J(3) can be inferred also with absolute certainty. As a glance at the plates will show, its second line begins not from below the commencement but from below the middle of its first line; such a disposition could only have been necessitated by the prior presence of J(3). The contents of section G corroborate the inference that it was a later addition. It reads—

(1) mahakshatravaasa Kusullaasa Patikasa Mevaki(sa)
(2) Miyikasa kshatravasa puyae

'In honour of mahākshatrapa Kusullaa Patika (and) of kshatrapa Mevaki Miyika.' The circumstance that 'honour' is accorded here to mahākshatrapa Kusullaa Patika and kshatrapa Mevaki Miyika, ignoring Śuḍisa-Śuḍasa, demonstrates that section G was added when Śuḍisa-Śuḍasa was no longer ruling at Mathura which had passed under kshatrapa Mevaki Miyika,[1] himself subordinate to mahākshatrapa Kusullaa Patika.

This conclusion has a bearing upon chronology. It renders possible the identification of Kusullaa Patika with Patika, son of Liaka Kusulaka, mentioned in the Taxila copper-plate, without prejudice to an explanation of its date (year 78) in terms of the same era as is employed in the Mathura Brāhmī epigraph (Lüders' *List*, No. 59) in association with the name of Śuḍasa as *mahākshatrapa Śoḍāsa*. The Mathura Brāhmī epigraph bears the date 'year 72' and refers to Śuḍasa as *mahākshatrapa*. If the Lion-Capital Inscriptions be read together as one single document (as has been done by Konow), then we should have to infer that it was incised when Śoḍāsa was a *kshatrapa*. On the assumption that he became first a *kshatrapa* and afterwards a *mahākshatrapa*—not first a *mahākshatrapa* and afterwards a *kshatrapa* —we would have to admit that the Mathura Lion-Capital record is earlier than the Mathura Brāhmī epigraph of 'year 72'. Again, since the Lion-Capital Inscription mentions Kusullaa Patika as a *mahākshatrapa*, it (as a single document) would be presumably later than the period when Patika was not yet even a *kshatrapa*. On the assumption that this Kusullaa Patika is identical with Patika, son of Liaka Kusulaka, mentioned in the Taxila copper-plate—an assumption supported by the agreement between the styles *Kusullaa* and *Kusulaka*—the conclusion would follow that the Taxila copper-plate inscription bearing date 'year 78' is earlier than the Mathura Lion-Capital record and *a fortiori* earlier than

[1] Rapson (*JRAS*, 1894, p. 548) traces the name of a ksatrapa *Mevaka* on a coin; see *Corpus*, p. 45, n. 3.

the Mathura Brāhmī epigraph bearing date 'year 72'. In other words, we should be driven to the position that the 'year 78' refers to one era, and the 'year 72' refers to another; unless of course we were prepared to suppose (as done by Fleet) either that the two Patika's were different, or (as done by R. C. Majumdar) that Śuḍasa may have been a *mahākshatrapa* first and a *kshatrapa* afterwards,—an exceptional circumstance. Recognition of the true character of section G of the Lion-Capital will obviate the necessity for these assumptions, leaving us free to regard the 'year 78' of Taxila and the 'year 72' of Mathura as belonging to one and the same reckoning which, I believe, was the famous Vikrama era of 58 B.C.[1]

(III)

The group N-O-P-Q-R, engraved on bottom, may be considered next. It is noteworthy that the first line of section N, comprising 16 aksharas, runs from end to end of the bottom-surface, while the next three lines (i.e. lines 2–4), consisting of 8 to 10 aksharas each, occupy only the central portion of the surface. The result is that marginal spaces remain on both sides—one to the right (below the aksharas *ayari*), another to the left (below the aksharas *sa bhikhu*). Into these marginal spaces were subsequently inserted sections P-O-R.

I look upon section Q as a continuation of section N. Part of Q, consisting of the four aksharas *Khardaasa*, was engraved upon the same face as N, on the right margin, below the aksharas *ayari* of line 1 of N and immediately after line 4 of N; the other part of Q, consisting of the four aksharas *kshatravasa*, appears practically on the front of the Capital, in an inverted order—a clear overflow from the back and a continuation of *Khardaasa*. The original intention evidently was to symmetrically place *Khardaasa* and *kshatravasa* in the same line,—the one below *ayari*, the other below *sa bhikhu*, of line 1 of N; but the scheme was frustrated by a chipping-off in the stone-surface so intended for accommodating *kshatravasa*. Symmetry had to be sacrificed, and *kshatravasa* had to be engraved just 'below' *Khardaasa*.

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[1] See my paper 'Vikramaditya and his era' in *Zeits. f. Ind. u. Iran.*, 1922, pp. 255ff., for the origin of the era. I argued there that the era of 58 B.C. was founded by Gautamīputra Śātakarṇī who is called *vāraṇa-Vikrama* in his mother's Nasik eulogy; *cf. siṁha-Vikrama* on coins of Chandra-gupta (II) Vikramāditya. I have since then observed that a Nasik epigraph of Vāśishṭhīputra Puḷumāyī is expressly dated in the era founded by his father (*i.e.* G. Śātakarṇī);—*amhapituka-savachhare* should be read in place of Sénart's *amhohi savachhare*, as can be seen from Sénart's published facsimile. I have also satisfied myself by a personal inspection of the original cave-inscription at Nasik.

Reading N-Q together, we have—

(N) ayariasa Budhilasa Nak(r)araasa bhikhu-
-sa Sarvastivat(r)asa sag(r)a-
-re Mahasaghia na pra [ma]
ñavit(r)ave Khalulasa
(Q) Khardaasa
kshatravasa

The word *sag(r)are* may be taken to denote the instrumental singular of *sag(r)ara*, equivalent to Skt. *saṁgara*, 'promise'; we have similar instrumentals in *Śudase kshatrave Naülube* of sections B-D. In *ñavit(r)ave* we shall no doubt be justified in seeing a survival of the Vedic infinitive in *-tave* which, with the negative, often had a passive force. Thus, the expression *Mahasaghia na prama ñavit(r)ave* may be held to mean: '*prama* (is) not to be taught to any Mahāsāṁghika'. *Prama* is most naturally explained as Skt. *pramā*, a technical term in Logic, signifying 'correct apprehension' or 'right knowledge'. This prohibition against *pramā* being taught to any Mahāsāṁghika 'according to the promise' *sag(r)are* of the Sarvāstivādin *āchārya*, provides important epigraphic evidence on the relations between the two rival Buddhist schools—the Sarvāstivādins and the Mahāsāṁghikas—about the beginning of the Christian era. The Mahāsāṁghikas were regarded as schismatic, and the Sarvāstivādins were also designated 'Hetuvādas' (more correctly, 'Hetuvādins'), i.e. 'professing the doctrine (*vāda*) of Logical Reasoning (*hetu*)' or 'causationists' (Radhakrishnan, *Indian Philosophy*, 2nd ed., p. 613 n.). The place of Logic in the history of Buddhism, as worked out by Dr. Stcherbatsky in his *Buddhist Logic* (Leningrad, 1932), enables us to determine the psychology behind the prohibition embodied in our inscription which pertains to the threshold of Stcherbatsky's 'Second Period' comprising the first five centuries A.D.—a period characterized by the rejection of all Logic, it being maintained that 'the only source of true knowledge is the mystic intuition of the Saint'. The Sarvāstivādin *āchārya* Budhila, belonging as he did to a school of thought that believed in the doctrine of logical reasoning, was naturally loth to see the *pramā* of their Logic being taught to the Mahāsāṁghikas who professed to believe in the doctrine of mystic intuition. Upon the earlier prestige of philosophers devoted to *pramā* (of which an equivalent is *pramāṇa*), Strabo throws some light. 'The *Pramnai*,' says Strabo, 'are philosophers opposed to the *Brachmanes*, and are contentious and fond of argument. They ridicule the Brachmanes who study physiology and astronomy as fools and impostors.' Strabo then proceeds to distinguish several classes of 'Pramnai'.[1]

[1] McCrindle, *Ancient India, etc.* (1901), p. 76.

Budhila's desire that *pramā* should not be taught to the Mahāsāṁghikas was given effect to by the official endorsement entered herein: *Khalulasa Khardaasa kshatravasa* of N-Q. It is clear that, when N-Q was engraved, the local satrap was Khalula Khardaa; the satrap Śuḍasa's rule had terminated in Mathura. Quite in harmony with this conclusion is the circumstance that Budhila, who appears simply as a *bhikshu* in section F pertaining to the period of Śuḍasa's rule in Mathura, appears in section N as *bhikshu* and *ācḥārya*, implying elevation in status.

The dispositions of sections P-O-R show their posteriority to sections N-Q; P-O-R being fitted into the marginal spaces kept blank by the engraver of N-Q. What is designated J′ appears really to be a continuation of R. The disposition of section G leaves it open to us to place G after N-Q but before P-O-R-J′. Such placing will conform to a psychological link; for G, like P-O-R-J′, records *pūjā* to enumerated entities.

Of P-O-R-J′, P must be read before O, because P is to the right, while O is to the left, and the direction of Kharoshṭhī writing is from right to left. Thus, we read: (P) *sarvasa Sak(r)-astanasa puyae*; (O) *sarvabudhana puya dhamasa puya saghasa puya*. We can hardly take P independently of O—although P is engraved in bolder letters than O, and we have *puyae* in P but *puya* (thrice) in O; because the relatively small lettering as well as the omission of the three *e*'s can be explained as due to limitations of space, apparently in conformity with the intention to write P and O symmetrically on the two margins. The engraver of section R, which follows section O, was so hard pressed for space that he could not help engraving part of it on the chipped-off surface avoided by the engraver of N-Q even at the cost of symmetry; for, as shown above, the latter part of Q (*kshatravasa*) overflows practically to the front. The precedent so established seems to have influenced the engraver of R to put down the terminal part of his material on a chipped-off surface of the front—the part designated J′. Consequently, reading R-J′ together, we get: *Takshilasa K(r)ochh(r)anasa Belaśamuśo*. And it may be rendered: 'Of K(r)ochh(r)ana Belaśamuś, native of Taxila'. We should not dissociate *Takshila* from *Taxila*, a Greek pronunciation of Skt. *Takshaśilā*; another Greek pronunciation, *Taxiala*, is preserved in Ptolemy (VII. 1. 45), and is reflected as *Takshaila* in another Kharoshṭhī epigraph (*Corpus*, p. 90). The group P-O-R-J′ should thus be taken together, and translated thus:—

> 'In honour of all Śakrasthāna: Honour to all Buddhas! Honour to Dharma! Honour to Saṁgha!'
> 'Of K(r)ochh(r)ana Belaśamuś, native of Taxila.'

Sak(r)astana is doubtless composed of *Sak(r)a* and *stana* (= Skt. *sthāna*); and, if any particular geographical area is

intended thereby, we should think primarily of Kamboja—Naulibi—Nagara—Taxila,—wherefrom the people responsible for these records came to Mathura. The fact that *puya* (Skt. *pūjā*) is accorded to **Sak(r)asthāna* along with the Buddhas, Dharma and Saṁgha would lead us to expect in the expression *Śak(r)a-sthana* an allusion to a *sacred entity*. It seems to me that **Sak(r)a-sthāna* is equivalent to *Śakra-sthāna*, 'the region of Śakra', i.e. the area or areas where Śakra-worship prevailed. We may compare *Śiva-thala* (Skt. *Śiva-sthala*) occurring in the Panjtar Inscription of 'the year 122' in the reign of *maharaja Gushana*.[1] The expression *sarvasa Sak(r)astanasa puyae* implies *pūjā* to the whole of Śakrasthāna, that is, to all localities where Śakra or Indra was worshipped. Since the *pūjā* proceeds from a person pertaining to Taxila, it behoves us to enquire in the first instance whether Śakra was venerated there.

Strabo quotes Alexander's historians as the source of his statement: 'The Indians worship *Zeus Ombrios* (i.e. the Rainy); the river Ganges and the indigenous deities of the country.' Let us compare a passage occurring in the Kauṭilīya Arthaśāstra (IV. 3): *varshāvagrahe Śachīnātha-Gaṅgā-parvata-Māhākachchha-pūjāḥ kārayet*, 'During drought, worship should be performed of Śachīnātha (= Śakra, Indra), the Ganges, the mountains and Māhākachchha (= Varuṇa)'. It thus appears that Zeus Ombrios corresponds to Śakra or Indra in his drought-removing and rain-giving capacity. When therefore we find Strabo quoting Onesicritus as the source of his statement that two of the sages of Taxila—Kalanos and Mandanis—discoursed on Zeus when Onesicritus, as Alexander's representative, wanted to 'hear their wisdom', we may infer that the identity of Zeus with Śakra was well recognized and that Zeus was regarded with special veneration at Taxila as master of the world and dispenser of rewards and punishments. As the passage in Strabo is important for its bearing on my interpretation of *Sak(r)astana*, I take the liberty of quoting it in McCrindle's translation (*Ancient India*, 1901, pp. 70–75):

'.....Onesicritus found him [*scil.* Kalanos] at the time of his visit lying upon stones. He approached the sage and, having accosted him, informed him how he had been sent by the King [*scil.* Alexander] to hear their wisdom and bring him a report of its nature. So then, if there was no objection, he was ready to listen to his discourse. Kalanos, observing that he wore a mantle, a broad-brimmed cap and long boots, laughed and said: In former times the world was full of corn and barley, as it is now of dust; the fountains then flowed, some with water and others with milk, or it might be with honey or with wine and with oil; but mankind, by repletion and luxury, became

[1] *Corpus*, p. 69. Konow, after remarking 'what a *Śiva-thala* is, I cannot say', proceeds to translate it as 'auspicious grounds'.

proud and insolent. Then Zeus, indignant at this state of things, made all disappear, and allotted to man a life of toil. When temperance, however, and other virtues had appeared once more in the world, an abundance of good things again arose.... ....Mandanis' [who was, according to Strabo's sources, 'the oldest and wisest' of the sages of Taxila] 'is praised, because when messengers from Alexander invited him to go to the *son of Zeus* [*scil.* Alexander], with the promise of gifts if he complied, and threats of punishment if he refused, he did not go. Alexander, he said, was not the *son of Zeus*, for he was not so much as the master of the larger part of the world.....The following particulars also are stated by the historians. The Indians worship *Zeus Ombrios* (i.e. the Rainy), the river Ganges, and the indigenous deities of the country.'

Of the three other localities, besides Taxila, mentioned in the Lion-Capital Inscriptions, viz. Kamboja—Naüliba—Nagara, the last named (Nagara) bore, according to Ptolemy's geography, the alternative designation Dionysopolis, proving it to have been a centre of Dionysus-cult; and Dionysus was, as we know, a son of Zeus. Naüliba figures along with Proklais (Pushkalāvatī) among the Gandarioi in Ptolemy. And Kamboja figures between Yonas (Greeks) and Gandhāras in one of Aśoka's inscriptions.

We have numismatic testimony to prove prevalence of Zeus-worship in regions around Kāpiśī and Pushkalāvatī; coins of Eucratides present 'Zeus enthroned' as *Kavišiye nagara-devata*, and coins of Azilises figure the 'standing Zeus' along with the 'city-goddess of Pushkalāvatī'. In view of the early identification of the thundering Indra or Śakra with the thundering Zeus, it is of interest to note that Aśoka refers to thunder-cult being practised in an area contiguous to or comprised in the Greek settlements, the Kambojas and the Gandhāras; in one of his inscriptions we find reference to *Viśa-Vajri—Yona—Kaṁboja—Gandhara*, and *Viśa-Vajri* can hardly be dissociated from *Viśva-Vajra*—a double-headed variety of *Vajra*—worship of which is well attested for a later period. The Gandhāra sculptures always figure Vajrapāṇi as attending on Buddha; and, since Indra or Śakra is Vajrapāṇi ('thunder-bearing') *par excellence*, the representation of Buddha-*cum*-Vajrapāṇi can only be regarded as evolved from an originally dual divinity, like Mitra-Varuṇa, etc. of Vedic literature, composed of Buddha and Śakra (= Vajrapāṇi), with Śakra reduced to a subordinate position. Many such sculptures come from the Swāt valley where, according to Yuan Chwang, local legend related what Buddha had done 'when he was Śakra'. Associated with the source of the river Swāt (Su-po-fa-su-tu, 'Suvāstu') is another legend, also preserved by the Chinese pilgrim, which makes Buddha take the *Vajra* from Vajrapāṇi in order to bring to terms

the dragon-king who was afflicting people with rains and wind,—clearly a Buddhist edition of the Indra-Vṛitra myth.

There are coins of the so-called 'Nameless King', found almost exclusively at Mathura, which depict the thunder-bearing Zeus or Śakra on reverse; these show that even in the Mathura region there was a community devoted to the worship of Śakra or Zeus. The reverse-type closely resembles some coins struck by Azes as well as issues bearing the joint names of Azes and Spalirises found most plentifully in Kandahar and Seistan. Its ancestry can be traced back to Bactria. Coins of Bactrian Greeks figure Zeus hurling thunderbolt, with aegis on one arm as reverse-type. Diodotus (I or II) and Euthydemus I strike the type. Demetrius, on his bilingual silver clearly intended for Indian currency, varies the type by substituting the sceptre for the aegis, the god being represented as holding, instead of hurling, the thunderbolt. Heliocles follows Demetrius in his silver issues; and his Scythian conquerors mint the type in copper. Archebius presents the thunder-bearing Zeus in two poses: in one, the deity holds sceptre and hurls thunderbolt; in the other, he holds aegis and hurls thunderbolt; both being manifestly varieties of the representations of Zeus in the two series, Bactrian and Indian. Since Greek coin-types were local in character, it is reasonable to infer that these coins were meant specially for areas where worship of Zeus prevailed. The idea seems to have originated with Bactrian Greeks intent on conciliating Scythians who, as Herodotus (IV. 59) assures us, were in the habit of propitiating Zeus. It is interesting to observe that according to the same authority the Scythians regarded the Earth as the consort of Zeus—an idea akin to the Vedic concept *Dyāvā-Pṛithivī*, of which the first element (*Dyauḥ*) has been philologically identified with the name *Zeus*.

Concerning Taxila, we may observe that the local coin-type initiated by Antialcidas (whose rule over Taxila is epigraphically attested by the Besnagar inscription of his envoy Heliodorus) shows on *obv.* the 'Head of Zeus, holding sceptre' (really the king, posing as Zeus) and on *rev.* 'Palms and Pilei of Dioscuri', that is, the twin-sons of Zeus. The same reverse-type is employed by the Satrap *Liaka Kusulaka* whose name occurs on the Taxila copper-plate; and his son figures on the Lion-Capital itself as *Kusullaa Patika* in section G which was inserted, as we have seen, shortly before P-O-R-J'. It is likely that, when Patika removed from Taxila to Mathura, a part at least of his *entourage* accompanied him to his eastern seat of government; and *Takshila K(r)ochh(r)ana Belaśamuś* (sections R-J') may have been a person belonging to the same *milieu*.

The name *K(r)ochh(r)ana Belaśamuś* reminds us of *Belasamisa Gushaṇasa* in line 3 of the Takht-i-Bahai inscription incised in the year 103 of what is generally admitted to be the

(Vikrama) era of 58 B.C. (i.e. the year A.D. 46), being also the year 26 in the reign of Gondophernes. It is not impossible that the same person is intended. From the phonetic standpoint, *K(r)ochh(r)ana* might well correspond to the style we generally represent as 'Kushāṇa'; the word was, even on Kushān coins, variously spelt; *XOPANCY*, *KOPΓOΛOY*, *KOϕANO*,—all these are found, and they betray the uncertainty felt in transcribing the second syllable in Greek or modified Greek. The vocalization in *K(r)o* corresponds to *X O-*, *K O-*, of the coins; that is to say, it may represent a Greek pronunciation of *K(r)u*, just as *Takshila* represents a Greek pronunciation of *Takshaśilā*. There is enough resemblance between *Belaśamuśo* of Mathura and *Belasamisa* of Takht-i-Bahai to justify us in presuming phonetic identity; the name may perhaps be composed of Babylonian *Bel* and *Shamash*, where *Bel* means 'lord', 'master' (*cf.* art. 'Bel' in Encycl. Britt., 11th ed.) and *Shamash* is a god's name. We have already (*supra*, p. 17) noted correspondence between the name *Habani* (of section A herein) and *Habban*, an 'Indian' merchant figuring in the *Acts of St. Thomas* in association with Gondophernes. And it has been shown elsewhere[1] that the king reputed to have put St. Thomas to death was most probably *Mastāna* whose torso was found in the Kushān statue-house near Mathura and whose name can be reconstructed out of the Ethiopic versions of the *Acts*. Mastāna must have been a 'Kushān', since his statue was set up with that of Kanishka in the same statue-house, evidently for purposes of worship as implied in the term *devakula* ('temple') applied to it in the foundation-record incised on the pedestal of another image labelled as *mahārājo rājātirājo devaputro Kushānaputro shāhi Vama-Takshamasya*.

If these links are considered together, we shall probably have to revise our notions regarding the manner in which Śakas were supplanted by Kushāns. A process of infiltration seems to have operated. We know from coins that Gondophernes succeeded to the Manes-Azilises-Azes group by associating himself with Aśpa-varmma, the *strategos* of Azes; and Sasa, nephew of Aśpa, afterwards struck coins under the new master. Quite possibly, when the Śaka empire in N. India was thus hastening to its end, its eastern provinces, hitherto ruled over by mahākshatrapas and kshatrapas, passed under Kushān administration as the result of a *coup d'état*. The fact that the Sarnath inscription dated in 'year 3' in the reign of Kanishka mentions local rulers bearing Scythian names with the titles *mahākshatrapa* and *kshatrapa* points to a bloodless revolution rather than a sanguinary conflict having ushered in Kushān rule over Eastern India.

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[1] Deb, *JPASB*, 1933, pp. 311-2.

First Inscription.

(H. H) dhamadana guhavihare viya[a]ka[dha][varo]

(M)	(I and J(1)-J(2))	
1. kshatrave Śuḍise	4. Veyaüdaka-	8. kadhavaro Bubusapa
2. imo paḍhravī	5. ro kadha	9. rvat(r)aparena palich-
3. prat(r)eśo	6. varo	chhina
	7. viyaa	10. nisimo karita niyat(r)-
		it(r)o

(J(3)) 11. Sarvastivat(r)ana parigrahe

(K-L) { 12. ayariasa
13. Budhat(r)evasa
14. ut(r)aena ayimita

Translation.

'*Religious gift to the cave-monastery—the encampment of victory.*'

'By kshatrapa Śuḍisa, this piece of land—Veyaüdakara—the encampment of victory, limited in boundary by what is beyond the rock Bub(b)usa is made *nissima* (i.e. an appurtenance just outside the limit of the cave-monastery) (and) is granted for the acceptance of the Sarvāstivādins.'

'Of the āchārya Budhat(r)eva. Received with water.'

Second Inscription.

(A)

1. mahakshatravasa Rajulasa
2. agramahesh(r)i Ayasia
3. Kamuia dhit(r)a
4. Kha(r)raostasa yuvaraña
5. mat(r)a Nada Diakasa [taye ?]
6. sadha mat(r)a Abuhola [e]
7. pit(r)amahi Pishpaś(r)ia bhra
8. tra Hayaürana sadha Habanisa
9. astraürena horakapa
10. rivarena iś(r)a praḍhraviprat(r)e
11. ś(r)e nisime śarira prat(r)iṭhavit(r)o
12. bhak(r)avat(r)o Sakamunisa Budhasa
13. [Maśa]kitri-rayasaśpae bhusaṁvita
14. thuva cha sagharama cha chat(r)u
15. diś(r)asa saghasa Sarva
16. stivat(r)ana parigrahe

(E(1)(2)(3)-E′)		(B-D)	
17.	Kha(r)raosto yuvaraya	20.	mahakshatravasa
17*a*.	Kamuïo	21.	Rajulasa putra
18.	Khalamasa kumara	22.	Śuḍase kshatrave
19.	Maja kaniṭha	22*a*.	Naülube
		(C) 19*a*.	Kalui a
		19*b*.	varajo

(E(4)-E″) 23. samanumot(r)ak(r)a karita

(F) 24. Budhilasa Nak(r)araasa

25. bhikhusa Sarvastivat(r)asa

Translation.

'By Ayasi, chief queen of mahākshatrapa Rajula, native of Kamboja, daughter of *yuvarāja* Khar(r)aosta, mother of Nanda Diaka, (by her ?), along with her mother Abuhola, her father's mother Pispasri, her brother Havaüara, along with the body of Star-observing Horakas (astrologers) of Habani, is established, in this piece of land made *nissima* (i.e. an appurtenance just outside the limit of the cave-monastery), the corporeal relic of the Lord Śākyamuni, also, for merit to the (? the three Maśaki) Kings, a *stūpa* imbedded in earth, also, a *saṁghārāma* for the Four Quarters of the Saṁgha—for the acceptance of the Sarvāstivādins.'

'Khar(r)aosta, the *yuvarāja*, a native of Kamboja; Khalamasa, the *kumāra*; Maja, the *kanishṭha* (i.e. youngest of the brothers); [Kalui, the *avaraja* (i.e. born afterwards)—added with a caret] ;—made co-assenters by kshatrapa Śuḍasa, native of Naüliba, son of mahākshatrapa Rajula.'

'Of Budhila, native of Nagara, a Sarvāstivādin *bhikshu*.'

Third Inscription.

(N-Q)

1. ayariasa Budhilasa Nak(r)arak(r)asa bhikhu
2. sa Sarvastivat(r)asa sag(r)a
3. re Mahasaghia na pra (ma)
4. ñavit(r)ave Khalulasa
5. Khardaasa
6. kshatravasa

Translation.

'According to the promise (*saṁgara*) of the *ächārya* Budhila, a Sarvāstivādin *bhikshu*, native of Nagara, correct apprehension (*pramā*) not to be taught to any Mahāsāṁghika.'

'Of kshatrapa Khalula Khardaa.'

Fourth Inscription.

(G)

1. mahakshatravasa Kusullaasa Patikasa Mevaki(sa) Miyikasa kshatravasa puyae

Translation.

'In honour of mahākshatrapa Kusullaa Patika (and) of kshatrapa Mevaki Miyika.'

Fifth Inscription.

(P-O-R-J')

1. sarvasa Sak(r)asta
2. nasa puyae
3. sarvabudhana puya dhamasa
4. puya saghasa puya
5. Takshilasa
6. K(r)ochh(r)anasa
7. Belaśamu
8. śo

Translation.

'In honour of all Śakrasthāna! Honour to all Buddhas! Honour to Dharma! Honour to Saṁgha!'

'Of K(r)ochh(r)ana Belaśamuś, native of Taxila.'

Reference.

For plates please refer *Corpus Inscriptionum Indicarum*, Vol. II, Sten Konow, *Kharosthi Inscriptions*.

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ARTICLE No. 3.

A Note on a Unique work on Vedānta.

By CHINTAHARAN CHAKRAVARTI.

The Royal Asiatic Society of Bengal possesses a manuscript of a unique work on Vedānta called the *Saugata-sūtra-vyākhyānakārikā* and attributed to Kumārila Svāmin. A brief account of the work is given below with a view to drawing attention of scholars.

The manuscript which is hopelessly corrupt consists of 222 verses divided into three chapters, containing respectively 66, 81 and 75 verses. The origin and nature of the work is explained both in the beginning and the end.[1] But I am afraid, the explanation does not appear to be clear and helpful in appreciating the actual position. It refers to a Śivasūtra, composed in response to questions of Sugata, on which a commentary with a metrical summary as represented by the work under review was composed by Kumārila. The work is of the type of the *Upadeśasāhasrī* of Śaṅkara and contains a number of beautiful verses (I. 63, II. 47, 74).

It begins with an obeisance to Śiva.[2] The object of the work is stated to be an exposition of the real nature of Self and the refutation of Dualism.[3] So, the definition of Self is discussed and views of other schools including those of the Vijñānavādins are refuted (I. 29). A eulogy of *knowledge* closes Chapter I.

Chapter II speaks of Pratyagātman, Māyā and the identity of Ātman, Brahman and Paramātman.

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[1] शिवार्थं सुगतप्रश्नं शिवो व्याकृतवान् स्वयम् ।
शिवप्रश्नः स तत्सूत्रसारव्याख्यानमारभे ॥ I. 3.
प्रश्नं शिवार्थं सुगतस्य चक्रे यमुत्तरोक्त्या निहतं शिवोयम् ।
स वै शिवप्रश्न इति प्रसिद्धस्तत्सारसूत्रार्थनिरूपणोयम् ॥
शिवप्रसादेन विनिश्चितार्थः शिवोक्तसूत्रस्य विधाय भाष्यम् ।
इमाः सुसंछिन्नतदर्थकारिकाश्चकार षड्बुद्धिमुदे कुमारिलः ॥ III. 74-5.

[2] अवाङ्मनसगम्यस्य गुणातीतस्य वर्णनम् ।
गुणाश्रयतया यस्य सोऽनु[ग्र]ह्णातु नः शिवः ॥ I. 2.

[3] अथात्मनःपुमर्थाप्त्यै द्वैताभावप्रसिद्धये ।
आत्मकामस्य षड्वृद्धा आत्मतत्त्वं विविच्यते ॥ I. 20.

Chapter III discusses the nature of *Mokṣa*, praises monism, refutes dualism and incidentally refers to five mental states and three sources of knowledge (III. 21-22).

Of works, authors and schools of philosophy referred to in various connections mention may be made of Yogabhāṣya (I. 9), Bādarāyaṇa (I. 16), Sāṃkhya (I. 48), Bṛhadāraṇyaka (II. 6), Vyāsa (II. 39), Vyāsasūtra (II. 40), Gautama, Akṣapāda and Kapila (III. 8–10), Karmamīmāṃsaka (III. 34) and Kāpila (III. 39).

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ARTICLE NO. 4.

Rāja Bīrbal—A Biographical Study, and an account of his articles of worship.

By B. PRASHAD.

Count von Noer [1] remarked 'of the many famous sovereigns of the East, few are comparable with Akbar and to him indisputably belongs the first place among the rulers of Hindustan. Not only was he equally great as a man, a warrior, and a statesman, but his reign fell at a time fitted to afford the freest play to his eminent qualities.' Beveridge [2] added his testimony to the above by stating 'The many-sided Akbar was a epitome of all the great Emperors, including Augustus, Trajan, Hadrian, Marcus Aurelius, Julian and Justinian.'

One of the great institutions of his august reign was the *Nau Ratana* (*Navaratna*) or the 'Nine Jewels'. These his 'nine friends', as Vincent Smith [3] designated them, were Rāja Bīrbar or Bīrbal, Rāja Mān Singh, Rāja Tōdar Mal, Ḥakīm Humām, Mullā Dūpiyāza, Faiḍī, Abūl Faḍl, Mīrza 'Abdur Raḥīm Khān Khanān and Tānsēn. The question has recently been discussed in an interesting contribution by Rao Bahadur G. S. Sardesai [4] which was read at the Akbar Quarter-Centenary Celebrations at Bombay in 1942. In place of 'Abdur Raḥīm Khān Khānān he has substituted Bairām Khān, which is hardly correct, and he also includes Badā'onī in the list. *En passant* it may be noted that a very interesting painting of the *Navaratna* is exhibited in the Victoria Memorial Hall at Calcutta. Rāja Bīrbal was one of the brightest jewels of this august assemblage, and his tragic death in 993 A.H. (February, 1586) in the 30th year of the reign cast a gloom over the Court. On hearing of the death the Emperor did not take any food or drink for two days, and is reported to have remarked 'Alas! they could not even get his body out of the pass, that it might have been burned.' [5] A court mourning was ordered, and later a second mourning [6] was observed when an impostor's story of Bīrbal being alive proved without foundation.

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[1] Fredrick Augustus Count of Noer, *The Emperor Akbar*, translated by A. S. Beveridge (Calcutta, 1890) I, Preface, p. 1.

[2] Beveridge, H. in *Tūzuk-i-Jahāngīrī*, translated by A. Rogers, edited by Beveridge, H., (London, 1914), II, Preface, p. 1.

[3] Vincent, A. Smith, *Akbar The Great Mogul*, (Oxford, 1919), p. 359, note.

[4] Sardesai, G. A., *Modern Review* for August, 1943, pp. 129–133.

[5] *Muntakhab-ut-Tawārīkh* II, translation by Lowe (Calcutta, 1924), p. 164.

[6] *Op. cit.*, p. 369.

Bīrbal's personality has unfortunately been greatly maligned at the hands of the contemporary historians. They all appear to have been extremely jealous of the very great influence which he had over the Emperor, but even so the most bigoted of them and one who probably hated him the most, Mullā 'Abdul Qādir Badā'onī could not but recognize his great merits, for he says: فهمی و ادراک بلند داشت i.e. he had a considerable amount of capacity and genius—and in regard to his influence over the Emperor he added 'it became a case of "Thy flesh is my flesh and thy blood my blood"' (لحمک لحمی و دمک دمی بود). Surely such a position of trust and regard with an exceptionally shrewd, clever, and talented ruler, such as Akbar, would have been impossible unless it is admitted that Bīrbal must have been a remarkably clever, capable, accomplished and loyal officer. Vincent Smith and tradition ascribe to him the extraordinary faculty of divining his master's secrets.

Our sources of information in regard to Bīrbal's earlier life are extremely limited, and even for the period of his service under Emperor Akbar one has to build up from stray references in the three contemporary histories, Abūl Faḍl 'Allāmī's *Akbarnāma*, Khwāja Niẓām-ud-Dīn Aḥmad Bakhshī's *Ṭabaqāt-i-Akbarī* and Mullā 'Abdul Qādir Badā'onī's *Muntakhab-ut-Tawārīkh*.[1] Shaikh Illādād Faidī Sirhindī's *Akbarnāma*, Mullā 'Abdul Bāqī Nihāvandī's *Maāthir-i-Raḥīmī*[2], and Firishtah or Muḥammad Qāsim Hindūshāh Astrābādī's *Tarīkh-i-Firishtah* or *Gulshan-i-Ibrāhīmī* do not contain any additional information. This is not strange in view of the fact that the authors of all these works relied mainly on the *Ṭabaqāt-i-Akbarī* for their accounts of Akbar's reign. From amongst the biographical works dealing with the period I have consulted the monumental book on Mughal Peerage *Maāthir-ul-Umarā*[3] by Ṣamṣām-ud-Daulah Shāh Nawāz Khan, completed by his son 'Abdul Ḥayy, *Tadhkirat-ul-Umarā*[4] by Kēwal Rām, and *Darbār-i-Akbarī*[5] by Maulānā Muḥammad Ḥusain Āzād. The account in *Maāthir-ul-Umarā* is a tolerably good summary of the information available in the contemporary histories of the period, and has formed the basis

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[1] *Muntakhab-ut-Tawārīkh*, text II, p. 161 (Calcutta, 1865).

[2] For these works see Prashad, Preface to *Ṭabaqāt-i-Akbarī* translation III, pt. ii, pp. xxxiii–xxxv (Calcutta, 1939).

[3] See Prashad's Preface to the English translation I (Calcutta, 1941) pp. 1, 2 for details of the text edition of this important publication. Bīrbal's biography is printed on pp. 118–122 of Vol. II of the text, and Beveridge's translation I, pp. 420–423.

[4] See Ivanow, V. *Descriptive Cat. Persian Manuscripts in colln. As. Soc. Bengal* (Calcutta, 1924), pp. 71, 72, No. 216, for the MS in the Society's collection and references in regard to the work.

[5] Muḥammad Ḥusain Āzād, *Darbār-i-Akbarī* (Lahore, 1939, Urdu), pp. 295–310.

of the accounts of most later authors. Muḥammad Ḥusain Āzād also notes that he tried to obtain further information about Bīrbal and his literary work from other sources, but without success. Blochmann's [1] account in his admirable translation of the first volume of *Ā'īn-i-Akbarī* is based on *Maāthir-ul-Umarā* with some additional notes, but it unfortunately does not add to our knowledge of the life or achievements of Bīrbal.

A really important contribution on the subject, however, was the work of Grierson [2] (later Sir George Grierson) entitled *The Modern Vernacular Literature of Hindustan* published in the *Journal of the Asiatic Society of Bengal* in 1889, in which he collected most valuable information regarding the Hindi literature, particularly the works of poets, bards, etc. In this work he was able to include notes about Bīrbal's life based on Todd's *Rājasthān* and Sib Singh Segar's *Sib Singh Saroj*,[3] an important anthology of the Hindi poets about whom very little information was hitherto available. This formed the basis of Vincent Smith's [4] account of Bīrbal in his biographical work *Akbar the Great Mogul*. The interesting pamphlet entitled *Mullā Dūpiyāza and Rāja Bīrbar* (Bīrbal) by Muḥammad Ṭāhir [5] in Urdu is an interesting account of these noblemen, but the details about Bīrbal's life, such as his early years, education at Lucknow, Lahore, etc. though stated to be based mainly on *Muntakhab-ut-Tawārīkh*, are not confirmed by any historical work. His identification of Mullā Dūpiyāza with 'Abdul Qādir Badā'onī is at variance with Pairamall [6] who identified him with a Mullā of Persian descent. A few useful notes on Bīrbal have also been published by Varaj Ratan Das in his Hindi translation of the *Maāthir-ul-Umarā* [7] in the volume dealing with the Hindū officials, and in *Umrā'ī Hunūd* by Sa'īd Aḥmad.

I give below a brief outline of the life of this great Hindū diplomat of Akbar's reign based on the information in the above sources.

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[1] Blochmann, H., *Ā'īn-i-Akbarī* I (translation, 2nd Ed., Calcutta, 1939), pp. 442–444.

[2] Grierson, G. A., *Journal As. Soc. Bengal*, LVII, for 1888, pt. I, pp. i-xxx, 1–170, i-xxxv (1889). Birbal's account is on pp. 35, 36, No. 106.

[3] Sib Singh Sēgar, *Sib Singh Saroj*, pp. 454, 455 (3rd edn. Newal Kishore Press, Lucknow, 1883).

[4] *Op. cit.*, pp. 236, 237.

[5] *Mullā Dūpiyāza and Rāja Bīrbar* (The name is Birbal all through the text) in Urdu, pp. 1–48 (Delhi, 1927). For a detailed account of Mullā Dūpiyāza Professor H. Mahmud Shirani's learned article in *Oriental College Magazine* for November 1939 may be consulted. I am indebted to Prof. M. M. Haq for this reference.

[6] Pairamall, *Modern Review*, Vol. VIII, pp. 86–89 (1910).

[7] Varaj Ratan Das's Hindi translation of *Maāthir-ul-Umarā* I, (Hindū Nobles), pp. 242–250 (Benares, 1931), *Umrā'ī Hunūd*, pp. 126–139 (Aurangabad, 1932).

His real name was Mahēs Dās, but in his earlier days he apparently preferred to it his *nom-de-plume* Brahm Dat (not Brahma Das as given by Badā'onī [1], or Brahna Das as was incorrectly copied by some ignorant or bigoted scribes of the *Muntakhab-ut-Tawarīkh*). In some works Brahm Kabī [2] is also given as his name, but this does not appear to be correct as he received the title of Kabī Rāy from Emperor Akbar at a later date. His father's name was Gangā Das [3], and according to Sib Singh Segar [4] and Bhūkhan Tripāṭhī [5] (Bhushan Kabī of Chhatar Sāl) of Tikāmpūr (Ṭikmāpūr) in the Kānpūr (Cawnpore) district he was born in *Vikrami* sambat 1585 (1528 A.D.). The latter author also gives Ṭikāmpūr as the place of his birth. Sib Singh Saroj states that his ancestral place was some village in Ḥamīrpūr District in the Allāhābād division. In view of these positive statements it is incorrect to describe him as a native of Kālpī, as most authors have done. Grierson describes him as a Kanaujiya [6] Dube Brahman, while Varaj Ratan Das designates him as a Kanykubja—(a more correct Sanskrit form of Kanaujīya or Qannaujiya as it should be if the Persian orthography is followed). The details of his early life in Muḥammad Ṭāhir's work are, as already noted, not to be found in any historical work. It is essential to direct attention here to an unfortunate error on the part of the Muḥammadan historians and which has been copied in some of the later historical works in English. It is stated that he was a *Bhāt* by caste, and that he was a *Bādfarōsh*. The epithet *Bhāt* in the case of Bīrbal was

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[1] *Muntakhab-ut-Tawārīkh*, text II, p. 161, Lowe's translation II, p. 164. برهمه داس is written wrongly as برهنه داس or the Naked Das which is absurd. Lowe has, in my opinion, incorrectly regarded Badā'onī's epithet گداۓ as a part of the name; this was only an invective used by the author out of scorn for Bīrbal; it only means a poor man, a mendicant or a dervish and cannot be regarded as a part of his name. Similarly his supposed *nom-de-plume* Baramba with the variant Burhiya noted by Beveridge (*loc. cit.*, p. 423) are only copyists' errors for Brahma. See also De's translation of *Tabaqāt-i-Akbarī* II (1936), p. 398, note 2, where a variant from another MS. has almost the same names and descriptions as in *Muntakhab-ut-Tawārīkh*; this was apparently the work of Bādā'onī who was one of the collaborators of Niẓām-ud-Dīn Ahmad in the compilation of the *Ṭabaqāt*, see Prashad, *op. cit.*, p. xviii.

[2] See Grierson, *Journal As. Soc. Bengal*, LVII, Pt. 2, Special Number for 1888, p. 35.

[3] This name is given in the inscription on Aśoka's pillar at Allāhābād, *vide* Varaj Ratan Das's Hindi translation of *Maāthir-ul-Umarā*, I (Hindū Nobles), p. 244, footnote (1931).

[4] *Vide* Grierson, *op. cit.*, p. 128, No. 595.

[5] *Vide* Varaj Ratan Das, *loc. cit.* He is the same as No. 145, p. 61 of Grierson's work.

[6] See Beame's edition of Elliot's *Memoirs on the History etc. of the North Western Provinces of India* (1869), I, pp. 146–153, and Bhattacharya, *Hindu Castes and Sects* (1896), pp. 49–51 and for *Bhats*, pp. 114, 115.

apparently used to signify his profession of a bard, a poet, and a genealogist, and not to indicate his caste. In any case, as has been remarked by Malcolm [1] and Bhattacharya, the *Bhāts* were in spite of their poverty 'the *tiers-etat* in Rajasthan, and the privilege of commenting on the action of their kings, which they possessed and very often abused, was nearly unlimited'. Similarly *Bādfarōsh* should be translated as a *Kabī* or a bard, and not a sycophant or a flatterer, as is implied in the most English translations. According to Badā'onī [2] he was at first in the service of Rāja Rām Chand of Bhatta, now known as the Rēwah State in Baghēlkhand. A reference may also be included to a legend current in Rēwah State: 'The [3] village of Ghoghra (24° 33′ N., 82° 5′ E.), 18 miles west of Sihāwal, in the *Ilāka* of *Kanpura*, is traditionally connected with Bīrbal, Akbar's witty favourite. The story runs that in a small temple here dedicated to Chandī Devī, one Raghubīr Rām, Brāhman of Chandainia village, daily worshipped the goddess for twelve years. He was helped by his sister's son Bīrbal, in keeping the temple clean. One day while the boy was sweeping the temple and Raghubīr Rām was away, he accidentally hurt his little finger and the blood from it stained the goddess's image. This propitiated the goddess and she promised the boy that whatever he prophesied, would turn out right. On leaving the temple the boy met a Kewat fishing. He told the Kewat that a bird was entangled in his hook and drawing up the line a bird was actually found upon it. The same night the goddess appeared to the boy in a dream and told that instead of wasting his power in such follies he should go to the Emperor's court. Accordingly the boy went to Akbar's court, where he soon rose to honour and distinction. Apart from the legend it would appear that Bīrbal was at one time an attendant at the Baghēl Chief Rām Chandra's

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[1] Malcolm, *Central India*, II, pp. 113, 114. The quotation is from Bhattacharyya, *op. cit.*, p. 115. Also see Wilson, *Glossary of Judicial and Revenue Terms*, pp. 78, 79 (London, 1855).

[2] *Muntakhab-ut-Tawārīkh*, text II, p. 335, Lowe's translation II, p. 345. De in the translation of the *Ṭabaqāt-i-Akbarī* II (1936), p. 595 has a long note (No. 3) about Bhatta, which he calls 'the country of Bhatt' and has given references to various readings and works. He was unable to trace the corresponding reference in *Akbarnāma*. The references are text III, pp. 420, 427 and Beveridge's translation III, pp. 624, 636. Blochmann (*op. cit.*, p. 685) identified Bhatta or as he writes Bhath as Panna, and following him Beveridge in his translations of the second and third volumes of *Akbarnāma* has designated Rāja Rām Chand as the Rāja of Panna State in Bundēlkhand, but the territory is what is now known as Rēwah State in Baghēlkhand, Central India, see C. E. Luard, *Rewah State Gazetteer* (Central India State Gazetteer Series IV, Lucknow, 1907), p. 1. He gives the name of Rāja as Rām Chandra, who ruled from 1555–92, and has included his detailed account on pp. 14–16. For Rām Chand Baghēlah also see *Maāthir-ul-Umarā*, text II, pp. 134–138, and for Baghēlah or Baghel Wilson, *op. cit.*, p. 45.

[3] C. A. Luard, *op. cit.*, p. 82.

court.' Later, according to Todd [1] he was one of the Court poets of Rāja Bhagwān Dās of Amber or Jaipūr, and this Rāja gave him as a *naẓar* (a present) to Emperor Akbar shortly after the latter's accession. Sib Singh Saroj [2] also mentions this in his biography. No reference to this transaction, if it may be called as such, is made in *Akbarnāma*, *Ṭabaqāt-i-Akbarī* or *Muntakhab-ut-Tawārīkh*, but relying on Todd's statement, apparently based on his personal enquiries in Jaipūr, the date of his introduction into Akbar's Court cannot be placed earlier than February, 1562, when Rāja Bihār Mal with his son Rāja Bhagwān Dās and grandson Rāja Mān Singh first came to Akbar's Court near Ajmer, and the Emperor was married to Rāja Bihār Mal's daughter at Sambhar [3]. Grierson, apparently on the authority of Sib Singh Segar, states that at this time he used to sign himself as Brahm Kabī in his poems. But according to the *Ṭabaqāt-i-Akbarī* [4] he was first given the title of Kabī Rāy, and later of Rāja Bīrbar (the Hindī meaning of this title are detailed there at length as *Bīr* meaning a brave or hero, and *bar* great, i.e., the Rāja who is brave and great) when Nagarkot was bestowed on him by Emperor Akbar as his *jāgīr* in 980 A.H.[5] (1572-73 A.D.). Blochmann, Āzād and Vincent Smith all state that he probably never enjoyed this *jāgīr* of Nagarkot, but in the account of the 26th year's reign in *Akbarnāma* it is recorded that he welcomed the Emperor and offered his tribute at Dasūha [6], in the Nagarkot territory, which was in fief.

Prior to this in the 14th year he already must have been a man of some influence at the Court, for he introduced to the Emperor the Ambassador or Kajlī (Cochin?) who had been waiting from some time to offer as a tribute a wonderful knife on behalf of his master.[7]

In the 17th year [8] he was sent with other officers to the Panjāb to safeguard against the threat of an invasion by Ḥakim

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[1] Todd's *Rajasthan*, II, p. 390 (Calcutta edn. 1877–79).

[2] *Op. cit.*, p. 455.

[3] *Akbarnāma*, text II, pp. 157, 158, Beveridge's translation II, pp. 243, 244.

[4] *Ṭabaqāt-i-Akbarī*, II, De's translation, p. 399.

[5] Nagarkōt, according to *Akbarnāma*, text II, p. 370, Beveridge's translation II, p. 538, was assigned to Bīrbal in the 17th year, but Nagarkot was not conquered till the following year, and even then only a hurried peace had to be arranged by Ḥusain Qulī Khān owing to the impending attack of the Punjab by Ibrāhīm Ḥusain Mīrzā, see *Akbarnāma*, text III, pp. 36, 37, Beveridge's translation III, pp. 51, 52.

[6] *Akbarnāma*, text III, p. 348, Beveridge's translation III, p. 511. It is Dasuya in the Hoshiarpur District of the *Imperial Gazetteer*.

[7] *Akbarnāma*, text II, p. 342, Beveridge's translation III, p. 500. The knife referred to was probably made of Narhwal ivory, see Rogers and Beveridge's translation of *Tūzuk-i-Jahāngīrī*, II, p. 300 for its supposed properties, etc.

[8] *Akbarnāma*, text II, p. 370, Beveridge's translation II, p. 511.

Mīrzā. In the 18th year [1] he accompanied the Emperor on his famous invasion of Gujarāt, and in the 19th year [2] he was with him in the expedition to Bihār. In the 30th year [3] he was deputed to the Yūsufzā'ī campaign. The choice of the command lay between Bīrbal and Abūl Faḍl and the question was decided by lot. Even then Akbar was reluctant about allowing Bīrbal to proceed on this campaign, but on the latter's insistance he sent him with a large army. The absence of a unified command, the inexperience and petty mutual jealousies of the commanders and finally the haphazard way in which the expedition was carried out resulted in a disastrous defeat for the imperial armies while crossing the Karākar and Malandarī passes, and it was here that Rāja Bīrbal and nearly 8000 of the army were massacred by the Afghāns.

In the 21st year [4] Bīrbal was sent to Dūngarpūr to arrange about the marriage of the daughter of the Rāja with Emperor Akbar. In the 23rd year [5] he was deputed with Saiyid Muẓaffar to Jālandhar (Jullundher) to supervise the removal of the Afghāns from the Panjāb to other areas. In the 25th [6] year Rāja Bīrbal and Shāh Qulī Maḥram were sent to conciliate Mā'ṣūm Khān Farrankhūdī who had rebelled at Jaunpūr. In the 28th year [7] he was deputed with Zain Khān Kōka for bringing Rāja Rām Chand Baghēla of Rēwah to the Court.

Bīrbal, however, spent most of the time at the Court in close attendance on the Emperor, and according to local tradition was with Khān Khānān, Abūl Faḍl and Faiḍī one of the four ministers who were favoured with attendance round the famous throne-pillar at Fatehpūr [8] Sīkrī. He was constantly consulted by the Emperor, and one special occasion was in the 27th year [9] when the Emperor asked the advice of all his leading ministers for improving the administration in the country. Bīrbal's suggestion, which was very judicious and humane was that 'some right-minded and energetic men should act as inspectors in various places and should represent impartially the condition of the oppressed people and seekers after justice and report unavoidable calamities.' In the same year [10] when various leading officials were appointed to supervise sales of different

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[1] *Akbarnāma*, text III, p. 49, Beveridge's translation III, p. 69.

[2] *Op. cit.*, text, p. 87, translation, p. 123.

[3] *Op. cit.*, text, p. 478, translation, pp. 719, 720. For good accounts of the Yūsufzā'i campaign see Raverty, *Notes* on *Afghanistan* (London, 1888), pp. 259–265, and Vincent Smith, *op. cit.*, pp. 232–236. Sardesai is wrong in stating that Bīrbal was killed in the Kashmīr campaign.

[4] *Op. cit.*, text, p. 196, translation, p. 278.

[5] *Op. cit.*, text, p. 248, translation, p. 357.

[6] *Op. cit.*, text, p. 330, translation, p. 484.

[7] *Op. cit.*, text, p. 420, translation, p. 624.

[8] Vincent Smith, *op. cit.*, p. 444.

[9] *Akbarnāma*, text III, p. 380, Beveridge's translation III, p. 559.

[10] *Op. cit.*, text, p. 396, translation, p. 585.

commodities on a commission basis, Bīrbal was appointed in charge of the sale of cattle and buffaloes; the officers were to receive ½% from the purchasers and 1% from the sellers, and the ½% was to be their share. In the 28th year [1] he in company with Abūl Faḍl, Qāsim 'Alī Khān, Hakīm Humām and Shamshēr Khān Kōtwāl was appointed to 'the administering of justice to complainants'. They were not only to be 'satisfied with witnesses and oaths, but make a profound investigation'. In fact this body was established as a final appellate Court of the realm on the lines of the present day Federal Court of India. In view of the above appointments Vincent Smith's conclusion that 'he is not recorded as having held any important office' is hardly justified.

The regard which the Emperor had for him is further borne out by the fact that he had a beautiful house built for him at Fatḥpūr Sīkrī in the 27th year [2], and the Emperor twice attended at his house special feasts which Bīrbal arranged in his honour in the 27th [3] and 29th [4] years. In the 29th [5] year the Emperor even at the risk of his own life saved him from being crushed by an elephant which had run amok. The Emperor also went to his house [6] in the village Akbarpūr Bīrbal [7], which Bīrbal had founded on the banks of the Jamnā some 30 miles north of Cawnpur, in the 28th year. This village was in his *jāgīr* in the Kālinjar Sarkār [8] mentioned by Badā'onī, and whence the false report of Bīrbal having been seen after his death was received at the Court. Finally a reference may be included here to the identification [9] of Salīmgaṛh in the Agra Fort as the *bāradarī* of Bīrbal on the authority of some native historians who have not yet been identified.

In the above account I have not considered it necessary to refer to the religious discussions and wrangles in which he

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[1] *Op. cit.*, text, p. 405, translation, p. 599.

[2] *Op. cit.*, text, p. 397, translation, p. 587. For a photograph of the house see Vincent Smith, *op. cit.*, p. 443 and the plate facing the page, and Percy Brown *Cambridge History of India*, IV, pp. 542, 543.

[3] *Op cit.*, text, p. 397, translation, p. 587; also see Muḥammad Ḥusain Āzād, *op. cit.*, pp. 296, 297.

[4] *Op. cit.*, text, p. 438, translation, p. 657.

[5] *Op. cit.*, text, p. 436, translation, p. 654.

[6] *Op. cit.*, text, p. 415, translation, p. 617.

[7] F. N. Wright, *Statistical, Descriptive and Historical Account of the North-Western Provinces of India*, VI, p. 203 (Allahabad, 1881). Grierson notes that his descendants still exist in the Nārnaul quarter of the town (*op. cit.*, p. 36) and Sib Singh Segar (*op. cit.*, p. 455) records that the remains of beautiful buildings erected by him are all still to be found there, and that he founded the place at the instance of the Emperor.

[8] See Badā'onī, *Muntakhab-ut-Tawārīkh*, text II, pp. 357, 358, Lowe's translation II, p. 369.

[9] *North-Western Provinces Gazetteer*, VII, p. 690 (Allahabad, 1884) and Nur Bakhsh in *Annual Report Arch. Surv. Ind.* for 1903-04), p. 169 (Calcutta, 1906).

was often involved with Badā'onī and other Muhammadan ecclesiasts; these are recorded in second and third volumes of the *Muntakhab-ut-Tawārīkh*. Nor have I discussed his *bon-mots*, jokes, parables and short stories which are still current in almost all parts of Northern India. All these are of no historical interest. Bīrbal it may be noted was a *Kabī* of no mean order, a skilled musician, and was well known for his liberality and good nature.

Two of his sons Lālā and Har Rāy held minor offices during Akbar's time, but none of them rose to any high rank.

From the above it is clear that Bīrbal was not merely a story-teller, and a conversationalist whom only his *bon mots* made a favourite with Emperor Akbar. He was an officer of the rank of 2000 horse [1], and besides being attached to various military expeditions was often sent on diplomatic missions of great importance. He was certainly an exception amongst all grandees of Akbar's Court in not having been admonished for any shortcomings on any occasion whatsoever. He was the only Hindu member of Akbar's universal religion *Dīn-i-Ilāhī* [2]. It would be wrong to assert that he became a convert to this new religion simply to please the Emperor, rather it is suggested that he was fully satisfied about the soundness of its principles. In this connection it should not be forgotten that as a Brahman he was a devout Hindu as is evidenced by his articles of worship which have now come to light, and his pilgrimage to Allāhābād in 1576, while in the earlier years of the reign he was instrumental in making the Emperor take to Sun worship [3]. In Akbar's regime he held a very high place being connected with the commerce department and the administration of justice. He would certainly have risen much higher but for his untimely death in the Yūsufzā'ī campaign.

As an appendix to the above account I propose to include here a short description of certain articles of worship of Rāja Bīrbal. These articles were recently acquired by my friend Rai Bahadur Radha Krishna Jalan of Patna City from a hoard in the possession of an old family now fallen on evil days in the United Provinces. I wish here to express my sincere thanks and gratitude to him for giving me an opportunity of examining and describing this valuable find.

These articles of worship are made of solid silver inlaid with gold and copper and are excellent examples of high class Bidri work. Leaving aside the intrinsic value of gold and silver their importance lies not only in the fact that they are excellent

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[1] *Ṭabaqāt-i-Akbarī*, II, De's translation, p. 674. Sib Singh Saroj, *loc. cit.*, p. 445, is incorrect in stating that he had attained the rank of 5,000.

[2] For a critical account see Vincent Smith, *op. cit.*, pp. 209–422.

[3] See Badā'onī *Muntakhab-ut-Tawārīkh*, text II, pp. 260, 261, Lowe's translation II, p. 268.

dated specimens of Bidri-ware, nearly 400 years old, but also because they bear the name of the owner and the dates on which he acquired them, in both the Vikrimī *samat* and the Salivāhan śāke. They also enable us to judge the social and material position of their owner, Rāja Bīrbal, at the time noted in the inscription.

The *pancha-pātra* (Figs. 3, 4) or the flat-bottomed basin for water used in the course of the ablutions is $3\frac{3}{4}$ inches high; and $3\frac{1}{4}$ inches in diameter. The presence of shallow depressions in the centre of its bottom seems to indicate that it was made on some type of a turning wheel or lathe, and this is confirmed by its very regular outline and shape. It has an outwardly projecting rim about half-an-inch broad along its upper edge. Both the rim and the outer surface of the basin are worked in Bidri style, and the main motive is the *Kalika* or conventionalized mango design with a branch of leaves filling up the central space. Above and below this motive are a row of heart-shaped petals with two rows of ovoidal leaf-like figures on either side. The spaces between the 8 main *Kalikas* are filled in by well-chased gold leaves. The outlines of the *Kalikas*, about $\frac{1}{8}$ of an inch broad, are in gold and so are the heart-shaped motives, while the foliage and smaller leaves are of copper. The motive on the rim consists of very regularly laid out ovoidal leaves in a single row, in gold, filling up almost the entire surface.

The *tāmra-kunda* (Figs. 5, 6) or the flat-bottomed plate is $7\frac{5}{8}$ inches in maximum diameter at the top and has a diameter of $5\frac{7}{8}$ inches at the bottom; it is about an inch deep. The motive of the *pancha-pātra* is repeated on this plate, except that there is a circular stellar design in the centre surrounded by a circlet of 8 Kalika designs. The heart-shaped gold bits on the rim are, owing to their small size, not so well executed as those on the rim of the *pancha-pātra*.

Both these vessels bear the inscriptions 'Shrīmān Mahārāj Brahm Dat, *saṃat* 1608, *śāke* 1473' reproduced in photographs 4 and 6 respectively. The date according to the Christian era would be 1551 A.D. about 11 years before Bīrbal's introduction to Emperor Akbar's Court.

The *Āchamanī* (Fig. 7) or the spoon used in the course of ablutions is about 5 inches long. The spoon end, which is slightly, less than an inch in diameter, is not quite circular but octagonal, and bears 8 low ridges on its inner surface, and at the bottom has a solar design in gold. The handle is fluted above and there is a bird figure on either side where it is joined to the spoon-end. The other end of the handle has an image of the god *Gaṇeśa* with a five-headed hooded cobra forming an umbrella over the image. In Madam Getty's [1] excellent monograph

[1] Alice Getty, *Gaṇeśa, A Monograph on the Elephant-faced God* (Oxford, 1936).

on *Gaṇeśa* I have not found any figure corresponding to this representation of *Gaṇeśa*. It may be noted that though gold chasing in three rows is to be found on the stem, no gold inlay has been used on the figures of *Gaṇeśa* or of the cobra.

The last item, the most interesting of the list, is a standing image of *Nṛitya-Gopāla* (Fig. 1) fitted on a beautifully executed pedestal, and a *prabhāvali* fixed by struts behind it. The pedestal (Fig. 2) underneath bears an inscription similar to those on the other vessels except for the dates, both *samat* and *śāke*, which are six years later, *viz.* 1614 and 1479 respectively.

The pedestal is roughly 4 inches square, and about 2 inches high with a grooved-in space in which the image is slipped in from behind, and two rectangular slots for the fitting in of the *prabhāvali* on the sides. The pedestal is ornamented with a row of inverted heart-shaped golden petals joined together by regular arcs connected with one another on the outer bases. The same design is repeated over the hollow groove for the reception of the image, while the flange next to it bears a single row of stellar petals. The main bevelled surface is ornamented with a beautifully executed foliage design in gold. It is interesting to note here that the *Kalika* design is not used in the ornamentation of the pedestal or the image.

The *prabhāvali* stands some 6 inches high with the struts about an inch long fitted into the pedestal. It is an ornamented ring, somewhat ovoidal in outline with a maximum breadth of about 5 inches, and represents a halo of flames (*jvālās*) shown in conventional curls round the periphery. The flames or *jvālās* are executed in gold, while the central ovoidal pivot about $\frac{3}{4}$ inch in height bears a stellar design in gold.

The image of *Nṛitya-Gopāla* is some 3 inches in height and is standing on a *padma-pīṭha* or the conventional lotus flower base about $1\frac{1}{4}$ inch in diameter. It is an image of the young *Kṛiṣṇa* in the dancing attitude resembling in general the *Navanīta-nṛityamūrti* bronze figured by Rao [1]. The right foot is made to rest on a *śaṅkha* to provide better attachment to the pedestal, and the hands are held in a *Kaṭaka-hasta* or pose. There is no *makuṭa* on the head and the hair are coiled into a prominent knot behind the head in the characteristic South-Indian style. The ears are large and bored in the lower lobe; they are supported by a broad lapel connected with the shoulders somewhat similar to the type reproduced in Madam Getty's figure of *Bāla-Kṛiṣṇa*.[2] It is a nude figure, but is embellished with ornaments, such as a necklace with an amulet in the centre worked in gold, a waist-band, bangles round the wrists, and anklets on the legs and the feet.

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[1] T. A. Gopinath Rao, *Elements of Hindu Iconography* I, pt. i, p. 206, pl. lx, fig. 1 (Madras, 1914).

[2] Alice Getty, *op. cit.*, pl. xv, fig. *b*.

These articles are of a polished chocolate brown or bronze colour which appears to be due partly to oxidation during the process of manufacture, and partly to their age. These articles of worship with the name Brahm Dat inscribed on them, and the dates 1608 and 1614 *samat*, eleven and five years earlier than his introduction to Emperor Akbar's Court, indicate that Bīrbal at the time must have been a man of position and means, and not a mere nobody. Unfortunately very little information is available regarding the exact history of these vessels, and one must add a word of caution regarding the possibility of their being fakes, though in view of their historical value not having been realized at the time of their sale, this is hardly likely.

I have to express my great indebtedness to Rao Bahadur K. N. Dikshit, the late Director-General of Archaeology in India, for his expert advice in reference to these articles of worship and for lending me several books from his departmental library.

Explanation of Plate.

All the figures are direct reduced photographs of the articles of worship of Rāja Bīrbal.

Fig. 1. The image with the pedestal and the *prabhāvali*. Front view.
Fig. 2. Pedestal from below showing the inscription of the name of the owner and the date.
Figs. 3, 4. Side view and base of the *pancha-pātra*.
Figs. 5, 6. Upper and lower views of the *tāmra-kunda*.
Fig. 7. *Āchamanī* seen from above.

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Articles of Worship of Rāja Bīrbal.

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Volume X, 1944.

ARTICLE No. 5.

A New Discovery referring to Marco Polo's Departure from China from the Chinese Source.

YANG CHIH-CHIU.

(*Communicated by Dr. Kalidas Nag.*)

Much has been done to the solution of the many puzzled questions in the book of Marco Polo. The identification of places, the interpretation of strange terms and the illustration of obscure customs, all these have been largely worked out by the laborious researches of the lovers of this traveller. Little, indeed, has been left unexplained about the numerous statements which Marco gives in his book and which may seem curious and incomprehensible at first sight.

There remains still, however, a great deal of puzzles about the circumstances of our traveller's personal history. Marco resided in China for a long time; no one nowadays doubts this fundamental fact; but none, alas! has been able to find any mention of him from Chinese sources of information. Pauthier's assertion, supported by Chang Hsing-Lang and Charignon,[1] that the 'Polo' found in the Chinese annals of the Mongol Dynasty (Yuan-Shi), who was nominated as a second class commissioner or agent attached to the Privy Council in the year 1277, refers to our author Marco Polo, has been refuted by M. Pelliot.[2] Since then, no satisfactory identification has been made of Marco Polo from Chinese materials of history.

I have found in a Chinese book an official document which I think refers to the doings of Marco Polo in China, with the only omission of his name in it. The passage runs as follows:

'On the 17th day of the 8th month of the 27th year of Chi-Yuan (September 21, 1290) Minister A-Nan-Da and another official, Bieh-Bu-Hua present jointly a petition to the court, saying:

'We have received a petition from Minister Sha-Pu-Ting which reads:

'On the 3rd month of this year (April-May 1290) the three lords U-Lu-Tai, A-Pi-Shi-Ha and Huo-Jeh have arrived here who are despatched to the Kingdom of the great king

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[1] *Pauthier's text of Marco Polo*, p. ix and p. 361.

Chang Hsing-Lang: *The 'Marco Polo' in the Chinese Books of History*, an article profaced to the introduction to his Chinese translation of The Book of Ser Marco Polo.

A. J. H. Charignon's *preface to his version of Pauthier's text of Marco Polo.*

[2] See Pelliot's article in *T'oung Pao* of 1927-1928. Pp. 156-169.

A-Lu-Hun, by the way of Ma-Pa-Rh. Accompanying them are one hundred and sixty persons, among whom ninety have been given their share of government provisions. I have been informed that the remaining seventy are only persons sent as presents (to be slaves to the three lords) by other officials, or bought by them. I beg therefore that provisions be not given to them.'

'The decree of the Emperor after reading this petition is: Let shares of provisions be not given to them!'

The above passage is taken from a Chinese book entitled Jan-Chi, which is an odd collection of governmental documents containing regulations and ordinances regarding the post system in the Mongol period, and abstracted from the Chinese Encyclopaedia, Yung-Lo-Ta-Dian (now missing), composed in 1408. An examination of it gives us much light on the relation existing between it and what has been described in the book of Marco Polo. In his book (see the Book of Ser Marco Polo, of Yule and Cordier's third edition, the 17th chapter of the prologue, pp. 31–33) Marco tells us that Argon, the lord of the Levant (i.e. Persia) had sent three barons as ambassadors to Cathay to request a Mongol lady for his bride from the great Caan Cublay. The names of the three barons were Oulatay, Apusca and Coja. When a maiden was given to them, they decided to return by the sea route and asked Marco's family (i.e. Marco, his uncle and his father) to travel with them. A comparison of this chapter with the above Chinese document will show that there is much coincidence between them. For it is very easy, by similarity of pronunciations between the two sources, to identify the Oulatay of Marco Polo with U-La-Tai of our Chinese document, Apusca with A-Pi-Shi-Ha, Coja with Huo-Heh and Argon with A-Lu-Hun. What interests us more is that not only are the names of the three barons of the two sources similar in the two sources, but the order in which they are enumerated in the two books is also the same. And, to complete their coincidence, Ma-Pa-Rh of the Chinese material corresponds obviously with the 'Maabar' of Marco Polo, which is the name of the south-east coast of modern India; and their returning to A-Lu-Hun (Argon) through this place as related by the Chinese passage suggests that the three lords were decided to take the sea route, as was reported by Marco Polo.

It is very safe, therefore, to conclude that the three lords in the Chinese document are the very three barons sent by Argon of Persia as ambassadors to China, and at the time when the petition was written Marco Polo was with them, though his name was not included in the petition.

Another light is thrown to us in the person of Sha-Bu-Ding of our document. According to the Mongol Annals (Yuan-Shi, vol. 16), Sha-Bu-Ting was a minister of the province of Chiang-Huai, in the year 1290, and Ch'uan-Chou, the Zayton of Marco

Polo, was a port then governed as part of this province (see vol. 62 of the Yuan-Shi). So we infer that at the time when the petition was presented, Marco Polo and the three ambassadors were staying at the port of Zayton.

So far as our knowledge goes, the above passage is the only information we can get from Chinese sources about Marco Polo's stay in China. The absence of his name in this passage is surely very regrettable, but not altogether without compensation. For it gives us light on the position Marco held in the Mongol court. If he had held a high rank in the government, his name should not be omitted in the Chinese petition. We derive from this that the office Marco served in China could not be so exalted as he would have us believe, and this serves as an explanation why it is difficult to find from Chinese materials of history any mention of his name who has left so gloriously a reputation in the western world, and whose book has led to the discovery of America.

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ARTICLE NO. 6.

Some Etched Carnelian Beads from Egypt.

By TSOMING N. SHIAH.

(*Communicated by Dr. Kalidas Nag.*)

Etched carnelian beads have designs in white colour chemically produced on red carnelian by etching and heating. This technique is still known to the Indian bead-maker at Sindh, who produces the white pattern by soda treatment and heating.[1] In Beck's comprehensive article on ancient etched carnelian beads, he says that the only definite case of specimens of this process for Egypt is a scarab of Amenhetep I.[2] When the writer was working on ancient Egyptian beads in London, he found three etched carnelian beads from Egypt in the Petrie Collection in the University College, University of London. The most interesting piece among them is one dated to the Eleventh Dynasty. It was found by Petrie in the Tomb 197 at Abydos in 1922, but so far has not been published. Besides the specimen in question, the tomb contained many small ring-beads of blue faience and the 'Antef Stelae' which alone has been published in the Report.[3] This tomb has been dated to the Eleventh Dynasty with a fair certainty by the 'Antef Stelae'. The faience ring-beads have a thick and brilliant glaze with a rich deep blue tint, and are characteristic of the Middle Kingdom. Our specimen is a barrel-shaped bead and is etched with an eye-pattern combined with a chevron design (fig. 1), a typical pattern of the beads of the 'Early Phase (before 2000 B.C.)' in Beck's article.[4] This type of beads was fairly common in Mesopotamia from the Protodynastic times down to the Sargonic period centring upon the Third Dynasty of Ur[5] and has been found also in Mohenjo-daro, India.[6] Those from India show the same technique, but are different in form and decoration. On the other hand, two beads from Ur, now in the British Museum (B.M. 120598, and 123213) show striking



FIG. 1. Bead from Abydos. (1/1)

[1] E. Mackay, *Decorated Carnelian Beads*, in *Man* (1933), No. 150, pp. 143–146.

[2] H. C. Beck, *Etched Carnelian Bead*, in *Antiquaries Journal*, XIII (1933), p. 395.

[3] F. W. Petrie, *The Tombs of Courtiers* (1925), p. 10, sec. 20.

[4] Beck, *op. cit.*, p. 396.

[5] C. L. Woolley, *Ur Excavation II, Royal Cemetery* (1934), p. 374; also Mackay, *'A' Cemeteries at Kish*, pt. I, p. 56, pl. IV, fig. 30; and Mackay, *A Sumerian Palace*, etc., pl. xliii, fig. 9; pl. lx, figs. 54–8.

[6] John Marshall, *Mohenjo-daro and the Indus Civilization* (1932), I, pp. 104–105; II, pp. 515-6; pl. CXLVI, 43–45.

similarity in shape and pattern to our specimen (fig. 2). There is no question that our specimen was imported from Mesopotamia. The synchronology between Egypt and Mesopotamia from this evidence can be collated by others. There are two Egyptian alabaster vases inscribed in cuneiform with Sargonic (Akkadian) royal names, Rimus and Naram-Sin.[1] The vases are of the Tenth–Eleventh Dynasty type.[2] A cylinder-seal inscribed in hieroglyph and cuneiform in the Collection of Carnarvon bears the royal name 'Sehetepibre' (Amenemhet I), the first pharoah of the Twelfth Dynasty, while its cuneiform inscription belongs to the Epoch of the Third Dynasty of Ur as shown by its form of writing, according to Sayce.[3] The treasure from Tod in Upper Egypt is dated to Amenemhet II of the Twelfth Dynasty by the cartouche on the box. The box contained many gold, silver, and *lapis lazuli* objects, including cylinder-seals and beads, which are certainly imported from Mesopotamia. Some of the beads of *lapis lazuli* have characteristic forms, such as the facetted barrel-beads with a square cross-section, and the triangular spacers, both of them having been found at Ur.[4] The cylinder-seals of *lapis lazuli* have cuneiform inscriptions which are of the period of Hammurabi of the First Dynasty of Babylon.[5] Although the absolute chronology of Egypt and Mesopotamia before the Middle Kingdom could not be fixed quite definitely at present, yet their synchronology is fairly certain as proved by beads and other archaeological objects.



FIG. 2. Beads from Ur.

The other two specimens of etched carnelian beads are dated to the Greco-Roman period. Both of them came from Petrie's excavations at Saft el Henna in 1905-6 (Tomb Nos. 705 and 796*s*). But the beads in question have not been mentioned in his Report,[6] nor have been published in his later works. Both of them are circular button-shaped beads with an elliptical or plano-convex-section (fig. 3). The etched white pattern is a circular ring with a row of radiated small crosses on one bead, and a large cross encircled



FIG. 3. Beads from Saft el Henna. (Natural size.)

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[1] A. H. Sayce, *The Date of Middle Kingdom, in Ancient Egypt*, 1921, pp. 102-3.

[2] Petrie, *Stone Vases*, pls. XXVIII, 584, 589; XXIX, 617, 621.

[3] Pinches and Newberry, *A Cylinder-seal*, etc., in *Journal of Egyptian Archaeology*, VII (1921), pp. 190–199, pl. XXXII for Sayce's remark, see *Ibid.*, vol. VIII (1922), p. 285.

[4] Woolley, *op. cit.*, p. 369, fig. 78; pls. 144–145.

[5] B. de la Roque, Tod, 1934 à 1936, (1937), pp. 119-121.

[6] Petrie, *Hyksos and Israeli Cities*, (1906).

by a ring and filled with one dot each at the space between each two arms of the cross on another bead. They belong to the 'Middle Phase (300 B.C.–A.D. 200)' of Beck's scheme.[1] Again, the place of their manufacture is in western Asia. Beads of this type are extremely common in sites of the Scytho-Parthian and Kushan period in the North-west of India.[2] They have been found even as east as ancient Khotan in Chinese Turkestan.[3] This shows how useful the beads are as archaeological evidence for revealing a contact between two cultures in widely separated regions.

I wish to thank my teacher, Prof. S. R. K. Glanville of the University of London, for giving me the kind permission to study the unrivalled collection of beads in his charge with a view to their publication, and regret that the difficulty of communication under the present condition prevents me from sending the typescript of this article for his criticism.

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[1] Beck, *op. cit.*, p. 396.

[2] Marshall, *op. cit.*, p. 583, footnote 11; and also Woolley, *op. cit.*, p. 374.

[3] A Stein, *Serindia*, (1921), pp. 117, 122, 127; pl. IV, (Khot. 02r, 02q, Yo, 00125 and Jiya, 005).

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ARTICLE NO. 7.

Supplement to Bibliography of Ancient Indian Terracotta Figurines.

By CHARU CHANDRA DAS GUPTA.

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PREFACE.

In the year 1938 my article entitled 'Bibliography of ancient Indian terracotta figurines' summarizing all articles written up to 1936 was published (JRASBL, IV, 1938, pp. 67–120). Since that time so many articles on ancient Indian terracotta figurines had been published that it has been quite necessary to publish their summaries as a supplement to the aforesaid communication. I have, therefore, published them exactly in the same manner as was done in case of the articles mentioned above. This summarizes articles generally written in the period between 1937 and 1942.

ABBREVIATIONS.

A ..	Antiquity.
AAIT ..	Archaic and ancient Indian terracottas. By L. Sternbach.
ABIA ..	Annual Bibliography of Indian Archaeology, Kern Institute, Leyden.
ABORI..	Annals of the Bhandarkar Oriental Research Institute.
ADNAR.	Archaeological Department of Nizam, Annual Report.
AR ..	Asiatic Review.
ASIAR ..	Archaeological Survey of India, Annual Report.
BMRAH	Bulletin des Musées Royaux d'Art et d'Histoire.
EH ..	Excavations at Harappa. By M. S. Vats.
ER ..	Excavations at Rairh. By K. N. Puri.
FEM ..	Further excavations at Mohenjo-daro. By E. Mackay.
GIK ..	Grundzuge der Indischen Kunst. By S. Kramrisch.
I ..	Iraq.
IAL ..	Indian Arts and Letters.
JISOA ..	Journal of the Indian Society of Oriental Art.
JRASBL.	Journal of the Royal Asiatic Society of Bengal, Letters.
JRSA ..	Journal of the Royal Society of Arts.
JUPHS..	Journal of the United Provinces Historical Society.
M ..	Man.
MASI ..	Memoirs of the Archaeological Survey of India.
MR ..	Modern Review.
QJMS ..	Quarterly Journal of the Mythic Society.
RT ..	Rajghat Terracottas. By V. S. Agrawala.

BIBLIOGRAPHY.

1. Agrawala, V. S. JUPHS, X, pp. 59–64; pls. I–III; 1937.

(1) Terracottas from Ghoshi.

Here the author studies certain terracottas found at Ghoshi in Azamgarh district in the United Provinces of Agra and Oudh. As these specimens are found by chance, 'there is no stratum or level to indicate the period for which our sole criterion for the present remains the style' (p. 59). So far as technique is concerned, these specimens are mainly handmade, the material used is red clay of rough texture and the style is noted by remarkable crudity, verging on the primitive. According to the author these specimens are to be ascribed to the Kushaṇa age. The illustrated specimens are male figure (pl. I, fig. 1), female figure (ibid., figs. 2–4, II, fig. 5) and human head (pls. II, figs. 6-7, III, figs. 8–10).

2. ——— JUPHS, X, p. 88; pl. II, fig. 3; 1937.

(2) Further acquisitions to the Mathura Museum.

Among some important additions to the Mathura Museum the author has noted an Indian adaptation of the well-known Greek sculpture of 'Herakles and Nemean Lion' made in terracotta (pl. II, fig. 3).

3. ——— RT, pp. 1–8; pls. I–V; 1941.

(3) Here the author has described and illustrated certain terracotta figurines found at Rajghat in Benares district in the United Provinces of Agra and Oudh. The terracottas which have been found here number approximately two thousand specimens and mostly belong to the Gupta age. They are interesting for the varieties of the head-dress and for the paintings in line and colour still preserved on many of them. The illustrated specimens represent human head (pl. I, 1, 3, 4), female head (pl. II, 8), male bust (pl. I, 2), head of Pārvatī-Parameśvara (pl. III, 12), Kinnara-mithuna (pl. IV, 13), scene representing *aśoka-preṅkha* (ibid., 14), hunter (pl. V, 15) and Śiva (ibid., 16). It seems that the specimens nos. pls. II, 5–7, and III, 9–11 have not been described.

4. Anonymous. AR, XXXII, pp. 769, 770; figs. A, B; 1936.

Archaeology in Baroda.

The author describes and illustrates certain terracotta figurines found at Kamrej in Navsari district of the Baroda State (fig. A) and at Amreli in Kathiawar (fig. B).

5. Chandra, G. C. ASIAR for 1934-35, p. 40; pl. XVII, b; 1937.

(1) Excavations at Nalanda.

In course of excavation at monasteries Nos. 11 and 12 at Nalanda in Patna district in Bihar the author has discovered a number of 'terracotta plaques decorated with human and animal figures' (pl. XVII, b) (p. 40).

6. ——— ASIAR for 1935-36, p. 53; pl. XVI, f; 1938.

(2) Excavations at Rajgir.

In course of exposing the circular brick structure known as the Maniyar Math at Rajgir in Patna district in Bihar the author has discovered a large number of terracottas representing human and animal figurines (pl. XVI, f).

7. Corbiau, S. BMRAH, mars-avril, pp. 1–3; 1936.

(1) Collection de pieces provenant de l'Inde.

Here an account has been given of the terracottas found at Sari-Dheri and Sulai-Dheri in Peshawar district in the North-West Frontier Province. Major D. H. Gordon who discovered the mound of Sari-Dheri thought that the civilization evidenced by these specimens could be dated from c. 250–50 B.C.; but the present authoress believes that the archaic figurines found here belong to the 3rd-4th millenniums B.C. and that the later figurines to the Graeco-Buddhist age. Most of these archaic figurines have analogies with the Sumerian (age of Jemdet Nasr), Aegean (ancient Minoan) and Russian Turkestan (Anau III) antiquities. The illustrated specimens represent a human head (fig. 11) and a human bust (fig. 15)—both in Graeco-Buddhist style. The remaining figures are of archaic character and represent two unidentifiable specimens (frontispiece and fig. 12), a female figure (fig. 13) and another archaic figurine (fig. 14).

8. ——— M, XXXVII, pp. 150–52; 1937.

(2) Prehistoric remains on historic sites of India and the Near East.

In this paper the authoress has opined that Sari-Dheri 'forms part of a vast cultural cycle that will be met in the deeper layers of many sites of historical date, that there are many points of analogies between these archaic Indian remains with regions so far off as pre-Hittite Asia Minor and the Early Minoan Aegean,' that 'a whole stratum of Taxila bears the mark of Scythian art' which flourished in South Russia from the sixth to the second century B.C., and that 'Taxila appears to be of first importance also for the history of religions'. She doubts

the dating of the civilization of the Near East and remarks that 'if there was a time when the Harappa culture had to rely upon Mesopotamia for its date, now it is the turn of India to enlighten the dating of the Near East'.

9. ———— I, Vol. IV, pp. 1–10; pls. II, 2–5, III, 1–3, 5–7, IV, 1–4, 8, 9; 1939.

(3) New finds in the Indus Valley.

Here the authoress gives a short account of her excavations at the mounds at Sari-Dheri, near Charsadda in Peshawar district in the North-West Frontier Province and at Sulai-Dheri, otherwise known as Rajjar in the same district. According to Lt.-Col. D. H. Gordon the archaeological remains found at the former mound belonged to the Hellenistic culture which arose in India after the demise of Alexander the Great; whereas the present authoress proves that although some of the terracottas found here prove his point of view, yet there are certain specimens which, from their style and technique, are far more ancient. According to her opinion she has rightly found an archaic head (pl. II, 3) at a much lower level of the eastern mound at Sari-Dheri than the Hellenistic head (ibid., 2). At Sulai-Dheri also she gets archaic figures below and Hellenistic figures above. The illustrated specimens which are new are Hellenistic head (pl. II, 2, 4), archaic head (ibid., 3, III, 3, 5), archaic female figurine (pls. II, 5, III, 1, 2, 7), female torso (pl. III, 3), female figure (ibid., 6), roughly made figurines (pl. IV, 1), schematic figurine (ibid., 2–4), black terracotta figurine (pl. IV, 8), torso (ibid., 9).

10. Das Gupta, C. C. JRASBL, IV, 1938, pp. 67–120; 1939.

Bibliography of ancient Indian terracotta figurines.

In this paper the author has given a complete bibliography of ancient Indian terracotta figurines up to 1936 and has summarized no less than 175 articles and books dealing with ancient Indian terracottas. The articles have been arranged according to the author in the alphabetical manner. Three indexes dealing with author, find-spot, subject and geography have been added.

11. Dikshit, K. N. MASI, 55, pp. 56–72; pls. XXVI *a*, *b*, XXXIX–LIV, LV, *c*, *d*, LVII, LXIV; 1938.

Excavations at Paharpur, Bengal.

While giving a consolidated account of the excavations at Paharpur in Rajshahi district in Bengal the author has given a short account of the terracotta figurines found there. He finds the point of similarity between the plaques found at Paharpur and those found at Harwan in Kashmir, Hanumangarh in

Bikaner, Mirpurkhas in Sind, Bhitargaon in Cawnpore district, Sahet-Mahet in Gonda and Bahraich district in the United Provinces of Agra and Oudh, Mahasthan in Bogra district, Sabhar in Dacca district and Dah Parbatiya temple near Tezpur in Assam. Regarding the arrangement of these plaques he has remarked, 'An intensive study of the plaques, as they stand *in situ*, fails to bring out any regular sequential arrangement, and it appears as if it was only chance that determined whether a plaque with human figure was to be followed by a striding monkey, a goose or a conch'. He has opined that these plaques range in date from the eighth to the tenth centuries A.D. The illustrated specimens are ascetic (pl. XXVI *a*, *b*), monkey-story (pl. XXXIX, *c*, 2), Kṛishṇa legend (ibid., *c*, pl. XLI, *a*, 3), liṅga (pls. XXXIX, *f*, 1, LVI, *C*), woman carrying water (pls. XL, *a*, 1, *e*, 3), composite animal (pls. XL, *a*, 5, *b*, 3, 4, *c*, 5, *d*, 5, XLI, *b*, 4), Śiva (pls. XLI, *d*, 2, XLIV, *a*, *e*), men walking (pl. XLII, *b*), woman with children (pls. XLI, *c*, 1, XLII, *c*, 1), Gaṇeśa (pls. XLII, *d*, XLIV, *d*), Vishṇu (pl. XLII, *d*, 5), man doing acrobatic feats (ibid., *e*), Nāga-figure (pls. XLIII, *c*, 1, 3, *e*, 3, XLVI, *b*, *f*), story of man being drawn out of well (pl. XLIII, *f*), mating cobra (ibid., *g*), women with children (ibid., *i*, 5), Brahmā (pl. XLIV, *b*), Tārā (ibid., *c*, XLV, *d*, *e*), Mañjuśrī (pls. XLIV, *f*, XLV, *f*), Bodhisattva Padmapāṇī (pl. XLV, *a*), Buddha (ibid., *b*), Jambhala (ibid., *c*), kīrtimukha (pl. XLVI, *a*), peacock fighting with cobra (ibid., *c*, LV, *c*), cobra issuing from hills (pl. XLVI, *d*), Gandharva riding a rhinoceros (ibid., *e*), lion-face with crossed legs (pl. XLVII, *a*), Gandharva (pl. XLVII, *b*, *f*), Gandharva with vidyādharī (ibid., *c*), antilope (pls. XL, *d*, 4, XLII, *a*, 3, 5, XLVIII, *a*), man pulling down hillock (ibid., *b*), Rāma legend (ibid., *c*, *e*), Rāma-Lakshmaṇa (ibid., *f*), Śabara female (pl. XLIX, *a*, *f*), Śabara couple (ibid., *b*, *c*, *e*), Śabara male (ibid., *d*), human figure (pl. L, *a*, *b*), human bust (ibid., *c*, *d*), seated man (ibid., *f*), man beating gong (pl. LI, *a*), man holding drum (ibid., *b*), man beating time on pitcher (ibid., *c*), man holding lute (ibid., *d*), man dancing (ibid., *c*), man playing on vīṇā (ibid., *f*), kīlotpāṭī vānaraḥ story (pl. LII, *a*), elephant and mice (ibid., *b*, *c*), story of lion and hare (?), (ibid., *d*), story of talking cave (ibid., *e*), deer drinking water (ibid., *f*), elephant (pls. XLI, *c*, 3; LIII, *a*), camel (pl. LIII, *b*), monkeys entertwined (ibid., *c*), lizard (ibid., *d*), deer looking up (ibid., *e*), horse (ibid., *f*), bird feeding her young ones (pl. LIV, *a*), Garuḍa (ibid., *f*), goose (pls. XL, L, 1, LIV, *c*), peacock (pl. LIV, *d*), goose feeding her young ones (ibid., *e*), goose eating lotus (ibid.), warrior (pls. XLI, *c*, 3, LVII, *a*, *b*, *e*), lizard (pl. XL, *e*, 2), fish (pls. XL, *e*, 5, XLII, *a*, *b*), tiger (pl. XL, *f*, 4), lion (pl. XLI, *b*, 5), deer (ibid., *d*, 3), king and queen (pl. XLII, *a*, 1), monkey (ibid., *b*, 2), man's combat with lion (ibid., *d*, 3), peacock (ibid., *f*, 3), man and woman holding cymbals (pl. XLIII, *d*), boat paddled by two persons (ibid., *a*), jackal and lion (ibid., *h*), crocodile head (ibid.,

i, 4), woman and children (ibid., *i*, 5), bear (ibid., *j*, 3) and antelope (ibid., *j*, 4). It is strange that many illustrations have not been described in the text.

12. Dutt, G. S. JISOA, VI, pp. 169–80; pls. XXXVI–XXXIX, 1938.

Bengali Terracottas.

In course of giving an interesting résumé of Bengali terracottas the author has opined that this art may be divided as belonging to two periods, one ending with the close of the Pāla and Sena ages and the other till almost the end of the nineteenth century. Though he has given an account of the first type of specimens, yet the article is almost devoted to the study of the terracotta plaques found on the Deul, a monument of probably the seventeenth century A.D. at Mathurapur in Faridpur district in Bengal. The illustrated specimens which are taken from the Deul itself represent the lion-belt (pl. XXXVI, 2), Rāmāyaṇa and Kṛishṇa-līlā scenes (ibid., 4, pl. XXXVII, 1), Kīrtimukha (pls. XXXVI, 1, XXXVII, 3). Kīrtana-scene (pl. XXXVI, 2), two females worshipping one Kalpataru (ibid., 3), Lakshmaṇa (pl. XXXIX, 2), lion (śārdūla) rampant superimposed on an elephant (ibid., 4), superimposed figures of armed soldiers (ibid., 5), herd of deer fleeing from hunters (pl. XXXVIII), hunting scene (pl. XXXIX, 3, 6), plaque representing two sphinenes (ibid., 1).

13. Gordon, D. H. I, Vol. V, pp. 85–88; pls. VI–IX; 1938.

(1) The age of frontier terracottas.

This is a reply to Corbiau's paper summarized as No. 9. According to the present author the Channavira, etched carnelian beads, lids in the central knob handles, applied and incised techniques in eye-form, fan-shaped head-dress are not convincing criteria for drawing any deductions. He opines that the goddess represented in the terracottas with the rosetted head-dress is Anaitis, Anahid or Nanaia. In order to illustrate his points of argument the author has illustrated certain specimens which are archaic head (pl. VI, fig. 1; fig. 2—left figs.), human head (ibid., fig. 2—third and fourth figs. from left), head with the knotted head-dress (ibid., fig. 3), head with the conical Parthian cap (pl. VII, fig. 4), moustached Scythian figures (pl. VII, fig. 5), archaic figure (pl. VIII, 6 and 7), archaic and Hellenistic head (pl. VIII, fig. 8), archaic moulded figure (ibid., fig. 9), primitive female figure with the fan-shaped head-dress (pl. IX, fig. 10), Hellenistic head (ibid., fig. 11), mask-like face (ibid., fig. 12).

14. ———— M, XXXVII, pp. 198-99; 1937.

(2) Prehistoric remains on historic sites: a reply.

This is a reply to Mlle. Corbiau's article summarized as article No. 8. According to him the terracottas from Sari-Dheri and other kindred sites may be divided into three groups, viz., the terracottas of Hellenistic appearance, Syrian derivation of 180–50 B.C. and a group of figurines and animals which appear to be just pre-Kushan of 100 B.C.–300 A.D.

15. ———— A, XI, pp. 70–79; pls. I and II; 1939.

(3) The mother-goddess of Gandhāra.

From the evidence of the terracotta figurines which have been dated from the third century B.C. to the 3rd century A.D. the author has established that a cult of the Mother-Goddess in her manifestation as the Persian Anaitis existed in India.

16. Gordon, D. H. and M. E. I, Vol. VII, pp. 1–12; pl. I; 1940.

(1) Mohenjo-daro; some observations on Indian pre-history.

Among various topics the authors have made some observations on terracotta figurines found at Mohenjo-daro. So far as female figurines are concerned, they have remarked that almost all these have the fan-shaped head-dress, that where the eyes are present, they are applied, that 'they are practically, without exception, of pink-coloured terracotta with a red wash, that the majority of the figures have a single necklace and that they have a narrow applied loin-cloth and are not completely nude. Regarding the male figurines they have remarked that 'they are for the most part of the same pink pottery, that the majority of these figurines have no head-dress, but a certain number have widespread horns and that these figures are completely nude. They also refer to human masks, man-headed animals and ordinary animals. They hold that there is no Yogic influence in the face of any figure. They do not hold the view of Dr. Mackay that certain terracottas of rough workmanship are the work of children and believe that the Mohenjo-daro terracottas have no Sumerian affinities. They have illustrated the figure of a man (pl. I) found in Zhob which is, according to them, the most Sumerian looking object yet found in India.

17. ———— JRASBL, VI, pp. 61–72; pls. 4, 5; 1940.

(2) Survivals of the Indus Culture.

Here the authors have shown the points of similarity between the objects of the Indus Valley age and those of the later ages and in proving this point they have illustrated a few terracotta figurines among other objects. The illustrated specimens are

bird (pl. 4, 1, 2), bird-whistle (ibid., 3), bird-rattle (ibid., 4), Hellenistic head (ibid., 5), divided figure (pl. 5, 1, 3) and female figure (ibid., 2).

18. Johnston, E. H. ABIA for 1937, p. 16; pl. V; 1939.

Indian Institute, Oxford.

The author has illustrated a female figure (pl. V). According to him 'the best authorities place it in the third century B.C., and it certainly cannot be later than the first century B.C.'

19. Khan, H. H. ASIAR for 1935-36, p. 70; pl. XXXIX, *d*; 1938.

Exploration in the Madras Presidency.

The author reports the discovery of a few terracotta figurines on the summit of the cairn hill on the Nilgiris among which one representing the head of a cow (pl. XXIX, *d*) has been illustrated.

20. Kramrisch, S. GIK, pp. 127-28, tefel 47 ; 1924.

The authoress illustrates a magnificent Vishnu-head preserved in the Museum of the Varendra Research Society.

21. ——— JISOA, VII, pp. 89–110; pls. VII–IX; 1939.

(2) Indian Terracottas.

Here the authoress has given a highly interesting account of Indian terracottas. There are certain conclusions which are quite important. According to the opinion of the present authoress there are two types of terracottas, viz., (1) ageless type and (2) timed variation. Then she has dealt with earth, physiognomy, costume and conveyance. So far as the type of the timed variation is concerned, she has given an idea of data, technique and places. She has given an elaborate description of Pataliputra, Buxar and Mathura terracottas. The illustrated specimens are all taken from the Patna Museum collection and represent male figure (pls. VII, 1–4, 6, 13, 14, VIII, 7, 10, 11, IX, 6), male torso (pl. VIII, 6), male figure with ram (ibid., 8), Yaksha (ibid., 9), male head (ibid., 12, 13), female figure (pls. VII, 5, 7–11, VIII, 2, IX, 1–5), female figure with serpent-head (pl. VII, 12), human head (pl. VIII, 1), animal-head (?) (pl. VII, 15), elephant (ibid., 16, pl. VIII, 4). griffino (pl. VIII, 3) and horse (ibid., 5).

22. Machay, E. JRSA, LXXXV, p. 542; fig. 8; 1937.

(1) Excavation at Chanhu-daro.

The author describes and illustrates one female figurine (fig.) found at Chanhu-daro in Nawabshah district in Sind and

referable to the Indus Valley age. According to him this represents mother-goddess.

23. ———— FEM, I, pp. 257–316; II, pls. LXVI, 23, LXXI, 23, 25–32, LXXII, LXXIII, LXXIV, 1–5, 7, 8, 13, 14–17, 21–26, LXXV, 1–23, LXXVI, 1–25, LXXVII, 2–7, 10–12, 17, 18, 21, 22, LXXVIII, 1, 3, 5–9, 11, 12, LXXIX, 1–4, 7–17, 22, 23, 25–27, 29–33, LXXX, 1, 2, 4, 6–12, 14–23, 25–27, LXXXI, 1–5, 7–11, 13, 14, 17–19, CXII, 10, 11; 1938.

(2) Here the author has described and illustrated certain terracotta figurines found in course of excavation between 1927 and 1931 at Mohenjo-daro in Larkana district in Sind and belonging to the Indus Valley age. He has divided these specimens into two groups, viz., human and animal. Further each group of figurines has been divided into two classes, viz., those found in the upper levels down to 12 ft. below datum and those from below that level. So far as human figurines are concerned, he has shown that 'most of the figurines were painted over with a red slip or wash ', that 'in only a few of the better made figurines is the red slip polished.' 'Besides the general coating of red, there is now definite evidence that on some at least of these figurines other colours also were used.' According to the author ' none of the female figurines are represented as entirely nude; they usually wear a short, plain kilt . . . . . sometimes ornamented with medallions'. So far as the modelling of these figurines is concerned, the author has shown that the eyes are represented by flat pellets of clay, that the nose was formed simply by pinching up the clay, that the nostrils are merely represented by holes, that the ears are never represented except the animal—like ears associated with horns. Regarding the dating of these figurines he has remarked, 'I find it impossible as yet to distinguish with any degree of certainty between the figurines from the upper and lower levels respectively ' (p. 270). The illustrated specimens represent human figure (pl. LXXIII, 7, 13, LXXIV, 14, 16, LXXV, 11, 20, LXXVI, 6, 14, 17, 19), human head (pls. LXXIII, 3, LXXIV, 21, LXXVI, 9, 12), human double head (pl. LXXVI, 8), human mask (pls. LXXIV, 22, LXXVI, 1, 2, 4), male figure (pls. LXXII, 3, 7–10, LXXIII, 1, 8, LXXIV, 17, 2, 3, 24, LXXVI, 15, 16, 23, 24), male mask (pls. LXXIV, 25, 26, LXXVI, 3), male bust (pl. LXXVI, 18), male child (pl. LXXVI, 25), female figure (pls. LXXII, 1, LXXIII, 2, 4, 6, 12, LXXIV, 15, LXXV, 2, 4, 5, 6, 8–10, 13, 15–19, 21–23, LXXVI, 7, 10, 11, 20–22), mother and child (pls. LXXII, 2, LXXV, 3, 7, 12, 14, LXXVI, 13), female torso (pl. LXXII, 5, 6), female bust (pl. LXXVI, 5), mother-goddess (pl. LXXV, 1) and crawling child (pl. LXXVIII, 10). So far as the animal figurines are concerned, he has remarked that 'like the human figurines, the animal figures were frequently

coated with a red wash or slip, varying from a light to dark red' (p. 283). The illustrated animal and bird figurines are dove (pls. LXXI, 28, LXXIV, 4, LXXVII, 3, 5, 11, 12, LXXX, 15, 18, 23, 25, 27), fowl or goose (pl. LXXIV, 1), foul or dove (pl. LXXIV, 2), pheasant (ibid., 3), foul (pls. LXXVII, 4, LXXX, 20), dove or cock (pl. LXXVII, 7), crested bunting (ibid., 6), goose or duck (ibid., 10), peacock (pl. LXXX, 22), monkey (pls. LXXI, 27, LXXVIII, 3, 8, 9, LXXX, 1, 2, LXXXI, 18, 19), antelope (pls. LXXVII, 2, LXXX, 4), dog (pls. LXXVII, 17, LXXVIII, 7, LXXIX, 4, 11, 12, 15, LXXX, 9), rhinoceros (pls. LXXVII, 22, LXXIX, 2, 3), bull (pls. LXXVIII, 1, 6, LXXIX, 16, 17, 25–27, 29, 30–32, CXII, 10, 11), horse (pl. LXXVIII, 11), cross-bred animal (pl. LXXI, 26), bull's head (pls. LXXIV, 8, LXXIX, 22, 23, 33), turtle (pls. LXXVII, 21, LXXX, 6), Gaur (pl. LXXVIII, 5), boar (pl. LXXIX, 1), hare (pl. LXXIX, 9, 10), elephant (ibid., 13-14), buffalo (pl. LXXX, 7), ram (ibid., 8, 12), goat (ibid., 11), unidentifiable animal (pls. LXXIV, 13, LXXIX, 7, 8, LXXX, 10, 19, LXXXI, 1, 1*a*, 2, 2*a*, 7–9), Gallus domesticus (pl. LXXIV, 5), unidentifiable figure (ibid., 7, LXXVIII, 12), dog-like animal (pl. LXXVII, 18), female kid (pl. LXXX, 14), head of bird (ibid., 16), dove or pigeon (ibid., 17), unidentifiable bird (ibid., 21, 26, LXXXI, 13, 17), composite animal (pl. LXXXI, 3, 4, 10, 11, 14) and figure having bird-like head (pl. LXXXI, 5).

24. Majumdar, N. G. ASIAR for 1934-35, pp. 41-42; pl. XVIII, 1, 3; 1937.

(1) Exploration in Bengal.

In course of excavating the mound known as Medh at Gokul in Bogra district in Bengal the author has found a number of terracotta plaques among which some have been illustrated. They represent the fragmentary hand of Vishṇu (pl. XVIII, 1) and a squatting male figure (ibid., 3). All these belong to the late Gupta age.

25. ——— ASIAR for 1935-36, pp. 64-65; pl. XXII, *a–e*, *g–o*; 1938.

(2) Explorations at Lauriya-Nandangarh.

While exploring the ancient mounds at Lauriya-Nandangarh in Champaran district in Bihar the author has discovered a large number of terracotta figurines among which a few have been illustrated. The illustrated specimens represent human child (pl. XXII, *b*), human figure (ibid., 1, *n*), female figure (ibid., *g*, *h*, *i*, *j*, *k*, *m*, *o*), duck (ibid., *c*), and elephant head (ibid., *d*). These examples should be ascribed to the Śuṅga age, i.e., second and first century B.C. on the stylistic consideration. It seems that the author has not described the specimens illustrated in pl. XXII, *i*, *k*, *l* and *n*.

26. ———— ASIAR for 1935-36, pp. 68, 69; pl. XXVIII, 4, 5, 8, 11, 12; 1938.

(3) Excavations at Gokul.

While excavating the mound known as Medh in Gokul in Bogra district in Bengal the author has discovered a number of terracotta plaques bearing human and animal figures among which some have been illustrated. The illustrated specimens which represent human figure (pl. XXVII, 4, 5), head of lion (ibid., 8), boar (ibid., 11) and crocodile or Makara with the rider (ibid., 12) are typically Gupta in style and may be ascribed to the sixth or seventh century A.D. The author in a foot-note informs us that similar terracottas were found by him at Govinda Bhita mound in Mahasthan in Bogra district in Bengal.

27. ———— ASIAR for 1936-37, p. 50; pls. XXII, XXIII, 4–18, XXIV, 7–16; 1940.

(4) Excavations at Lauriya-Nandangarh.

In course of excavation at the mound at Lauriya-Nandangarh in Champaran district in Bihar the author has discovered a large number of terracotta figurines among which some have been described. It is very strange that only a few out of the illustrated specimens have been individually described. Regarding the age of the monument buried under this mound the author has observed that 'there is evidence to show that this structure must have been erected not later than the second century B.C.' The illustrated specimens which have been described are human head (pl. XXII, 9), Lakshmī (pl. XXIV, 11, 16), mother and child (ibid., 14, 15).

28. Nazim, M. ASIAR for 1934; pp. 32-33; pls. X, 15; XI, 7, 14, 19, 25, 29, 31; 1937.

Excavations at Harappa.

In course of excavation at mounds A, B, D and F at Harappa in Montgomery district in the Punjab the author has unearthed a number of terracotta figurines among which he has described and illustrated a few only. These specimens belong to the Indus Valley age. The illustrated examples represent fish (pl. X, 15), model of a tiger (pl. XI, 7), unidentifiable animal-head (ibid., 14), turtle (ibid., 19), female figure (ibid., 25, 31) and male figure (ibid., 29). It is important to note that the above-mentioned terracotta fish (pl. X, 15) 'shows five pictographs on the underside' (p. 32).

29. Puri, K. N. ER, pp. 26–34, pls. XII–XVII, XVIII, 1–3, 6–8, 12; 1942.

Figurines and model animals.

Here the author gives an account of terracotta figurines found at Rairh in Jaipur State. He opines that among the female

figurines found here many represent mother-goddess which has been divided into eleven types. The illustrated specimens are mother-goddess (pls. XII, XIII), Yakshī (pl. XV, *a*, *c*, *g*), Śiva-Pārvatī (pl. XV, *b*. *f*). Śakti with male deity (pl. XV, *d*), elephant-rider (pl. XVI, 1), horse-rider (ibid., 8), nude male figure (pl. XVIII, 2), human figure (ibid., 6–8, 12), elephant (pl. XVI, 2, 3(*a*), (*b*), 5), bull (ibid., 7), camel (ibid., 9), cow with calf (ibid., 1*a*, and *b*, 12), monkey (pl. XVII, *a*, *b*, *d*), ram (ibid., *e*, *h*), tiger (ibid., *g*, *j*), unidentifiable animal (ibid., *c*, *f*), dog (ibid., *k*), dove (ibid., *i*), owl (ibid., 1). It seems that the specimens illustrated in pls. XIV, XV, *e*, XVI, 4, 6, 10, XVII, 1 and 3 have not been described.

30. Ramachandran, T. N. ASIAR for 1935-36, pp. 118–19; pl. XXXVI, 5–8; 1938.

(1) Indian Museum, Calcutta.

Here the author discusses five terracotta figures which were found near Ghosi in Azamgarh district in the United Provinces of Agra and Oudh. The illustrated specimens represent female figure (pl. XXXVI, 5), male figure (ibid., 7) and male head (ibid., 6, 8).

31. ——— ASIAR for 1936-37, pp. 52–54; pls. XV, *a*, *b*, *d*, *e*; XVI *a*–*e*, *g*, *h*; 1940.

(2) Excavations at Mahasthan.

In course of excavation at Govindabhita mound in Mahasthan in Bogra district in Bengal the author has discovered a number of plaques among which some have been illustrated. The illustrated specimens represent male head with ushṇīsha (pl. XV, *b*), mithuna (ibid., *d*), Yaksha (ibid., *e*, pl. XVI, *a*), conventional geese (ibid., *b*), Yama (ibid., *c*), dragon and elephant-headed makaras (ibid., *d*, *e*). It seems that the description meant for pl. XV, *b* has been wrongly ascribed to pl. XVI, *g* and that pl. XVI, *h* is undescribed. Regarding the figure illustrated in pl. XV, *a*, the author is of opinion that it may represent Māyā's dream or the second dream of Mārudevī, the mother of the first Tīrthaṅkara, Ṛshabha-deva (p. 54).

32. S. S. QJMS, XXX, pp. 362-63, pl. facing p. 362; 1939-40.

A note on the terracotta figurines at Pondicherry.

The author illustrates two terracotta figurines (pl. facing p. 362) found at Danatumoder, south of Tirukaji near Pondicherry.

33. Saraswati, S. K. MR, LIX, pp. 295–97; 1936.

A clay head from Kalinjar (Bogra).

The author describes and illustrates one terracotta male head found at Kalinjar in Bogra district in Bengal. According

to him it should be referred to the Pāla age while Dr. Kramrisch refers it to the fifteenth century A.D.

34. Srivastava, H. L. ASIAR for 1936-37, p. 40; pl. X; 1940.

Excavations at Harappa.

In course of excavation at Harappa in the Montgomery district in the Punjab the author has found a female figurine (pl. XI, *g*) belonging to the Indus Valley age.

35. Sternbach, L. AAIT, pp. 1–26; pls. I–XVII; 1941.

Here an account has been given of some ancient Indian terracottas in the collection of Dr. Eugene Banasinski, Consul-General for Poland in Bombay. Here the terracottas under discussion have been placed under five different groups, viz., those belonging to the Indus Valley, late pre-Maurya, Śuṅga, Kushan, and Gupta ages. Besides some animal terracottas have also been described. The illustrated specimens are female figure (pls. I, 1, 2, III, 7, IV, 8–10, V, 11, 12, IX, 28, XII, 31, XIII, 32, 33, XIV, 34, 35, XV, 36), human head (pls. I, 3, II, 4, 5), male head (pls. V, 13, VI, 14, X, 26, 27, XV, 37), female head (pls. VI, 15, VII, 18, 19, XII, 30), human bust (pl. III, 6), warrior (pl. VI, 16, 17), yaksha (pl. VIII, 20), half-man and half-monkey (ibid., 21), man-monkey (pl. IX, 22, 23), female bust (pl. IX, 24), mother-goddess (pl. X, 25), naṭī (pl. XI, 29), unidentifiable animal (pls. XVI, 38, XVIII, 43), ram (pl. XVI, 39), bull (pl. XVII, 40), bull's head (pl. XVIII, 41, 42).

36. Takacs, Z. de. JISOA, V, pp. 171–6; pl. XIX, 3, 5, 6, 8; 1937.

Kushaṇa art in the Francis Hopp Museum at Budapest and some related art products.

The author has described certain terracotta figurines, among other objects, said to have been found at Mathura. According to the author these belong to the Kushaṇa age. The illustrated specimens represent head and torso of Indo-Parthian figure (pl. XIX, 3), human figure (ibid., 5), half-figure of a man (ibid., 6) and female head (ibid., 8).

37. Vats, M. S. ASIAR for 1935-36, p. 37; pl. XII, *b*, 14; 1938.

(1) Explorations in Khairpur State, Sind.

In course of excavating the Kotasur mound in Khairpur State in Sind the author has discovered a number of toys among which one has been illustrated. (pl. XII, *b*, 14). This is to be ascribed to the Indus Valley age.

38. ——— EH, pp. 292–309, pls. LXXVI, 1–30, LXXVII, 31–69, LXXVIII, 3, 6–17, 21, 22, 26, 27, 31–41, LXXIX, 46–66, 69–73, 75–88; 1940.

(2) Here the author has given an idea of the terracotta figurines found at Harappa in Montgomery district in the Punjab in course of excavation carried out there between 1920-21 and 1933-34. Among the discovered human figurines 'nearly two-thirds of them are female and over one-third male, the latter not being so rarely as at Mohenjo-daro.' The animal figurines which have been found here are great in number. According to him 'Harappa offers a greater variety of animal figures than those yet published from Mohenjo-daro' (p. 300). The illustrated specimens are male figure (pls. LXXVI, 1–21, 27, LXXVII, 66), male (?) head (pl. LXXVI, 22), female figure (pls. LXXVI, 23, 26, 30, LXXVII, 49–53, 55, 61, 62, 64–67), female head (pls. LXXVI, 24, LXXVII, 39–44, 60), human feet (pl. LXXVII, 25), pregnant woman (ibid., 28, 29, LXXVII, 69), mother and child (ibid., 31–33), female bust (ibid., 34–38, 45–48, 54, 56, 57, 63), female torso (ibid., 57), female hand (?) (pl. LXXVII, 59), human figure (ibid., 68). The illustrated bird-specimens are parrot (pl. LXXVIII, 3), sparrow (ibid., 6), unidentifiable bird (ibid., 7), pigeon (ibid., 8, 9), kite (?) (ibid., 10, 11), cock (ibid., 12), hen (ibid., 13), peacock (ibid., 14, 15), duck (ibid., 16), goose (ibid., 17), tortoise (ibid., 21), crocodile (ibid., 22), arimadilo (ibid., 26), grasshopper (ibid., 27), squirrel (ibid., 31–34), monkey (ibid., 35-36), pig (ibid., 37, 38), unidentifiable animal (ibid., 39), goat (ibid., 40), ram (ibid., 41), hare (pl. LXXIX, 46), mastiff (ibid., 47), hound (ibid., 48), dog (ibid., 49–57), cat (ibid., 58), bull (ibid., 59–66), bull's head (ibid., 69–73), rhinoceros (ibid., 75–79), elephant (ibid., 80–82), tiger (ibid., 83–87) and bijugate chimera-head (ibid., 88).

39. Yazdani, G. ADNAR for 1935-36, p. 23; pls. IV, *b*; V, *c*; 1938.

(1) Note on the excavations at Maski in Hyderabad.

While carrying out excavations at Maski in Hyderabad the author has found a number of terracotta figurines among which a few have been illustrated. Regarding the age of these figurines it has been opined that they belong to the period ranging from 500 B.C. to 100 B.C. No illustrated example has been described. The author has opined that 'one figurine representing a woman with long trunk and short legs is very primitive and bears striking resemblance to similar figurines found in Mediterranean countries, particularly at Malta'; but he has not given the reference to this extract.

40. ————ABORI, XXII, pp. 176, 177, 178, 184; pls. VIII–XI, XVIII; 1942.

(2) Excavations at Kondapur.

In course of an address on the first excavations at Kondapur in Medak district in Hyderabad the author has given an idea of the terracotta figurines found there. The illustrated specimens are Bodhisattva or Yaksha or Rājā (pl. VIII, *a–d*), Yaksha (pl. IX), Bodhisattva (pl. X, *a*), human head (ibid., *b*), Kuvera or Yaksha (pls. XI, *a*, *b*), Hāriti with child (ibid., *c*) mother-goddess (?) (ibid., *d*), lion (pl. XVIII, *a*), ram (ibid., *b*), horse (ibid., *c*—the left fig.), bull (ibid., *c*—the right fig.). They are to be ascribed to the period extending from *c.* 200 B.C.–200 A.D.

41. Yusuf, S. IAL, XII, p. 87, pl. VIII, *b*, *c*; 1938.

Paithan excavations.

In course of excavation at Paithan in H.E.H. the Nizam's dominions the author discovered a number of terracotta figurines among which a few have been illustrated. The illustrated specimens are male bust (pl. VIII, *b*) and human bust (ibid., *c*). According to the opinion of the author 'the workmanship bears striking resemblance to that of the figurine found at Mohenjo-daro, Chanhu-daro, and Maski and other prehistoric sites' (p. 87).

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An Outline of the Stone Age in India.

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(Communicated by Dr. Kalidas Nag.)

The presence of old Stone Age remains in India was first recognized by R. Bruce Foote, who in 1863 had discovered the first palaeolith at Pallavaram, ten miles south-west of Madras, in the debris from a small ballast pit dug in the thin bed of laterite gravel overlying the basal granite gneiss. Foote's recognition of the specimen from Pallavaram as a true palaeolith was fully confirmed later in the same year by the discovery of similar artifacts, made by him in company with William King, at Attirampakkam, about forty miles north-west of Madras, on the banks of the nullah falling into the Korttalaiyar river two miles to the south-east.

From that date onwards palaeolithic implements have been collected in many parts of India from high-level gravel-beds, or older alluvia, of rivers, both in South and North India, and laterite formations of the Coromandel Coast. They have been found, proceeding northwards from Cape Comorin, in the Madura, Tanjore, and Trichinopoly districts of the Madras Presidency; in the Mysore State; in the Bellary, Cuddapah, North Arcot, Chingleput (e.g., at Pallavaram, Attirampakkam, and Vadamadurai), Nellore, Kurnool (e.g., at Giddalore), and Kistna districts of the Madras Presidency; in the Hyderabad State (e.g., in the Upper Godavari valley at Mungi); in the Dharwar, Bijapur, and Belgaum districts of the Bombay Presidency; at Kandivli, near Bombay; in the Baroda State (e.g., in a section of the right bank of the Sabarmati river opposite the village of Sadolia on the left bank); in the Narbada valley of Central India (e.g., at Bhutra and other localities between Narsinghpur and Hoshangabad in the Central Provinces); in the Saugor and Damoh districts of the Central Provinces; in the Rewah State and Bundelkhand Agency of Central India; in Rajputana; in the Punjab (e.g., in the Soan valley and on the banks of the Indus river from Attock to the junction with the Soan); in Jammu and Punch States; and in Chota Nagpur, Bihar, and Orissa. In 1865 A. B. Wynne discovered an agate flake at Mungi, near Paithan, in Hyderabad, and in 1873 C. Hacket found a handaxe at Bhutra in the Narsinghpur district. Both artifacts were found, embedded in gravels, in association with fossil mammal remains.

But no serious attempt was made to study old Stone Age remains in India on a geological basis until quite recently. Today, as a result of the Yale-Cambridge India Expedition, led in 1935 by H. de Terra in association with T. T. Paterson and P. Teilhard de Chardin, a geological foundation for the study of

Indian prehistory has been laid. The Himalayan Ice Age was studied in south-west Kashmir to understand the Pleistocene stratigraphy of the plains of the Punjab, and a correlation between Himalayan glaciations in the Sind and Liddar valleys and artifact-bearing Pleistocene deposits in the Potwar region was worked out to reach the relationship between Pleistocene geology and prehistory.

Of the studies on the Himalayan Ice Age by early geologists, G. Dainelli's are more intensive. He records four main glaciations, separated from one another by three interglacial stages, in the north-west Himalayas recognized by their moraines. The glacial sequence is as follows: (1) First glaciation. (2) First interglacial stage. (3) Second glaciation. (4) Second interglacial stage. (5) Third glaciation. (6) Third interglacial stage. (7) Fourth glaciation.

Nearly half the area of the valley of Kashmir is occupied by Pleistocene deposits, which are found as low, flat mounds bordering the slopes of the mountains on all sides. These deposits, known as *Karewas* in the Kashmiri language, are composed of boulder gravels and fine sands and clays, which occur in an alternating succession. The Karewas are supposed to be the surviving remnants of deposits of a lake which intermittently came into existence during the warm interglacial periods of melting ice and filled the whole valley. The first glacial deposit is the conglomerate overlying the Mangom moraine, the lowest and earliest undoubted morainic deposit composed of large blocks, derived from trap and limestone, and scree-like small chips in a yellow clay matrix. The conglomerate is characterized by small, coarsely rounded pebbles of limestone, quartzite, slaty rocks, and grits cemented by hard calcareous matter. The first interglacial period, succeeding the deposition of the 'cemented conglomerate', saw the inundation of the Kashmir valley by a lake in which were deposited fine sands and clays, forming the lower Karewa beds. The boulder gravels of second glacial time and the early second interglacial sediments form the upper Karewa beds. The great part of the early second interglacial deposit was eroded during the late second interglacial period, producing a terrace, T1. T2 is of third glacial age; the third terminal moraines are in a fresh state of preservation, which distinguishes them clearly from older glacial deposits. Brown loam and gravel cover the second terrace, which is presumably of fluvio-eolian origin. T3, of third interglacial age, was produced by erosion. Brown loam and gravel also cover the third terrace. But the eolian deposits in this terrace are less than those of the preceding glacial stage. T4, of fourth glacial age, is composed of a thin bed of boulder gravels.

Dainelli tentatively correlates the glacial cycle in the Himalayas with that of the Alps; the first glaciation in the Himalayas is correlated with the Mindel advance in the Alps, the

second with the Riss, the third with the Würm, and the fourth with the post-Würm I. Today, however, as a result of de Terra's studies it is necessary to assign an older age to Dainelli's glacial sequences. In other words, the lower Pleistocene in Kashmir corresponds to the first glacial and interglacial stages, the middle to the second major glaciation and the following long interglacial stage, and the upper to the third and fourth glaciations and the third interglacial stage. According to Dainelli the lower Karewa beds represent the first, or Mindel-Riss, interglacial stage. This means that the beds are of middle Pleistocene age. De Terra's studies show that the beds, as they lie between the first terminal moraines and the second glacial deposits, must belong to the first interglacial stage, but that they are to be assigned to the lower Pleistocene age, because in the lower Karewa beds at Sombur occur the *Elephas* cf. *hysudricus*, a primitive elephant that lived during the earliest part of the Pleistocene period. Again, in de Terra's opinion the fourth glaciation in the Himalayas should not be regarded as a post-Pleistocene stage, because its terminal moraines are succeeded by at least two smaller oscillations recalling the Bühl and Geschnitz advances in the Alps.

From this brief survey of the Pleistocene glacial sequence of the north-west Himalayas we pass on to the Pleistocene geology and prehistory of the Potwar region, an elevated plain lying on the one hand between the foothills of the Kashmir Himalayas and the Salt Range and on the other between the Indus and Jhelum rivers.

The upper Tertiary and lower Pleistocene rocks in the extra-Peninsula, forming the low, outermost hills of the Himalayas from the Indus to the Brahmaputra, are known as the Siwalik system, because they form the Siwalik hills near Hardwar where they were first recognized and in which the first palaeontological records were collected.

The origin of the Siwalik system is ascribed by E. H. Pascoe and G. E. Pilgrim to the flood-plain deposits of a great north-west-flowing river, lying south of and parallel with the Himalayan chain from Assam to the Punjab and flowing southwards into the gradually receding Miocene sea of Sind and the Punjab. This river has been named the 'Siwalik' by Pilgrim and the 'Indo-Brahm' by Pascoe, because it carried at one time the combined discharge of the Brahmaputra, Ganges, and Indus. According to de Terra, however, the Siwalik deposits are the local precipitates of an antecedent slope drainage and not derived from the hypothetical Indo-Brahm river.

The Siwalik hills have yielded fossil remains of a remarkably varied and abundant vertebrate fauna in which the class *Mammalia* preponderate. The first collections were made in the Siwalik hills near Hardwar in the early thirties of the last century. Later, additions were made by discoveries in the other Himalayan

foothills. But it is through Pilgrim's discoveries in the Potwar and Kangra areas in the present century that the homogeneity of the fauna over the whole Siwalik province has been established and a revised correlation of the system has been made.

Of special interest is the discovery of about eleven genera of fossil anthropoid apes in the Siwalik mammal fauna. Since the discovery of the first fossil anthropoid ape in 1836 by H. Falconer and E. Cautley many a scholar thought that the uplift of the Himalayas, which set in during the Tertiary era,[1] determined the evolution of the Siwalik anthropoids.

Now, those forms of the organisms which are most closely related to man are to be found, as all authorities now agree, in the anthropoid group. Hence, if the origin of man be looked upon as the result of evolution rather than of special creation it is to be assumed, especially on the evidence from the dentition, that the Siwalik anthropoids were at least structurally ancestors to the human group.

But in the light of geological investigations carried out by de Terra it appears that the uplift of the Himalayas and the evolution of the Siwalik anthropoids did not coincide. The greatest abundance of the anthropoids of the Siwalik fauna occurred long after the middle Tertiary mountain-making and prior to the Pleistocene uplifts. But no sure traces of anthropoids of the lower Pleistocene period are known, whereas the first records of man appear during the middle Pleistocene; the Siwalik fauna became extinct both by dying out of forms and migration to other regions, such as the Narbada valley of Central India, during the second glaciation.

On palaeontological grounds the Siwalik system is divided into upper, middle, and lower. The upper Siwalik embraces the Boulder conglomerate, Pinjor, and Tatrot stages; the middle the Dhok Pathan and Nagri stages; and the lower the Chinji and Kamlial stages. De Terra has correlated the upper Siwalik stages of the Punjab with the moraines of successive glaciations in the Sind and Liddar valleys of Kashmir.

We now come to the dating of the various stages of the Siwalik system on the basis of palaeontological records. Here,

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[1] The Tertiary era is the most important in the physical history of India. It was during this era that two profound physical changes set in, which materially altered the old geography of the Indian region. They are the submergence of the Mesozoic *Lemuria* (the name given to the Indo-Madagascar continent) and the upheaval of the deposits of the sea (the great Tethys of geologists) spreading over an immense tract, now forming the northern zone of the Himalayas, North India, Tibet, and a great part of China. As a result of the foundering of Lemuria (the land-bridge between India and Africa) and the growth of the Himalayas the present configuration of the country was outlined. The evidence of an Indo-African land connection is afforded by the unmistakable affinities between the living lower vertebrate fauna of India and that of Central Africa.

we are mainly concerned with the Pliocene and Pleistocene divisions of geological time. But opinion among geologists and palaeontologists differs as to the definition of the Pliocene-Pleistocene boundary. Pilgrim regards the Tatrot and Pinjor stages as of Pliocene age, and refers the Boulder conglomerate stage to the lower Pleistocene. W. D. Mathew and E. H. Colbert consider the upper Siwalik stages as of Pleistocene, 'very probably of lower Pleistocene age'. De Terra, following E. Haug's definition of the Pleistocene period which states that it is the period marked by the appearance for the first time of true elephants, true horses, and true oxen, considers the lower and middle Siwaliks as mainly of Pliocene age, and refers the Tatrot stage to the first glacial, the Pinjor to the first interglacial, and the Boulder conglomerate to the second glacial age. The mammal fauna of the Tatrot stage is poorer than that of the overlying Dhok Pathan and underlying Pinjor stages. Again, in the Tatrot stage occur elephants, pigs, and bovids, which are more easily adapted to climatic changes than the Rhinocerotidae or anthropoid apes. Distinct fossil remains of the latter are not found in the Tatrot stage. Again, most of the fossil remains of *Hippopotamus*, a climatically specialized type, are found in Pinjor beds rather than in basal Pleistocene strata. Thus in Tatrot time conditions were less favourable for land mammals due to the first glaciation. The fauna of the Pinjor stage is more or less similar to, but greater in number than, that of the Tatrot stage. In the Boulder conglomerate stage, in which the fauna is very poor compared with that of the underlying Pinjor stage, occur *Equus namadicus* and *Bubalus palaeindicus*, which are found in the middle Pleistocene of the Narbada valley of Central India.

In the Punjab, in second interglacial time, the Boulder conglomerate rock was eroded, leaving a terrace, T1. The surface of T1 is covered with redistributed Boulder conglomerate, which in places became cemented together. T2, of third glacial age, is composed of a conglomerate capped by a mantle of yellow and pinkish silt. This silt is the 'loess' of earlier writers and the 'Potwar loessic silt' of de Terra. T3 was produced by erosion during third interglacial time. It has a basal gravel covered by redeposited Potwar. T4, of fourth glacial time, is composed of gravel, and T5 is later than fourth glacial age.

The two important areas in north-west India where the Yale-Cambridge India Expedition of 1935 made extensive collections of palaeolithic implements in association with datable Pleistocene deposits are the Soan valley and the Indus river from Attock to the junction with the Soan.

The earliest tools, which come from the upper portion of the Boulder conglomerate at Chaomukh, Kallar, Adial, Jammu, and Malakpur, comprise large crude flakes of quartzite and slate. They are rolled, which suggests that they were made during the deposition of conglomerate. The upper surface is usually unflaked

save for one or two small irregular scars. The edges are often battered, either by use or by natural agency. These large crude flake tools of second glacial age have resemblances to the Cromerian of Europe.

At Khushalgarh, Makhad, and Injra on the Indus and at Gariala which is south-east of Attock at the outlet of the Haro river into the Indus, well-patinated pebble and flake tools, worn and fresh, were found on the surface of T1. Now, tools patinated like those from the surface of T1 and boulders were found in a rolled condition in the gravels of T2. Therefore, the tools from the surface of T1 appear to be earlier than those found in the gravels of T2. Hence, T1 is of second interglacial age and T2 of the third glacial.

The tools from the Indus region form a distinct group, and are termed the 'early Soan' by Paterson in contrast to the industry found widespread along the Soan valley to which the same 'Soan industry' has been given by de Terra and which Paterson called the 'late Soan'. The early Soan industry is divided into three groups, termed A, B and C, based on patination and state of wear. The tools of Group A are heavily patinated, deep brown or purple, and much worn. The tools of Group B are as patinated as those of Group A, but they are unworn. The tools of Group C are less patinated and fairly fresh.

The pebble tools, which are all made from thoroughly rounded, water-worn pebbles and small boulders, are of two types. The flat-based specimens are portions of pebbles, one side flat or nearly so, produced artificially or by natural agency. From the flat face flakes were struck off steeply towards the upper rounded surface, resulting in a strong working edge which is usually convex and sometimes straight but never concave. The working edge may be all around the pebble or only partly around. In the case of rounded-pebble tools the flakes were struck off from the original pebble surface and not from flake surface. The pebble tools, circular, boat-shaped, or oval, become finer in the later stages.

The flake tools, which are made of quartzite and trap, are at first Clactonian-like in appearance but have resemblances to the proto-Levalloisian forms in the later stages.

The early Soan A tools include pebbles only. The early Soan B and C tools comprise both pebbles and flakes. The flakes in Group B resemble the Clactonian forms, while those in Group C are of proto-Levalloisian forms.

Of the same second interglacial age are rolled tools, comprising handaxes, cores, and flakes, found in gravels of the third glacial age. The handaxes are of Abbevillian and early, middle, and late Acheulean types. The Abbevillian handaxes are more rolled than the early Acheulean. The middle Acheulean handaxes have been found in a gravel which is correlated with that on the terrace T1. They are slightly rolled. But unworn examples

occur at a site on the Soan, which was discovered in 1937 by E. S. Pinfold.

The late Soan industry is of third glacial age. In it flake tools and cores are more dominant than pebble tools. It is divided into two groups. In the earlier, A, the flakes and cores are of early Levalloisian forms, while in later, B, the flakes and cores have resemblances to the late Levalloisian forms.

In third interglacial time erosion was widespread, which led to the redeposition of all earlier industries in T3. At Chauntra de Terra and Teilhard found in a gravel that may be of third interglacial age an assemblage of tools. The tools comprise one or two very worn Abbevillian handaxes and one or two large flakes resembling those from the Boulder conglomerate; less worn early and middle Acheulean handaxes; and fresh, late Acheulean handaxes and late Soan flakes and cores.

At Dhok Pathan on a high terrace has been found a series of pebble tools and flakes. This series may be of fourth glacial age, judging from typology and state of preservation. Another site, a few miles from Dhok Pathan, yielding similar tools is Pindi Gheb. This site was discovered in 1930 by K. R. U. Todd.

In the Narbada valley between Hoshangabad and Narsinghpur de Terra and Teilhard carried out investigations. Here W. Theobald had studied the stratigraphy of the ancient alluvial deposits. At his time the deposits were considered of Pliocene age. Hacket had discovered a handaxe, embedded in the reddish clay of the upper group, in association with fossil vertebrate remains, and several finds of flake stones were made in the surface deposits. Theobald had mentioned a human cranium, supposed to have come from the conglomerate bone bed of the lower group. He listed it as *Homo sapiens*, which strongly suggests that it was collected from the surface deposits in which de Terra and Teilhard found protoneolithic tools. R. D. Oldham had pointed out that beneath the lower group lay laterite gravel and laterite soil. Pilgrim had proved that the beds were of Pleistocene age. De Terra and Teilhard established the association of early palaeolithic tools with a middle Pleistocene type of fauna, and suggested a correlation between the Narbada sequence and the Punjab Pleistocene.

The ancient alluvium of the Narbada is composed of three sedimentary phases, the lower and upper groups and the cotton soil or regur. In addition, beneath the lower group lies a thick deposit of laterite capped by a thin laterite gravel. The lower group begins with a coarse cemented conglomerate of gravels and sands, ranging in thickness between 3 and 11 feet. De Terra and Teilhard collected and chiseled out from the conglomerate large flakes, resembling the pre-Soan artifacts of north-west India, handaxes of Abbevillian, early Acheulean, and middle Acheulean types, and cores, most of which were heavily

rolled. They collected also fossil remains of *Hexaprotodon namadicus* and *Bos sp.* from the very base of the lower group. Conformable on the conglomerate is a red silty clay with lime concretions, measuring 25 to 32 feet in thickness. From the red clay de Terra and Teilhard collected unrolled Clactonian flakes and late Acheulean handaxes. In view of the fact that the lower Narbada group contains heavily rolled Abbevillian and fresh late Acheulean handaxes, which appear in the Punjab connected with the stages younger than the Boulder conglomerate, de Terra and Teilhard are inclined to equate the lower Narbada group with T1-T2 in the Punjab.

The fossil vertebrate fauna collected by de Terra and Teilhard from the base of the upper Narbada group includes *Elephas namadicus, Equus namadicus, Hexaprotodon namadicus, Bos namadicus, Bubalus palaeindicus, Sus sp., Trionyx sp.*, and *Emys sp.* To this list may be added the following types of the vertebrate fauna from earlier collections preserved in the Indian Museum of Calcutta. They are *Ursus namadicus, Leptobos frazeri, Cervus duvancelli, Rhinoceros unicornis, Stegodon insignis, Stegodon ganesa, Hippopotamus palaeindicus, Pangsura tectus Bell* and other Reptilia.

The fauna of the upper group is of middle Pleistocene type, except for *Leptobos* and *Stegodon* which occur in the Pinjor zone of the upper Siwalik series and hence are of lower Pleistocene age. But according to Teilhard, who critically examined these specimens in Calcutta, the *Leptobos* may well be a damaged skull of *Bos*, and the tusks or fragments of *Stegodon* are too imperfect to allow even generic specifications.

Thus it may be stated that the fossil fauna of the upper group is similar to that of the lower group and that both groups carry middle Pleistocene mammal remains.

The basal gravels and sands of the upper group are less cemented and less coarse than those of the lower group. Above this bed, which measures 15 to 30 feet thick, lies a clay bed of 30 to 70 feet thick. The clay is less red, poorer in concretions, and more silty compared with the older clay. In both gravels and pink clays occur flakes and cores of late Soan type, rolled and otherwise. Rolled early Acheulean handaxes are found in the basal gravels and sands and not in pink clays, which shows that they were redeposited from the lower group. The upper Narbada group may be correlated with T3-T4 in the Punjab.

Above the clay of the upper group is a soft bed of gravels and sands in which de Terra and Teilhard collected small blades and scrapers. These tools are made of flint or jasper and not of trap or quartzite from which the tools of the upper and lower groups were made. No handaxes or large cores were found. The small blades and scrapers show a total change both in technique and in material, and hence may be regarded as representing a

protoneolithic industry. The alluvium of the regur or cotton soil may be equated with T5 in the Punjab.

Paterson studied the terrace geology and archaeology of the region near Madras. In 1930 L. A. Cammiade and M. C. Burkitt had classified the old Stone Age artifacts of south-east India, collected by Cammiade, into four series belonging to four distinct cultures of early paleolithic to protoneolithic times, determined on stratigraphical and typological grounds, and also judging by their state of preservation. The earliest industries comprise handaxes of quartzite. They are rolled, but not heavily. One type, represented at Chodavaram and in the Bhavanasi gravels, recalls the rostrocarinate. It is the type of tool which was first recognized at Victoria West in South Africa. Next are flake industries. Industries of the third series, best found in sites at the eastern and western end of the Nandi-Kanama Pass, comprise blades, burins, planing tools, and end scrapers. Lastly, microlithic industries occur, pigmy tools being dominant. They are found on the surface of the ground near the Godavari river. The pigmy tools recall those of the Wilton culture of South Africa. According to Cammiade, who recognized a series of oscillations from pluvial to interpluvial in the climate of south-east India by observations made at a number of sites, the industries of the first series from pebble beds are associated with a long dry period following a long damp period which was marked by the formation of laterite on the east coast of India between the rivers Kistna and Palar, and those of the second series from red clay with the second dry period following a period of violent rain which led to the formation of detrital beds. The third wet period differs from periods 1 and 2 in that neither laterite was formed nor the rain-wash was violent. Lastly, a period of less rainfall was followed by a period of denudation. Industries of the third and fourth series are associated with these periods. The series 3 industries occur on the surface of red clay overlain by red sandy soil.

Paterson recognized four terrace surfaces, designated TD, T1, T2, and T3, in the Korttalaiyar valley. On the gneissic surface, an old marine platform of pre-Pleistocene age, lies the white boulder conglomerate, a fluvatile deposit which is probably of middle Pleistocene age. The overlying detrital laterite forms surface TD. The laterite was eroded, producing T1 which was mantled by some little deposits of boulder gravels and sands. This was followed by erosion to T2 on which thicker gravels were deposited and then covered by silts and sands. T3 was cut into these and forms a small terrace alluvium.

At Vadamadurai, in a tank dug up, palaeolithic implements comprising handaxes, cores, and flakes were discovered by Paterson. They are divided into three groups. The implements of the first group, heavily patinated and most of them rolled, are of pre-laterite age; they have been found in the white boulder

conglomerate. The second group has been found in the laterite on top of the conglomerate. The implements of the first group show a very deep whitish crust in consonance with the colour of the boulder conglomerate pebbles, while those of the second group are stained red through contact with the laterite gravel. The third group, the implements of which have no laterite staining and little patination, belongs to the gravels of T1.

The first group is divided into an early and a late series on grounds of patination and typology. The handaxes, cores, and flakes of the early series are heavily patinated. The handaxes are of Abbevillian type. They are very crude and irregular in outline. The cores, mostly oblong or circular, show rough, irregular flaking. The flakes have primary flaking of a very primitive type on the upper surface. The implements of the late series are less heavily patinated. The handaxes are of early Acheulean type, and show the beginnings of a step flaking technique. They are slightly more regular in form. The cores, mostly discoidal, show fairly regular alternate flaking. The flakes have more primary flaking than in the previous stage.

The handaxes of the second group resemble the middle Acheulean. They have considerably more step flaking. They are much more regular in form, and the common forms are pear-shaped and ovate. The cores, mainly discoidal, have more regular flaking. The flakes show primary flaking covering the upper surface.

The handaxes of the third group are of late Acheulean type. There are two forms, one comprising ovates with step flaking and the other consisting of long pointed forms with free flaking. The cores are discoidal. There is also a flat type of core, oblong, oval, or square, with a platform at one or both ends for removing flakes from one surface. The flakes show no faceting on the platform. They are thin, and a few show retouch for use, probably, as side scrapers.

Late Acheulean handaxes, cores, and flakes, similar to those of the third group from Vadamadurai Tank have been found at Giddalore in the Kurnool district. At Attirampakkam, near Madras, have been found late Acheulean handaxes and cleavers, several of them being in place in the basal laterite gravel of T2. A few rolled specimens correspond typologically to the implements of the first two groups from Vadamadurai Tank. But the very great majority are unrolled, and they are probably to be assigned to the age of the third Vadamadurai group.

Quite recently, in 1942, an expedition sponsored by the Archaeological Survey of India and the Gujarat Research Society explored the Sabarmati, Orsang,[1] and Narbada valleys. H. D. Sankalia of the Deccan College Post-Graduate and Research Institute, A. S. Gadre of the Archaeological Department of the

[1] A tributary of the Narbada.

Baroda State, B. K. Chatterji, and V. D. Krishnaswami participated in this expedition. A short article entitled 'In search of Early Man along the Sabarmati', embodying the results of the expedition, has been written and published by Sankalia,[1] the leader of the expedition. But in the said article the geological and archaeological results of the expedition have not been properly dealt with. In the Sabarmati valley, as the writer understands, Chatterji and Krishnaswami collected and chiseled out quartzite handaxes from conglomerate overlying a solid granite bed. They collected also microliths, made of flint or jasper, from cotton soil. But in the upper layers of the cotton soil microliths were associated with potsherds, whereas in the lower layers pottery was entirely absent. The discoveries made in the Sabarmati valley appear to be in consonance with that we expect; the geological, palaeontological, and archaeological history of Pleistocene time not only in the Sabarmati valley but also in the Godavari, Jamuna, and Ganges valleys must agree with that in the Narbada valley. As in the Narbada valley, in the Godavari valley and in the valleys of the Jamuna and Ganges a middle Pleistocene type of fauna has been found. Skulls and bones of *Elephas namadicus*, bovine bones, a jaw of hippopotamus, and a single tooth of *Equus namadicus* have been found in the Godavari valley, and in the valleys of the Jamuna and Ganges near Allahabad occur the following: *Semnopithecus sp.*, *Elephas namadicus*, *Mus sp.*, *Hippopotamus palaeindicus*, *Equus sp.*, *Sus sp.*, *Cervus sp.*, *Bubalus palaeindicus*, *Bos namadicus*, and *Antilope sp.* In the Sabarmati valley, however, fossil remains of middle Pleistocene mammals remain yet to be found.

From the preceding facts we may conclude as follows: (1) The earliest industry in north-west India is represented by pre-Soan flakes of Cromerian type. It is of second glacial age. (2) The earliest industry in south-east India comprises handaxes of Abbevillian type. (3) In the Narbada valley the earliest tools, found in association with a middle Pleistocene type of fauna, are Abbevillian handaxes and pre-Soan flakes. (4) In north-west India the second interglacial industries comprise Abbevillian and early Acheulean handaxes and early Soan flakes of Clactonian and proto-Levalloisian forms. Of third glacial age are late Soan's flakes of Levalloisian type. (5) The handaxes found in north-west India and the Narbada valley typologically resemble the handaxe technique of south-east India. (6) Thus it seems very probable that the handaxe peoples came from south-east India to the Narbada valley and north-west India.

Now, de Terra says: 'This race' (the handaxe peoples of south-east India) 'also may have brought to the north a special tradition of tool manufacture to which I have given the name

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[1] *Journal of the Gujarat Research Society*, Vol. V, April 1943, No. 2, pp. 75–86.

Soan culture.' But the writer objects to this statement, for the Soanian clearly belongs to the flake group. Oswald Menghin has put forth the theory that there were three belts of palaeolithic, or, as he prefers to say, protolithic, civilization in the Old World: in the north bone culture, in the centre flake culture, and in the south handaxe culture. Switzerland, Austria, Germany, and Czechoslovakia, where sites of bone culture have been uncovered, belong to the northern part of the Old World; Russia and the central portion of Asia to the middle part; and Africa and India to the southern part. Menghin is inclined to locate the original home of the flake culture somewhere in China or Turkestan and that of the handaxe culture in Africa. Regarding the question of the cradle of the flake culture the writer would bring north-west India within the central belt of the Old World, and suggest that the Caucasus and north-west India were the two earliest centres of the flake culture. This is because civilization began in the Near East not only in Mesopotamia and Egypt but also, and probably earlier, in north-west India and the Caucasus.[1]

As mentioned above, pigmy tools representing a protoneolithic industry occur in the Sabarmati, Narbada, and Godavari valleys. Such tools were also found in the alluvial basin of the Orsang river by Bruce Foote, in the Vindhya region, in the caves of Padan near Bombay, and in a rock shelter situated in the valley known as Dorothy Deep about two miles W.N.W. of Pachmarhi in the Mahadeo hills.[2] To the protoneolithic industry belong also the implements found at Sukkur and Rohri on the Lower Indus in Upper Sind. On the limestone hills in both localities de Terra found conical cores and very thin long blades of flint which, to judge from typology and the state of preservation, resemble those of Mohenjodaro. But at Sukkur and Rohri the implements were not found associated with pottery and metal. This suggests that the industries of Sukkur and Rohri are earlier than the industry of Mohenjodaro. Also, from a geological angle the greater antiquity of the industries of Sukkur and Rohri seems clear. Ancient soils of 'terra rossa' type occur on the limestone hills of Sukkur and Rohri. They are buried on the hill slopes under ancient Indus silt. In both red soils and silt occur flint cores and blades. Now, it is at a time of greater rainfall and not under present arid conditions that

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[1] For the Caucasus as one of the earliest centres of civilization see my 'The Origins of Civilization in Egypt' in the *Journal of the University of Bombay*, Vol. XII, Part I, July, 1943.

[2] In the Dorothy Deep rock-shelter No. 1, G. R. Hunter excavated microliths only from the lower layers and microliths associated with pottery from the upper layers. He excavated also a skeleton in association with microliths from the lower layers. Pottery was entirely absent not merely at the level of the skeleton, 18″–21″, but for a further 10″ above it. The surface soil down to 6″ yielded pottery in abundance.

red soils form. The Indus valley civilization flourished also at a time of greater rainfall. But the formation of red soils on the limestone hills and the construction of Mohenjodaro do not appear to have belonged to the same climatic phase. A higher Indus level at Sukkur, as attested by the silt on the hill slopes, necessitated also a higher flood plain at Mohenjodaro. But the flood plain at Mohenjodaro was not higher. The discovery of the ruins of Mohenjodaro nearly thirty feet below the present valley flat indicates a geological interval between the formation of the ancient silt and the construction of Mohenjodaro, during which the river deepened its channel. Hence we are inclined to adopt the view that the first Indian urban civilization represented at Mohenjodaro, Harappa, Chanhudaro, and other chalcolithic sites on the Indus evolved out of the protoneolithic culture represented at Sukkur and Rohri.

We now pass on to the new Stone Age in India. In 1861 H. P. Le Mesurier drew attention to certain ground and polished stone implements, which he in 1860 had found in the valley of the East Tons river in the United Provinces. In 1862 W. Theobald collected similar artifacts from the Banda district of the United Provinces. These stone implements are neoliths. But they were not recognized as such then. About 1866 numerous flint cores and flakes were discovered on the hills near Sukkur and Rohri in Upper Sind and from the bed of the Indus nearby. W. T. Blandford considered the cores 'by far the most carefully formed of any hitherto found in India'. Further, he suggested that the core-makers were different from the flake-makers, the latter representing a more advanced civilization. Blandford apparently regarded the implements of Sukkur and Rohri different from those of the Tons valley and Banda. In this, as we have seen above, he was right. The first discovery of neolithic implements, recognized as such, was made by W. Fraser about 1872 on the North and Peacock hills in the Bellary district of the Madras Presidency. Later, Bruce Foote made large finds of such artifacts in this district. He collected also neolithic implements from numerous sites in the northern part of the Anantapur district of the Madras Presidency. In 1876 F. Fedden picked up a flint scraper at Jhirak in Lower Sind, and in 1879 J. Cockburn described neoliths collected from the Khasi hills in Assam, the Banda district, and the Vellore taluq in the North Arcot district of the Madras Presidency. In 1879 W. Theobald picked up a celt of limestone with pointed butt and rounded edge from the bank of the Indus river near Attock. It is the first specimen of its kind to be discovered in the Punjab. W. H. P. Driver in 1887 discovered a neolithic settlement near Ranchi. Among the stone implements found by him we can recognize celts, arrow-heads, discs, polishers, and grinders. Since then neolithic implements have been collected from other districts in Chota Nagpur; C. W. Anderson in 1915 made in the valleys of

the Sanjai and Binjai rivers in Singhbhum an interesting collection of implements representing late palaeolithic and neolithic industries. Neoliths have been collected also from the Salem (e.g., on the Sheveroy hills) and Guntur (e.g., at Amaravati) districts of the Madras Presidency, from Gujarat (e.g., in the Sabarmati valley), and from the Central Provinces and the Assam Province. In the Tezpur district in Assam was found a shouldered celt of the Burmese type. A similar implement was found also in Dalbhum (Chota Nagpur) by V. Ball. The neolithic celts from the Central Provinces are similar to those from the United Provinces.

We shall now mention the neolithic discoveries made by the Yale-Cambridge India Expedition of 1935. In the central Salt Range, near Uchali and south-east of Rawalpindi, de Terra found human burials in postglacial loessic soil. The burials yielded skulls of *Homo Sapiens* of dolichocephalic type and handmade pottery. No stone implements were found. But at Uchali, west of Naushahra, a burial containing handmade pottery was found associated with implement-bearing layers. The implements comprised flakes and cores reminiscent of palaeolithic technique. Similar flakes and cores were found by Chr. and J. Hawkes in a postglacial terrace on the Jhelum river near Pampur. Both de Terra and Paterson made also similar finds associated with potsherds in alluvial deposits on the banks of the Jhelum as well as in lake-terrace sites of neolithic age. The megalithic site of Burzahom, between Srinagar and Gandarbal, yielded flakes and cores which are presumably waste products of hoes, pestles, and polished celts found at depths ranging from 2 to 10 feet. At Burzahom a trial excavation made by de Terra disclosed three culture layers. The uppermost layer (A) represented a Buddhist site of the fourth century A.D. Below it was a layer (B) with highly polished black ware and potsherds with incised geometric designs. This culture layer no doubt belongs to the last phase of the Indus valley civilization known as the Jhangar stage from the site of Jhangar, near Lake Manchar, in Sind where it is best represented. At seven feet from the terrace surface occurred charcoal, polished celts, bone awls, and cooking pots in postglacial loessic soil. Paterson uncovered also a similar 'kitchen' settlement at Nunar, above Gandarbal, also at seven feet below the terrace surface.

It would seem from the preceding that the neolithians of India were principally tool-makers and hence culturally inferior to the neolithic Egyptians who knew, in addition to tool-making, agriculture, domestication of animals, manufacture of pottery, and textile industry. Yet, India possessed a civilization fully equal to that of Egypt or Mesopotamia about 3400 B.C. The foreign derivation of the first Indian urban civilization at Mohenjodaro cannot be stressed in view of its connection with the protoneolithic culture at Sukkur and Rohri. Besides, going

Period.			N.W. India.	C. India.	S.E. India.
HOLOCENE.	Postglacial stage.	Chalcolithic.	Mohenjodaro.		
			Amri.		
		Neolithic.	Kitchen settlement of Burzahom and burial of Uchali.		
		Protoneolithic.	Industries of Sukkur and Rohri.	Microliths from cotton soil.	Microliths of the Godavari valley and the Nandi-Kanama Pass.
UPPER PLEISTOCENE.	Fourth glaciation.	Upper palaeolithic.	Industries of Dhok Pathan and Pindi Gheb.	Flakes and cores of late Soan type from upper gravels.	Blades and burins of the Nandi-Kanama Pass.
	Third interglacial stage.		Late Soan industry.		
	Third glaciation.				
MIDDLE PLEISTOCENE	Second interglacial stage.	Lower to middle palaeolithic.	Abbevillio-Acheulean and early Soan industries.	Pre-Soan and Abbevillio-Acheulean industries from lower gravels.	Handaxes of late Acheulean type, cores, and flakes of post-laterite age.
	Second glaciation.		Pre-Soan flake industry from top of the Upper Siwalik Boulder conglomerate.		Handaxes of middle Acheulean type, cores, and flakes of laterite age.
					Handaxes of Abbevillian and early Acheulean types, cores, and flakes of pre-laterite age from white boulder conglomerate.

backwards from 3400 B.C. a correlation of the civilizations of the Indus and Tigris-Euphrates valleys can be made out. The Mohenjodaro period corresponds to the early dynastic period of Mesopotamia, and the Amri to the Jemdet Nasr. Stages corresponding to the Uruk and al'Ubaid phases of Mesopotamian civilization remain yet to be found in India. If systematic explorations were undertaken in the Indus valley and its border lands, as in the Nile and Tigris-Euphrates valleys, no doubt our extremely meagre knowledge of the neolithic period in India could be enlarged and the gaps between the chalcolithic and neolithic periods filled up. During 1929-30 and 1930-31 a survey of Sind was carried out by N. G. Majumdar. In course of this Majumdar discovered the Amri phase of the Indus valley civilization. In October 1939 he began further exploration in Sind. But he was killed in November of that year while on exploration duty on the Sind frontier. So far no account of this exploration has been published by the Archaeological Survey of India. It is true that the preparation of such an account will involve many a difficulty. But it is worth making an attempt at it in view of the possibility of obtaining new information on the beginnings of civilization in India.

The Stone Age cultures, belonging to the middle Pleistocene and the early part of recent times, in north-west and peninsular India and the Narbada valley of Central India are summarized in the foregoing table.

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Note.—In 1940 the Anthropology Department of the Calcutta University in collaboration with the Archaeology Department of Mayurbhanj State carried out excavations in the neighbourhood of Kuliana where some palaeoliths had been discovered in 1939 in the bed of tanks dug by the State Public Works Department. The country rock is Archaean in age and the detrital laterite in which the stone implements are found embedded are derived from these rocks. The thickness of the laterite beds varies from two feet to more than thirteen feet in places. Samples of laterites from different depths were analyzed to ascertain if the whole could be broken up into subdivisions differentiated from one another by their heavy mineral content. The result was negative. No fossils were found in the laterite beds. They, however, overlie, by a considerable height, certain fossiliferous calcareous clay beds near Baripada which are known to be of middle Miocene age. The beds are therefore post-miocene.

The tools belong to the following families:—

A. Pebble tools, some of which resemble crude hand-axes, and others cleavers. There are also choppers, ovate forms and awl-like pointed tools.

B. Core tools, both faces worked—

(i) Peariform and sharply pointed triangular forms.
(ii) Almond shaped, with (*a*) worked and (*b*) unworked butts.
(iii) Discs and choppers.
(iv) Ovate, i.e. with convex cutting edges, (*a*) worked and (*b*) unworked butts.
(v) Cleaver with transverse cutting edge, (*a*) pointed butt, (*b*) square butt.
(vi) Cleaver with convex cutting edge.
(vii) Cleaver with oblique cutting edge.
(viii) A new type of cleaver-like tool with lateral margins alternately chipped to yield working edges, anterior blunt.
(ix) Side-scrapers with both faces worked all over.

C. Flake tools (one side unworked)—

(i) Cleaver on flake, transverse, convex and oblique edged.

(ii) Chopper on flake.

(iii) Tool with serrated margin produced by one-sided flaking.

(iv) Scrapers, with unprepared striking platform (none is with prepared striking platform).

D. Cores—

(i) Used only as a source of flakes.

All the above tools are of quartzite, ranging from a comparatively easily weathered siliceous sandstone to crystalline varieties and flaggy or chertlike specimens. Many implements, even when found on the surface in the neighbourhood of gravel pits, show ferruginous (lateritic) incrustations on their surface or in the angles between flake-surfaces, proving that they must have been dug up from within the lateritized gravel beds.

K. P. CHATTOPADHYAY.

REVIEWS OF BOOKS

MAGADHA ARCHITECTURE AND CULTURE. By S. C. CHATTERJEE. Published by the University of Calcutta. Price Rs.5.

It is possible to read in Sris Chandra Chatterjee's 'Magadha Architecture and Culture' (University of Calcutta) not only a sympathetic account of the buildings of the Buddhist Holy Land, but also to gain some idea of the intense enthusiasm of its author for the building art of his motherland. Beginning with a scholarly 'Foreword' by Dr. Syama Prasad Mookerjee, in which the author and his production are suitably presented, this is followed by an Introduction by Sir Sarvapalli Radhakrishnan who explains in a concise manner the objects of the work. From a Preface by the Sthapatya-Visarad, a title to which the author is fully qualified by his experience not only as an architect, but also as a Civil Engineer, Mr. Chatterjee passes on to a chapter on the historical aspect of his subject. Here is a fine opportunity to take an expansive view of the events which led up to the great days of Magadha, a region which corresponds in some of its geographical limits with the modern country of Bihar. Dwelling on the antiquity of its culture, the author then refers to the splendour of its past as shown in the ancient capitals of Rajagriha and Pataliputra. The influence of the Indus Valley Culture then comes into the picture, followed by the effect of the Hellenistic art of Greece through Bactria and Gandhara in the early centuries of the Christian era. And so the story is continued through the ages, of Mahavira and Gautama Buddha, of Asoka, to whom Indian architecture owes its genesis, to the Guptas and the Palas, all active patrons of the arts, finishing with the 'Glory of Nalanda' that great Hindu-Buddhist University which flourished in the first millennium and spread its influence over so much of Asia and the East.

Section II of the work deals with the 'Message of Magadha', and the effect of this living culture on the subsequent ages. Gradually the author leads up to the more recent times eventually treating with 'the Modern Architecture in Magadha', on which he makes some illuminating remarks. In conclusion the agencies for resuscitating the architectural art of Magadha are discussed, in other words, the future outlook of this historical school of the building art.

The author has thrown himself into the study of this interesting subject with great energy, and produced much that is thought-provoking. He illustrates his arguments with a number of plates from the primitive structure of the Cyclopean Wall at Rajagriha through many of the phases through which Indian

architecture has passed, finally producing a series of designs associated with the buildings of modern times, which although some may not entirely approve of his excursions into historic styles, the fact that the effort is being made to adapt the past with the present is something more than praiseworthy, it is essential to our well-being.

PERCY BROWN.

SCIENCE CAUSE AND GOD. By J. B. FREEMAN. Ave Maria Press, Chingleput, 1942, pp. i–iv, 210; i–x. Price Rs.5 or 7*s*. 6*d*.

The book under review may be called one for all those interested in modern philosophical speculations. It is an attempt to set men thinking and is itself full of thought, though set in a bit loosely.

The author is no doubt abreast with the most recent advances in science, which he discusses and utilizes in his analysis of the concept of cause, which leads on to that of God, the uncaused cause of the universe.

In his treatment of the Axiom of Realism, Analysis of Cause, the Will, Intelligibility, Kinds of Causes, the Principle of Causality, Causal Efficacy, the Apprehension of Cause, Indeterminism, Freedom, Causality, Scientific and Metaphysical Cause, the Ascent, Hume and Cause, After Hume, Religion, Philosophy, Science and other allied topics, the author has made bold not to follow the beaten track but place his original views on record as good as he could, although we cannot agree with him in every detail. The book is useful in spite of certain misprints, that have crept in. To observe critically the popular view of a cause is that it is a power or force which produces or originates the effect. Physical science improves upon this popular view and interprets causality in the light of the doctrine of conservation of energy. The Empiricist argues that we never apprehend a force or energy or power in our sense-experience since all our knowledge is derived from experience. We know nothing of production and necessary connection between the cause and the effect. All that we experience is merely a succession of phenomena. Now, if in our experience, one phenomenon is uniformly or invariably followed by another, the ideas of them become associated in our minds so that whenever we think of the former, we cannot but expect the latter. Thus causality is nothing more than uniformity of order among events and the cause is nothing but the invariable antecedent of an event. This is Hume's definition of a cause. But in that case, day would be the cause of night, as it is invariably followed by night. So Mill defines a cause as an *unconditional, invariable antecedent* of an event. Thus Mill attempts to prove the law of causation on the basis of induction by simple enumeration. While attempting

to prove that the principle of causation is derived from experience, he is compelled to assume that it is found in the facts to make induction possible. But Hume had clearly pointed out that the causal connection could not be found in the facts of experience. The Empiricists first read it into the facts before extracting it *from* them. Hence, the fallacy is obvious. On strictly experiential grounds the causal connection turns out a mere 'fiction'. Experience furnishes us with no ground whatsoever to extract the principle of causation.

If causality cannot be derived from experience, it must be explained as an *a priori* principle. Kant holds that there is no causality in the reality in itself behind and beyond phenomena. It is real only within the range of experience. It is an *a priori* category of the understanding which the mind evolves from within itself, in order to understand and interpret our experience.

According to Hegel, causality is not only a category of the human mind, but also a category or the framework of reality, which is the objective expression of the Absolute. According to the Intuitionists (Martinean and others) causality does not consist in mere uniformity of sequence, as empiricism holds, nor is it an *a priori* category of the understanding having no objective counterpart in nature, as Kant supposes. It is a power or force which produces the effect. Thus the Intuitionists' view agrees with the popular view.

According to Pragmatism causation is neither derived from experience nor from the necessity of reason but from postulation.

NARENDRA CH. VEDANTATIRTHA.

GEOGRAPHICAL FACTORS IN ARABIAN LIFE AND HISTORY. By SH. INAYATULLAH. Published by M. Ashraf, Lahore, 1942. Price Rs.4-8-0.

The book provides an enquiry into the influence of physico-geographical environment upon Arabian life and institutions. The need for such a work has been felt for a long time and the author has made a useful contribution to the study of Arabian history and human geography. Though for over a century historians and orientalists have devoted much attention to the Arabic language, general history and the rise and development of the Islamic civilization, yet a systematic geographical survey of the peninsula has not been easy to compile, because of the inaccessible nature of the land and the deep prejudice of its inhabitants against foreigners. Therefore the knowledge of the climatic and physical conditions of the country has mainly been derived from the accounts of the various travellers and explorers (mostly incognito in the past) almost exclusively western who have visited different parts of Arabia at different times. In the

present work, in the earlier part an attempt has been made to trace some general effects of the insular and inter-continental aspects of the location of Arabia in the history, race and languages of its people and the later portions deal with some aspects of the political life of the Arabs, which seem to have been influenced directly or indirectly by the physical conditions of their land. The concept of the environmental influence, including climate, physical aspects, location and natural resources has been fully brought out and the author aptly remarks, 'Not only does geography make clear to us historical facts and events, by giving us topographical and other information about the places, with which they are connected; but the conditions of physical environment, taken as a whole, reflect themselves among other things, in the historical and political activity of man.' But he rightly adds, that considerations of physico-geographical character alone do not explain the variable element of human personality and initiative though they certainly underly the stage on which the drama of human history unfolds itself and consequently helps us to understand better the general trend of the historical processes. Interesting discussions are found in relation to such as geographical influences and rational topics, independence, lack of rational unity born of geographical isolation, the rôle of the camel in the economy of the people of Arabia, the Quran and the articles of dress and luxury and the problem of food in relation to the means available. In addition, an appropriate reference is made to the scientific of the Arab geographer's work on provincial and regional geography which in many ways anticipate some of the modern concepts of human geography.

One would like the author to expand many discussions on such portions as the hydro-geographical of settlements, the natural delineation of the country and the influences of environment and mobility. The fact that 'Arabia lies in the tropical latitude of low pressure' (p. 23) has nothing to do with its extreme dryness. The real cause of its rainlessness is the prevalence of the trade winds which blow from land to sea. The author has taken an exaggerated view of the adverse nature of the climate of the peninsula (Chapter IX). The additions of a few maps, showing the main lines of relief, prominent WADIS and the distribution of settlements would have been of immense use to the reader.

It is rather strange that Amin Ar-Raihâni's marvellous book, 'MULUK-UL-ARAB' (Bairūt, 1929), escaped the notice of the author.

All in all the author has made a useful contribution to the historical and human geography of Arabia. A select bibliography, subject index and a list of Arabic words used, have been provided at the end. The book is one of general usefulness both for students of Islamic history and culture and human geography.

AKHTER IMAM.

ANCIENT RACES AND MYTHS. By CHANDRA CHAKRABERTY. V. K. Bros., 81 Vivekananda Road, Calcutta. 132 pp.

It is not always pleasant to review a book even if it is immensely so to read it. The booklet under review is a unique production. It gives proof of wide reading and condensed thought but the author seldom finds it necessary to discuss the statements which are put forward categorically and with conviction. Archaeological findings are important in the identification of races but they are not unerring guides to the reconstruction of human racial chronology, as the author seems to think. Mr. Chakraberty thinks that 'the bones do not tell lies' therefore archaeological findings are important, but bones do not speak, we speak on bones, there lies the trouble.

'The Austric race is characterized by chocolate brown colour of the skin.' 'In religion they have no higher conception than totems and taboos.' 'The Wegroids evolved in Western Africa.' 'The Caspians are the tallest (above 7 ft. high)', 'the Jats and Kushans are Caspians' according to the author, 'they practised jar burials at Harappa ' pot burials.' 'The Alpines have the highest brain capacity (1,450 c.c.)' though the average cranial capacity of the Eskimos is 1,560 c.c. and Amerindians 1,450 c.c.' 'The Aryans were a blend of the Caspians, Mediterraneans as major factors, Austroloids and Negroids as very minor elements.' 'The Negroes (Rakshasas) and Negrittoes (Nishadas) coming from the north-west crossed the peninsula and passed through the Assam corridor', Mongoloids 'fused with the Negrittoes, formed the Santals and Mundas'. 'The Austrics had a certain mixture of Negroid blood which imparted to their hair wavy characteristics.' If all these are mere myths, they have been well put. If they are claimed to be 'rational' I doubt if anybody would be convinced. Many of his conclusions which he thinks are proved are so hypothetical that it is no use discussing them. I would end this review by quoting him from his own introduction to the booklet, 'Within the same totem group sexual union is tabooed, consequently marriage is exogamous and due to psychic fixation, there is a strong incest phobia among them, which by psychological inhibitory reaction proves that sexual intercourse had been rather promiscuous among them and not only endogamous, but even it did not exclude close blood relations'. This is what the author writes about the Aruntas of Australia.

D. N. M.

MODERN PERSIAN POETRY. By M. ISHAQUE, B.Sc., M.A., Ph.D. (London), Lecturer, Calcutta University; with a Foreword by the HON'BLE NAWAB MAHDI YAR JUNG BAHADUR OF HYDERABAD. Pp. xix+226. Calcutta, 1943.

Dr. M. Ishaque has already earned a reputation as the author of an anthology of modern Iranian poetry, entitled *Sukhanwarān-i-Īrān dar 'Aṣr-i-Ḥāẓir*, which he published in two volumes in 1933 and 1937. The present work is, as stated by the author, 'a general survey with a critical estimate of the position of modern Persian poetry'; 'it may justly be regarded', says the author, 'as a critical supplement to the anthology containing the data on which this dissertation is mainly based'. The book is divided into seven Chapters. It opens with an account of the birth of modern poetry in Iran—in which the author has referred to the political and social causes which brought about a change in the outlook of the people and which found an echo in the songs or the laments of the poets. In the next Chapter, we get a list of eighty-three modern poets, with brief notices of their lives and comments on their style. Among them are included two ladies, Parvīn-i I'tiṣāmī (died 1941) who wrote under the pen-name of *Parvīn*, and the princess Faṣl-i Bahār Khānum, who has adopted the *nom de plume* of *Jannat*. In the third Chapter the author has discussed the changes in the language of modern Persian poetry and has referred to two movements which have brought about this change (p. 35). According to him, 'the first is a Purist movement, the sole aim of which is to eliminate Arabic elements traditionally connected with the former classical and theological learning. Paradoxically enough, the second movement runs counter to the first in that it readily borrows words from Western languages in order to make good the deficiency caused by the ban on Arabic terms . . . .' (p. 45). He refers to a third movement also, which, according to him, is to bring 'the poetical language nearer to the spoken idiom.' Dr. Ishaque has dealt with these movements in some detail. In the Chapter on Metres, the author has traced briefly the history of the development of the Persian metre and has referred to the isolated attempts of certain poets to depart 'from the traditional metrical principles' and 'to compose verses according to the syllabic system'; but no systematic effort has, it seems, been made to strike a new line. . . In verse-forms (Chapter V), also, Modern Persian poetry has not made any change of remarkable importance. No doubt, 'Ishqi, Afsar, and Ayati have made certain innovations, while certain inferior poets have tried to introduce the European system of rhyme or European verse forms into Persian, but their attempts have not found favour with the more distinguished poets of modern Iran.

Dr. M. Ishaque's discussion of the 'Themes' of modern Persian poetry is the longest and also, perhaps, the best. The themes, 'if studied according to their chronological growth and development', fall within three distinct periods: (1) 1890–1896, (2) 1896–1924, (3) 1924 to the present day. The history of the development of political consciousness among the Iranians, as reflected in their poetry, makes interesting reading. Poets have played no mean part in the awakening of modern Iran. The contact with Russia and the improvement of Russo-Iranian relations following the signing of the Soviet-Persian Treaty in 1921, urged a number of poets to propagate socialistic ideas through their poems, but their efforts were nipped in the bud by the stern Riza Shah Pahlavi. A feature of modern Persian poetry is the tolerant appreciation by Muslim poets of Zoroaster, the ancient Prophet of Iran; another marked feature is 'the new attitude towards women which constitutes one of the most important changes in modern Iranian life'. In the concluding chapter, the author has summed up the mission of modern Persian poetry; he has referred to its achievements and has invited pointed attention to its shortcomings. 'The modern period,' he says, 'with all its redeeming features and drawbacks, is a period of Romanticism in the poetry of Iran. Like the Romantic movement in English literature, it is essentially a product of the freedom of thought.'

The book ends with a useful bibliography and a carefully prepared index.

Dr. M. Ishaque is a notable authority on the subject which he has chosen for his study; he has taste and judgment and his book will be read with interest and profit by all students of Persian poetry.

M. M. Haq.

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