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TWO BUDDHIST SCENES AT BHAJA

by E. H. JOHNSTON

A scholar often finds it difficult to know whether or not to publish an idea, for which adequate proof is lacking. However much he emphasizes the conjectural nature of his suggestion, the next authority to take up the question is as likely as not to ignore his reservations and to pour scorn on him for treating an ill-advised guess as a well-ascertained fact. But sometimes a worse fate awaits him ; his idea will be accepted by his successors and, despite the absence of proof, will harden into a dogma, to challenge which will be regarded as propagating heinously heretical views. In subjects where working hypotheses are a necessity for further progress, these risks have to be incurred, but surely this argument does not apply to iconography and the present writer fails to see what advantage is gained from putting a purely baseless label to some work of art in order to provide it with a name. For instance, it will probably soon be reckoned heterodox not to agree that a certain statue at Bodhgaya represents Indra as Śānti, though the name of Śānti as the grasscutter who provided Buddha with his seat as well as his identification with Indra appear for the first time in the legends many centuries after the statue was carved.[1] Or again consider the heterogeneous mass of scenes, which are now styled the Great Miracle of Śrāvastī ; that title, I venture to think, is correct at best in only a small proportion of cases. But in a world, which prefers a wrong explanation to none at all, the expression of doubts and hesitations is futile, and the sceptic is best advised to hold his hand, unless he has a convincing alternative to offer. With these considerations in mind I propose to discuss here the subjects

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1. For the legends see L. Scherman, Der Schnitter und die Erleuchtung Buddhas in "A Volume of Eastern and Indian Studies" (F. W. Thomas Festschrift, Bombay 1939).

of two well-known reliefs at Bhaja, taking first that which is generally said to represent Sūrya in his chariot ; a different interpretation has long seemed obvious to me, but the proof eluded me till I had an opportunity of examining Dr. Kramrisch's photographs and going through the details with her.

The early iconography of Sūrya is now fairly well-established, and I need only draw attention to certain points. The images, which can be dated to periods before 600 A.D., fall into five classes. First there are the standing statues of Sūrya, usually holding a lotus in each hand, which is uplifted in the fashion which the Rigveda describes as characteristic of Savitṛ (Macdonell, Vedic Mythology, 32) ; he has no chariot, but is attended by Piṅgala and Daṇḍin. The standard example is at Bhumara (Mem. A. S. I., 16, pl. XIVa) ; a similar one from Niyamatpur in Bengal is published by S. K. Sarasvati in the Journ. Dept. of Letters, Calc. Univ., XXX, fig. 1, and the Indian Institute at Oxford has another rendering of the same theme, which appears rather crude from the loss of its original stucco covering. The second class, from Mathurā, shows the sun-god in a squatting posture with Piṅgala and Daṇḍin (Vogel, Sculpture de Mathurā, pl. XXXIIIb, whose description, p. 46, does not mention the two subordinate figures) ; the Indian Institute has recently been given another version of this motif, which can be indentified from the exact coincidence of the squatting deity with that in the next class. It is not clear whether either of these examples had originally representations of horses on the base. The other three classes all have Sūrya on his chariot, firstly squatting alone in a composition which seems peculiar to the Mathurā school (Vogel, op cit., pl. XXXVIIIa, and similar examples in the Indian Institute and elsewhere), secondly seated either with or without Piṅgala and Daṇḍin in certain reliefs from Afghanistan (Mem. Del. Arch. Fr. en Afghanistan, VII, Col de Khair Khaneh, by J. Hackin, figs. 17 and 31[1]), thirdly standing in a chariot with attendant goddesses, of which the earliest known example is at Bodhgaya (Coomaraswamy, Sculpture de Bodhgaya, pl. XXXIII) and one in the Ananta Gumpha, Orissa (inset

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1. The single figure of the Mathurā school, ib., fig. 34, belongs to the first class apparently. An isolated figure of Piṅgala has also been found at Mathurā (J. U. P. Hist. Soc., 1937, p. 90 and pl. II, fig. 5), but from the attitude it must originally have formed part of a larger composition.
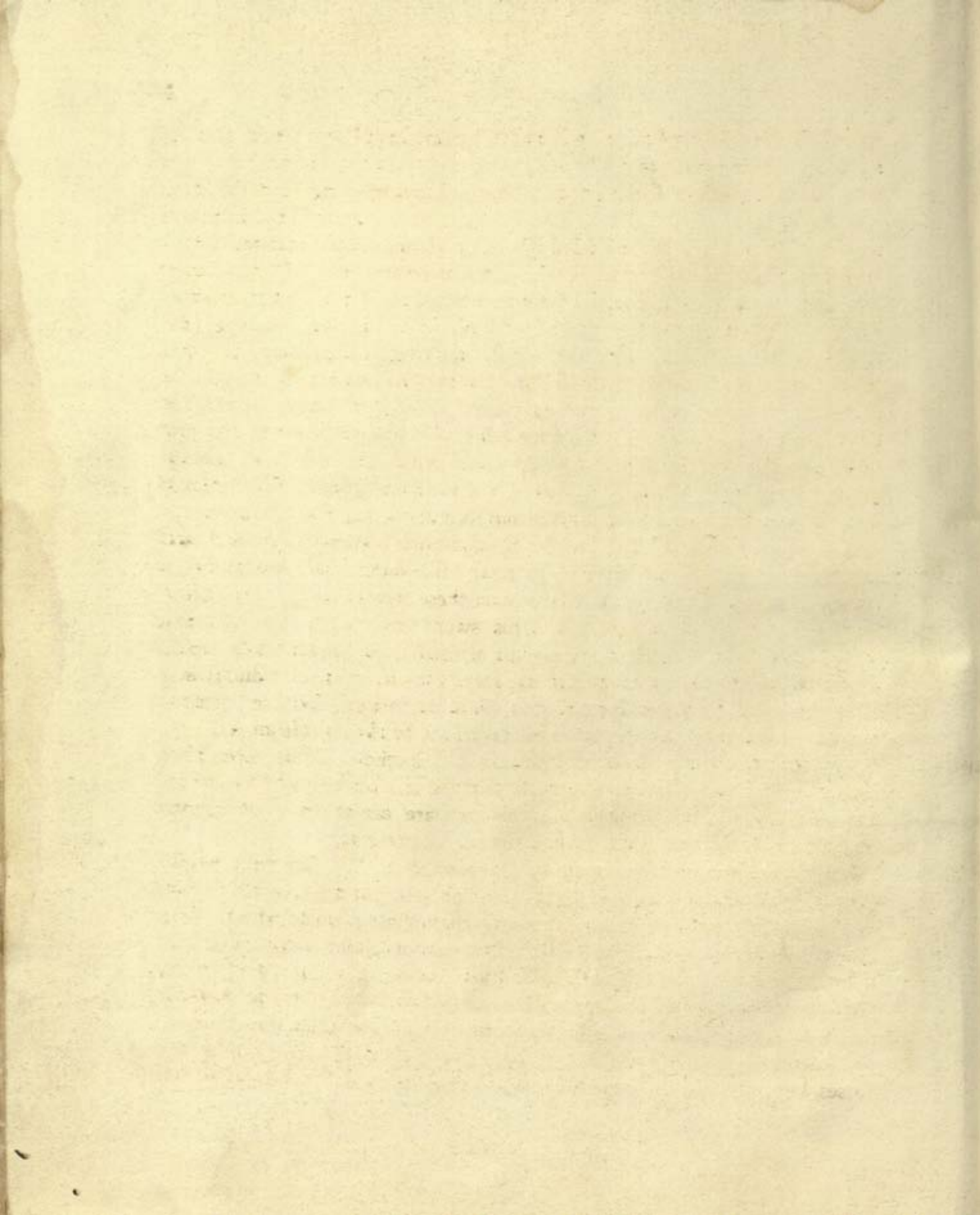
on p. 7). I have not seen V. Smith's description of a later one in Ostasiatische Zeitschrift, III.

As regards the first, second and fourth classes, the origin of the two attendants on the sun is discussed in a suggestive manner by Hackin in the memoir quoted and has its importance for dating. He associates them with the Dioscuri and other parallel pairs of attendants on the sun found especially in the Nearer East, but this does not account for Pingala carrying the pen and inkhorn, which can only be related to the recording of, and judgment on, the actions of the dead, not merely to the functions of a psychopompus. It looks rather as if we were concerned with Mithra in his function as recorder and judge, and I note that Dandin's method of holding the spear recalls strikingly the attitude of the dadophorus on the Mithraic reliefs, who holds his torch upright, though it is less easy to equate Pingala's attitude with that of the dadophorus who holds his torch downwards. This suggested relationship receives perhaps some corroboration from my second class, where the god holds a sword in his left hand and a curious pestle-like object in his right ; the latter may be meant to represent a torch, and, if so, we have on these statues the two characteristics of Mithra on the known reliefs, his sword and torch. On this line of argument the second is the earliest of these three classes, which would illustrate the process by which the statues of Mithra, when introduced into India, were gradually transformed into those of Sūrya. But the theory, however attractive, should not be accepted, till Mithra reliefs are available from Iran, preferably Eastern Iran, for comparison. This possibility combines with the indications of style to make me believe that none of the statues which include Pingala and Dandin are earlier than the fourth century A. D. and that some of them are materially later.

One characteristic, it should be observed, unites the last three classes, namely, that the horses are shown, not abreast, but drawn apart to each side, so as to make it apparent that the chariot has a single wheel. This method of representation has led to some misconception ; for by it the sculptors were unable to show all seven horses which draw the chariot. Sometimes two, sometimes four, sometimes six horses (e. g. in the Mathurā relief of my third class in the Indian Institute) can be seen, but it must not therefore be inferred that Sūrya was ever held to have less than seven horses, but only that the disposition of the figures made it impossible to

indicate the presense of seven steeds ; the device by which this difficulty was overcome in later times is well known. The further point should be noted that Sūrya, whatever his posture may be, is invariably shown in the centre of the chariot.

Now consider the Bhaja relief (Pl. I) in the light of the above statements. In the first place the chariot has two wheels and is drawn by four horses abreast ; these facts alone are sufficient in my view to negative the identification with Sūrya. In the chariot are standing three deities of more or less equal size, which fact alone prevents us from equating them with Sūrya, Piṅgala and Daṇḍin, even if the early date of the relief were not a strong argument against that assumption. The central position is occupied by the charioteer. The chariot is being driven over a mis-shapen monster with his feet turned the wrong way, who has been identified as Rāhu ; this is impossible, not so much because he is shown with his head not severed from his body, a legend that may not have been known at so early a date[1], but because the relief goes round the corner (Pls I-II) and shows a number more of similar monsters. Those who like the far-fetched might be tempted to think of the passage in Taittirīya Āraṇyaka, I, 10, where Śambara engages in battle with Savitṛ and is defeated ; but why should a Brahmanical legend, so little known as not to appear in any other text or even in Macdonell and Keith's Vedic Index, be given one of the principal positions in a Buddhist cave ?

So far I have dealt with those points which might be held to have some relation with Sūrya, but there is more in the relief with which to reckon, before any particular identification can be accepted. The chariot is travelling in the air ; at the bottom a bird's head peeps out in alarm (Pls. I and II) and further up, though invisible in most reproductions, is another bird or two (Pl. II). It was the presence of the birds which I had over- looked in the photographs available to me, and every Buddhist scholar who reads this paper will probably realize at once that I had always taken this scene to represent the war between Sakka and the Asuras as told in Saṃyuttanikāya, I, 224-225. The earlier 'vaggas' of this work contain a number of legends in decidedly antique form, some of which, such as those

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1. From Bṛhatsaṃhitā, v, it may be inferred that there are several forms in which Rāhu might be expected to appear.
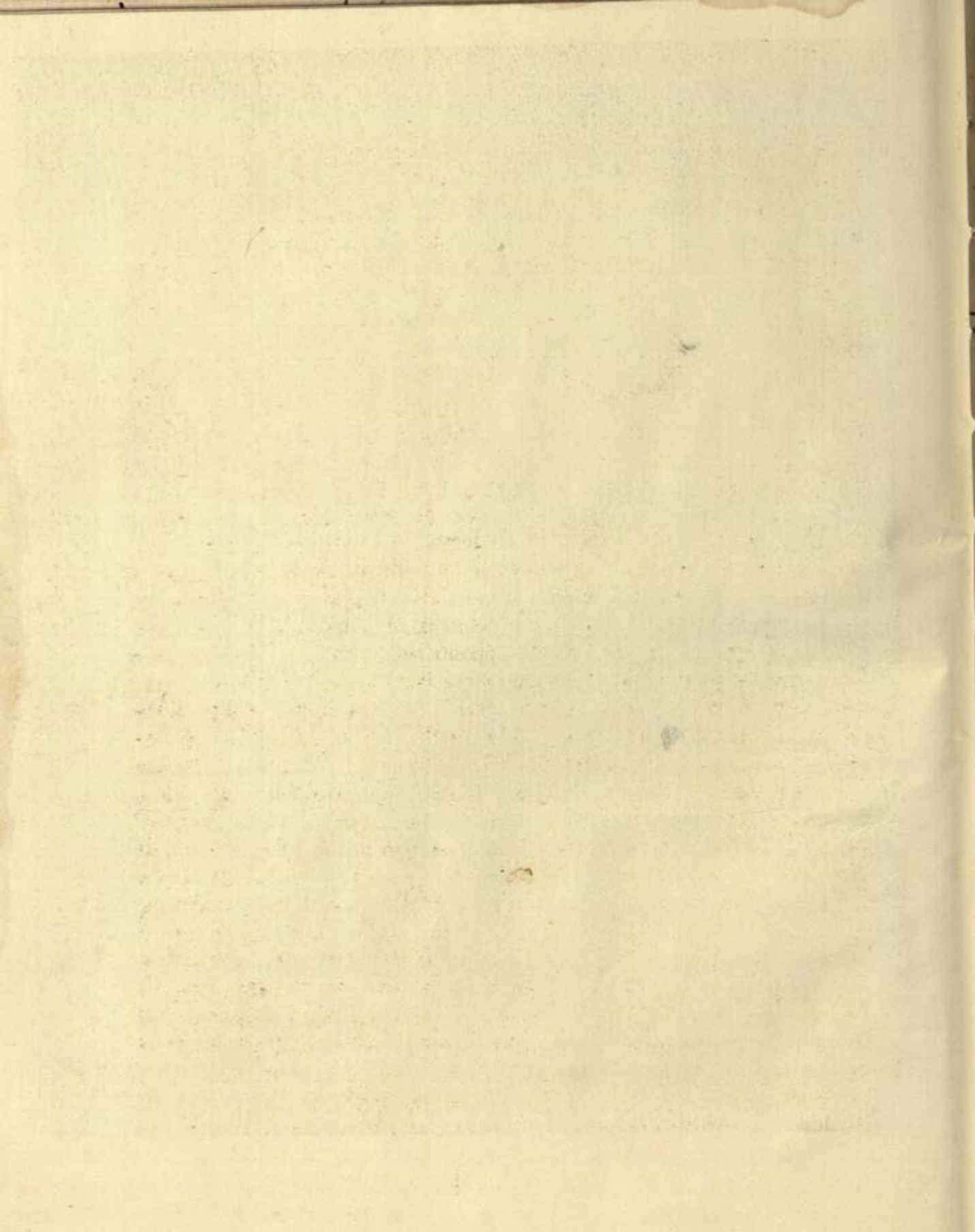
of the campaigns of the gods against the Asuras, are of pre-Buddhistic origin. This particular story is stated to have happened in the past but is not treated as a Jātaka, though later on it was included in the standard Jātaka collections, appearing as the Śakrajātaka, No. xi of Śūra's Jātakamālā, and as an incident in the Kulāvakajātaka, No. 31 of the Pali Jātakas. The slight differences between the various versions are irrelevant for my purpose, the essential point being that Śakra, fighting in his chariot against the Asuras, had occasion to take a course that would have cut off some 'śālmalī' trees, in which garuḍa birds were nesting. In order to save the lives of the birds and their nestlings, he directed Mātali to take the hazardous step of turning the chariot back, and the Asuras, thinking from this movement that he had received reinforcements, fled in terror. It is this episode which has been chosen for representation in the relief.

Having regard to the early date of the cave and to the subjects of the other sculptures, I doubt if we are meant to see a Jātaka in this scene ; more probably the sculptor is following the Saṃyutta story or the version of it known to him in his canon, and has chosen it as a suitable setting for the representation of Śakra. This point is of some importance, when we turn to the relief (Pl. I) on the opposite side of the door, since it does not appear to be explicable from any of the Pali Jātakas. To save misunderstanding, let me make it clear that I do not claim finality in the solution I put foward here, but I think that, if certain points are brought out, it may enable someone else to find a more appropriate canonical passage than that I cite. In the first place, if I am right in holding that the other scene illustrates, not the Śakrajātaka, but the original tale of the Saṃyuttanikāya, one would expect to find in this one a deity shown in the action of some well-known story about him. The central figure is a deity mounted on an elephant, which is moving through the air, not on the ground, and is therefore a divine elephant. Its size is vast in comparison with the human beings depicted in the relief. The most noticeable thing about the god is an enormous wreath, which hangs from his neck and is grasped by his left hand ; in his right hand he holds what seems to be an 'aṅkuśa'. An attendant, seated behind him on the elephant, holds a pennon, which is surmounted by an ornament of the type known as 'nandipada', and two shafts whose tops look like leaves. The attendant's headdress has an erection built up on it which has some resemblance to

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an enormous flower. Who is the deity ? It is no more necessary to identify every god on an elephant with Indra than it is to equate every god in a chariot with Sūrya. The obvious suggestion to my mind is Māra depicted as Kāmadeva ; we know from Buddhacarita, XIII, that the identity of the two was generally accepted by the first century A. D., and one might compare the terracotta from Mathurā (Ann. Bibl. of Ind. Arch., IX. pl. IVd) which shows, Kāmadeva with a wreath, though a smaller one. The attendant then would be carrying the flower-arrows and the flag, which causes Aśvaghoṣa to call Māra by the name Puṣpaketu (Buddhacarita, XIII, 72).[1] But this identification, unavoidable though it seems, raises several difficulties. Why should Māra, even though treated by Buddhism as on the same plane as the other gods, be depicted here, when one would expect something more edifying as a pendant to Indra's good deed ? And if it is Māra, what is the scene represented ?

I can only propose as a solution that we should see a reference in the relief to Saṃyuttanikāya, I, 103-104, the second of the Mārasaṃyuttas, in which Māra created the form of a gigantic elephant to frighten the Buddha, when soon after the Enlightenment he was sitting in the open air on the bank of the Nerañjarā under the Ajapālanigrodha. The Pali text, "mahantaṃ hatthirājavaṇṇaṃ abhinimminitvā", strictly translated, would require us to suppose that the elephant was not merely a form which Māra took on, as Geiger's rendering (I, 162) has it, but that he produced the form separately from his own (see Andersen and Helmer Smith, Pali Dictionary, s. 'abhinimmināti') ; if this is correct, Māra might be represented as sitting on the back of the elephant. The relief shows at the bottom below the elephant a tree set in a railing, surmounted by an umbrella and possibly covered with garlands or streamers, on one side of it women with one or more cows, and on the other two richly dressed persons on cane seats (cf. Vogel, op. cit., pl. XXXIVb) and other persons. Above the latter is another larger tree in a railing, with figures, presumably deities, flying round and above it, while the elephant holds a third tree in his trunk, as if he had just torn it up in his rage ; a being, also possibly a deity, is holding on to this tree. Some minor details are not clear to me

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1. The only other occurrence of this name in Buddhist literature known to me is at Gaṇḍīstotra, 8 ; it is applied to Kāmadeva at MBh., XVI, 16172.

on the photograph, but it is not impossible to interpret the whole as a rendering of the scene mentioned above, taking the trees in railings to be the Bodhi tree and the Nigrodha, the women to be Nandabalā and her followers, and the men to be the Gopa chief and his attendants. Whether this suggestion is sound or not I am unable to determine with any certainty, and it would certainly be desirable that the next competent person who visits the cave should examine the relief with care and report its contents fully, as conclusions drawn from the photographs are exposed to error from misapprehension of the details.

THE ARTS AND THEIR TRADITIONAL CONCEPTION

By RENE GUÉNON

We have frequently insisted on the fact that the profane sciences are but the product of a relatively recent degeneration, brought about by a misunderstanding of the ancient traditional sciences, or rather of some of them only, the others having completely fallen into oblivion. This is true not only of the sciences, but also of the arts; moreover, the distinction between them was once far less accentuated than it is now; the Latin word "artes" was sometimes also applied to the sciences, and, in the Middle Ages, the classification of the "liberal arts" comprised subjects which the modern world would assign either to the one or to the other group. This remark alone will already prove that art was once something different from what is now understood by this name, and that it implied a real knowledge to which it was, as it were, incorporated; and, of course, this knowledge could only have been of the order of the traditional sciences.

From this, one can at once understand that in certain initiatory organisations of the Middle Ages, such as the "Fedeli d' Amore", the seven "liberal arts" were considered as corresponding to the "heavens", that is to states which were themselves identified with the different degrees of initiation[1]. It will be seen that, for this to be the case, the arts as well as the sciences must have been capable of a transposition that gave them a real esoteric value; what makes such a transposition possible, is the very nature of traditional knowledge; whatever its order, it is always connected with transcendent principles. Thus this knowledge is given a meaning which may be termed symbolic, for it is founded on the correspondence which exists between the different orders of reality; it must, however, be stressed that it is not here a question of something added accidentally afterwards, but, on the contrary, of what constitutes the profound essence

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1. Cf. L'Esotérisme de Dante, pp. 10-15.

of all normal and legitimate knowledge, and, as such, is inherent in the sciences and the arts from their very beginning and remains so as long as they have not undergone any deviation.

That the arts can be viewed from this standpoint should cause no astonishment, once one sees that the crafts themselves, in their traditional conception, serve as a basis for initiation, as we have pointed out in these pages on another occasion.[1] We ought, in addition, to recall here what we said then, that the distinction between the arts and the crafts appears as specifically modern and, to put it briefly, as being a mere consequence of the same degeneration which has given birth to the profane outlook, for this outlook in reality expresses nothing else but the very negation of the traditional spirit. On the whole, in dealing with art or craft, one may say that a certain knowledge of a higher order, which was connected by degrees with initiatory knowledge itself, was to some extent applied and worked on ; furthermore, a direct working on initiatory knowledge also went by the name of art, as can be clearly seen in expressions such as "sacerdotal art" or "royal art", which refer to the respective applications of the "great mysteries" and the "lesser mysteries".

If now we consider the arts and give to this word a more narrow and usual meaning, or what is called more precisely the "fine arts", we may say, after what has gone before, that everyone of them ought to constitute a kind of symbolic language adapted to the expression of certain truths by means of forms, some of which are of the visual order, while others are of the auditive or sonorous order, respectively ; hence also their customary division into two groups, the "plastic arts" and the "phonetic arts". We have explained in other studies that this distinction, as well as that of two corresponding kinds of rites founded on the same categories of symbolic forms, referred originally to the difference that exists between the traditions of a sedentary people and those of a nomadic people.[2] Moreover, whether the arts are of the one or of the other kind, it is easy to see, in an altogether general way, that their character in a civilisation is the more manifestly symbolic, as the civilisation itself is more strictly traditional, for their real value lies less in what they are in themselves than in

1. Initiation and the Crafts, JISOA 1938, pp. 163—168.
2. Cf. Cain et Abel, Le Voile d' Isis, January 1932, and also Le rite et le symbole, Feb. 1935.

the possibilities of expression which they afford and which are beyond those to which ordinary language is confined. In a word, their productions are first of all destined to serve as "supports" for meditation, and as "aids" to as deep and extensive an understanding as possible, which is the "whole point" of all symbolism[1]; everything in them, even to the minutest detail must be determined by this consideration and subordinated to this end, nor must any unnecessary "ornament" or meaningless "decoration" be added.[2]

One sees that such a conception is as far as can be from all modern profane theories, whether that of "art for art's sake", which amounts on the whole to saying that art is only what it should be when it has no meaning, or that of "art as a moraliser", which obviously has no more worth from the standpoint of knowledge. Traditional art is certainly not "playing", to use an expression dear to certain psychologists, nor is it merely a means of procuring man a kind of special pleasure, qualified as "superior", although no one knows, exactly why, for, once it is only a question of pleasure, everything is reduced to individual preferences, among which no hierarchy can be logically established ; no more is it a vain and sentimental bombast, for which ordinary language is certainly more than sufficient, without its being in any way necessary to resort to more or less mysterious or enigmatic forms, in any case far more complicated than what they would have to express. This gives us an opportunity to recall in passing, for one can never insist too much on these things, the perfect inanity of "moral" interpretations which certain people want to give to all symbolism, inclusive of initiatory symbolism proper : if it really were a question of such banalities, one does not see why or how one should ever have thought of "veiling" them in any way whatever, for they do very well without it when expounded by profane philosophy, and it would be better to say quite simply that in reality there is neither symbolism nor initiation.

This said, one may ask on which of the different traditional sciences do the arts most directly depend ; this, be it understood, does not exclude their also having more or less constant relations with the others, for every-

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1. This is the Hindu notion of 'pratīka', which is no more an "idol" than it is a work of imagination and individual phantasy. Each of these two Western interpretations, opposed to a certain extent, is as wrong as the other.

2. The degeneration of certain symbols whose meaning has ceased to be understood, into ornamental "motifs", is one of the characteristic features of profane deviation.

thing here necessarily holds together and is connected in the fundamental unity of the doctrine, which can neither be destroyed in any respect, nor even affected by the multiplicity of its applications; the conception of sciences which are narrowly "specialised" and entirely separated the one from the other, is altogether anti-traditional, in so far as it manifests a lack of principle, and is characteristic of the "analytic" outlook which inspires and rules the profane sciences, whereas any traditional standpoint cannot help being essentially "synthetic". With this reservation made, one may say that what lies at the very basis of all the arts is chiefly an application of the science of rhythm in its different forms, a science which itself is immediately connected with the science of number; moreover, it must be clearly understood that when we speak of the science of number, it is not a question of profane arithmetics as understood by modern people, but of that science of which the best known examples are found in the Kabbalah and in Pythagorism, and of which equivalents exist, with varied expressions and greater or lesser developments, in all the traditional doctrines.

What we said just now may appear especially evident with reference to the phonetic arts, the productions of which are all constituted by sequences of rhythms unfolded in time; it is owing to the rhythmical character of poetry that it was originally the ritual mode of expression for the "language of the Gods", that is to say the pre-eminently "sacred language"[1], a function which it preserved something of even until the relatively recent time when "literature" had still not been invented.[2] With regard to music, it will surely not be necessary to insist on this, since its numerical basis is still recognised by the moderns themselves, falsified though it is by the loss of traditional data; in ancient times, as can be seen particularly clearly in the Far East, modifications could not be introduced into music except in accordance with certain changes in the actual state of the world conforming to the cyclical periods, for musical rhythms were at once intimately linked with the human and social order

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1. See: La Langue des Oiseaux, Le Volle d' Isis, Nov. 1931.
2. It is curious enough to note that modern "scholarship" has arrived at an indiscriminate application of the word "literature" to everything, even to the sacred Scriptures which it has the pretension to study under the same heading as anything else and by the same methods, and, when its representatives speak of "biblical poems" or of "Vedic poems", altogether misunderstanding what poetry meant to the ancients, it is once more their purpose to reduce everything to something purely human.

and with the cosmic order, and in a certain way they even expressed the connections between the one and the other ; the Pythagorean conception of the "harmony of the spheres" belongs exactly to the same order of considerations.

In the plastic arts, the productions of which are developed by extension in space, the same thing cannot be as immediately apparent, and yet it is not less strictly true ; then the rhythm is fixed, so to say, in simultaneity, and not in a state of successive unfolding as in the previous case. This can be understood more especially by pointing out that, in this second group, the typical and fundamental art is architecture, of which others, such as sculpture and painting, at least with regard to their original destination, are on the whole but simple dependants ; in architecture, the rhythm is directly expressed by the proportions which exist between the various parts of the whole, and by geometrical forms, which are basically from our standpoint, but the spatial translation of numbers and their relations.[1] Here again, of course, geometry should be considered in a very different way to that of the profane mathematicians and this way's priority to the latter most completely gives the lie to those who would attribute to this science an "empirical" and utilitarian origin ; on the other hand, we have here an example of the manner, as we have said above, in which the sciences are linked amongst themselves from the traditional standpoint, to such an extent that at times they may be considered as in some way expressions of the same truths in different languages ; this is moreover but a natural consequence of the "law of correspondences" which is the very foundation of all symbolism.

These few notions, summary and incomplete as they are, will suffice at least to make one understand what is most essential in the traditional conception of the arts and what differentiates it most profoundly from the profane conception, at once with regard to their basis, as applications of certain sciences, to their significance, as diverse modalities of symbolic language, and to their destination, as a means for helping man to approach true knowledge.

Transl.

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1. In this connection, it should be noted here that Plato's "God geometer" is properly identified with Apollo, who presides over all the arts ; this, directly derived as it is from Pythagorism, has a particular importance concerning the filiation of certain traditional Hellenic doctrines and their connection with a "Hyperborean" first origin.

VASUDHĀRĀ

by V. S. Agrawala

According to Mahāyāna iconography Vasu-
dhārā is a consort of Jambhala. She is believed to
be an emanation of Ratnasambhava, and some times
of Akṣobhya, but in sculpture she is more ancient
than either of her spiritual fathers, the two Dhyāni
Buddhas named above. According to a note in the
Sādhanamālā, p. 89, only three Sādhanas are devoted
to her worship, and in one of these only is she said
to bear the image of Akṣobhya. In two others,
she is assigned to the Dhyāni Buddha Ratnasam-
bhava, which word means "born of jewels". Vasu-
dhārā, literally custodian of "vasus" or riches, found
her appropriate male counterpart in Jambhala, the
god of wealth, and both were made dependent for
origination on Ratnasambhava, the later event taking place at a much later
date, since the incorporation of this Dhyāni Buddha into the pantheon of
the divine Buddhas was in itself a subsequent accomplishment.

The Dhyāna lays down that the goddess exhibits the varada mudrā in
the right hand and carries ears of corn in the left : 'dakṣiṇakareṇa varadam
vāmakareṇa dhānyamañjarīdharam (Sādhanamālā, p. 90).

According to another Dhyāna (ibid. p. 117)[1] she carries in her left
hand the ears of corn with the vessel showering gems : "dhānya mañjarī-
nānāratna varṣaghaṭa-vāmahastam".

In the images from Sarnath (B (8) 19-22) which belong to the late
medieval period, we find the three distinguishing features as given in the

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1. Also Foucher, l' Iconographie Bouddhique de l' Inde, 1905, p. 85.

Dhyāna; which shows that the sculptors followed a genuine tradition. The right hand of the goddess is shown in the gift-bestowing attitude, and from the stalk beneath the left hand it is suggested that this hand held an ear of corn ('dhānyamañjarī'). The other emblem, the vase of treasure ('ratnaghaṭa') which is the most important of her attributes, is represented by a pair of vases one under each foot (Catalogue of the Sarnath Museum, B. (f) 19, p. 147, Plate XV, b). In sculpture No. B. (f) 20 the right foot of the deity is placed on an inverted vase which rests on a lotus flower. This vase is apparently a treasure vase, the attribute of Vasundharā. The line of seven similar vases lying upside down on the top of the vase was added manifestly by the sculptor to emphasise the idea of Vasundharā's control on the wealth of the world (Sahni, ibid. p. 142). The eight vases most probably correspond to the Aṣṭa-Vasus, the eight Vasu deities who are counted as the Gaṇa-devatās making up the traditional number of the Trayastriṁśat Devas. Whatever that may be, the fact remains that the images of Vasudhārā emphasized the 'ratna-ghaṭa' as an emblem of the goddess.

From this known attribute on the images from Sarnath we now proceed to a group of statuettes from Mathurā in which we find a two-armed female figure standing with the right hand in abhayamudrā (inset on p. 13). In her left hand she holds a lotus parasol. For all practical purposes the female figure is identical with the well-known Gaja-Lakṣmī or Nāgī figures from Mathurā, but without the elephant or the serpent hoods. The typical standing female figure with left hand akimbo is also known to us from the coins of Mathurā and some of the tribal coins. In the early centuries of the Christian era there seems to have been a recognised type of female figure which was employed with certain minor changes to represent the iconographic forms of the different goddesses, such as Lakṣmī, Hārīti, Nāgī, etc. It is this form that constantly recurs in the numerous female statuettes of the Kuṣāṇa period discovered at Mathurā. The two-armed female figure with a pair of vases and with her right hand in 'abhayamudrā' is certainly of divine rank, and the vases appear as her distinguishing symbol.

The statuette No. 1695 in the Mathurā Museum shows the goddess holding a lotus parasol in her right hand, the left hand is akimbo, and on her right side is a pair of vases placed one over the other. In statuette No. 1411 the lotus parasol is in her left hand, the right hand is in 'abhayamudrā',

and the vases are placed, one on each side of the legs. The same arrangement of the 'ghata' is found in statuettes No. 1583, and No. 2523. A fragment No. 127 shows only the lower portion of the goddess standing between to elongated jars bearing on the pedestal an inscription reading 'dharasenasya' in the script of the Kuṣāna period. It is therefore apparent that the iconography of the goddess in the art of Mathurā shows some difference from that at Sarnath, viz. that the right hand is held not in 'varada', but in 'abhaya' pose ; and a lotus parasol held either by the left or right hand is a new feature. The connecting link between the two groups of figures from two different periods remains, however, the treasure vases, and these may be looked upon as the principal cognizance in the iconography of Vasudhārā. Much of the Buddhist and Hindu iconography was in its formative stage during the Kuṣāna epoch and details had not yet become crystallised. It therefore does not much matter if the 'varada' pose and the 'dhānya-mañjarī' of the medieval period are missing at an earlier period, or more correctly speaking had not been perfected as emblems of this goddess. The 'ratna pātra' was deemed enough to mark the identity of the deity represented.

There is yet another symbol which is met with in the images of Vasudhārā from Mathurā described above. It is a 'mīna-mithuna' or pair of fish that is found suspended from the lower handle of the lotus parasol (padmātapatra) held in the left hand. Figures Nos. 1411, 1695, 2523 and 748 also have fish symbols. It should, however, be noted that in statuette No. 2523 which is well preserved the number of fish is three ; the third fish is shown attached to the upper end of the lotus parasol. We shall presently see its earlier connections. In statuette No. 1583 we find the female figure with the right hand in 'abhaya' pose, but without the fish-pair suspended from the umbrella post ; the 'ratna-ghatas', however, indicate her true character. It represents the transitional stage when the fish symbol was being omitted.

In one specimen (No. 748) the 'abhaya' pose and the fish symbol with the 'padmātapatra' occur, but the 'ratna-ghatas' are wanting. It most likely points to an earlier transitional stage when the symbol of the treasure-vases had not come into vogue.

And this brings us to a third group of figures consisting only of terracottas in which the fish symbol alone is found associated with a

standing female figure whose left hand is placed on the girdle and the right hand holds a string with a pair of fish suspended from its end. A typical specimen (Mathurā Museum No. 2243) is illustrated in the Mathurā Museum Handbook (second edition), Plate VII, Fig. 14.[1] Stylistically the figure is related to the Yakṣī figures from Bharhut and Bodhgaya, and the conspicuous headdress, heavy earrings, full broad face and the narrow junction of the breasts and waist point to its being a product of the Śuṅga period. Here the auspicious jewel-vases find no place, and the iconographic conception with 'mīna-mithuna' appears to be insulating itself from the vague and general belief in a Mother Goddess who was the precursor of the later classical goddesses. The fish symbol associated with water, which is the birth-place of the 'nidhis' or mythical riches, is much more elemental in conception than the treasure-vases. We do not yet precisely know the significance of the fish symbol in relation to these female figures from Mathurā. But working back from the known figures of the Kuṣāṇa period in which both the 'ratna-ghaṭa' and the 'mīna-mithuna' occur side by side in one and the same figure, to terracotta figurines with only the fish emblem, we at least find some common links which may tentatively serve as pointers in the direction of identifying these early figurines of the Śuṅga period. Whether in the religious upheaval accompanying the early Indian art of Bharhut, Sanchi and Mathurā of the Śuṅga period, the conception of Vasudhārā had been developed and grasped we have no obvious means of determining. The few Mathurā figurines are our only source at present.

It may also be pointed out that a third fish placed horizontally below the two others is found in the terracotta figures. It is visible also in the illustration of terracotta No. 2243 described above. We have also seen that in statuette No. 2523 of the Kuṣāṇa period discussed before a third fish figures separately from the 'mīna-mithuna' and is carved near the upper end of the lotus-stalk. Perhaps the explanation may be found in the tradition of the Tantras where the Gaṅgā and the Yamunā as the two principal energy-systems and the Sarasvatī as the central one are symbolised as rivers, and naturally by means of fish.

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1. An almost similar Mathurā specimenis figured by Dr. Coomaraswamy in 'Indian Terracottas' "IPEK" 1928, Fig. 24.

Vasudhārā may ultimately be found to have been identical with the earth goddess Vasundharā whom the Atharvaveda calls 'hiraṇya-vakṣā',[1] the golden bosomed who conceals within her womb the treasures ('vasu, maṇi, hiraṇya') of the world. The following two verses 6 and 44 give us a vivid picture of the earth goddess as the presiding deity of wealth :

विश्वम्भरा वसुधानी प्रतिष्ठा हिरण्यवक्षा जगतो निवेशनी ।
वैश्वानरं विभ्रती भूमिरग्निमिन्द्र ऋषभा द्रविणे नो दधातु ॥६॥
निधिं विभ्रती बहुधा गुहा वसु मणिं हिरण्यं पृथिवी ददातु मे ।
वसूनि नो वसुदा रासमाना देवी दधातु सुमनस्यमाना ॥४४॥

6. "Sustainer of all, bestower of wealth, support, golden bosomed, and the dwelling-place of creatures ;
   may Earth whose lord is Indra, carrying the Agni Vaiśvānara, establish us in riches."

44. "Hoarding manifold wealth in her secret places, may Earth confer riches, jewels and gold on me ;
   may the bountiful Goddess bestow treasures on us with her pleasing heart."

We find here the significant epithets Vasudhānī and Vasudā applied to earth, which are synonyms of Vasudhārā. We also meet with the imagery that the goddess earth sends out myriad streams (dhārā) of wealth as an unflinching cow rains streams of milk.

This is just the idea underlying Vasudhārā. Earth is the prototype of the great mother goddess (Mahī Mātā), and Vasudhārā as a specialised classical goddess may only be an emanation from that cosmic form of the Magna Mater which antedated all that we have in Indian iconography. In fact the identification of Vasudhārā with the earth goddess is carried one step forward by the appearance of the earth goddess with a vase beneath the right hand of the Buddha in Sarnath (Catalogue, p. 67, B (b) 175, Plate IX). The association of a vase with the earth goddess during the Gupta period is also in keeping with the iconographic evolution of Vasudhārā's form after the Kuṣāṇa period when the fish symbol ceased to be associated with her.

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1. Atharva, Pṛthvī sūkta, XII. I 6 and 44.

5

AN INVESTIGATION INTO THE METHODS OF THE MURAL PAINTINGS

A: IN COCHIN AND TRAVANCORE

By S. PARAMASIVAN

In south-western India, the states of Cochin and Travancore have extensive mural paintings. The temple of Vadakkunnathan[1,2] at Trichur, and those at Tiruvanchikulam[1,3] Chemmanlatta,[1] Pallimanna and Peru-maham and the palace at Mattancheri[1,4] in Cochin State are rich in mural paintings. In Travancore, there are mural paintings in the rock-cut temple at Tirunandikkara, in the temple of Padmanabhaswami at Trivandrum, in the Śiva temple at Ettumanur, in the old palace and in an old ruined temple at Padmanabhapuram.[5]

The mural paintings of Cochin and Travancore depict popular scenes from Hindu myths. Of these the paintings at Tirunandikkara have suffered much damage through the vicissitudes of time and elements. From the little that is left of them today, it seems probable that they were executed in the classical or Ajanta style.[6] The other paintings are in a local style probably of the 17-18th centuries A. D. (Pls. III-IV, V 2).

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1. Annual Report of the Archaeological Department, Cochin State (1935-36) pp. 19-22.

2. Ibid. (1934-35) pp. 4-5.

3. K. V. Ramachandran, Frescoes from Kerala, Triveni, Vol. IV (1931), No. 3, pp. 77-78.

4. Annual Report of the Archaeological Department, Cochin State (1927-28) pp. 16-17, (1928-29) pp. 5-12, (1934-35) p. 6.

JISOA, Vol. III (1935) pp 13-14., Vol IV (1939) pp. 77-78.

5. JISOA, Vol. V (June-Dec 1937) pp. 181-83.

6. There is an inscription of the 8th century A. D. in the cave temple from which it is clear that the cave was excavated during the same period or earlier (Vide Travancore Archaeological Series Vol. III Part 2, pp. 200-201). But it is very difficult to say whether the paintings also belong to the same period.

Experimental Investigations

There are four principal factors[1] in the production of these paintings, namely, (1) the 'carrier', which supports the 'ground', (2) the 'ground' on which the paintings are executed, (3) the materials or the 'pigments' used in elaborating the design and (4) the 'binding medium', or the means by which the pigments are attached to the ground so as to make the work firm and lasting. In order to carry out experimental investigations on them, some damaged fragments of painted stuccoes were collected from the sites enumerated above.[2] It may be mentioned here that there is a striking similarity in the technique of these paintings.

(a) The Carrier

The walls and ceilings of the cave temple at Tirunandikkara which act as the 'carriers' are of hard stone with a rough surface. The walls and ceilings in other temples and the palaces at Padmanabhapuram and Mattancheri are constructed of blocks of laterite. Their rough surfaces contribute to the firmness of the plaster[3] and the hard and compact nature of the walls and ceilings eliminates all chances of salt efflorescence.[4]

(b) The Ground

Since the 'ground' secures the paint, the following experiments were conducted to study the nature of the materials composing it.
Study of the micro-sections :

Micro-sections of the painted stuccoes showing all the different layers composing them were prepared in the usal way[5]. On examining them under the microscope, they showed two lines of cleavage or junctions below the painted surface due to the presence of three distinct layers. The first junction was between the layer of paint and a thin

1. Daniel V. Thompson, The Materials of Medieval Painting, Yale University Press 1936, pp. 43-47.

2. The author is very much indebted to Mr. P. Anujan Achan, Government Archaeologist, Cochin State, and Mr. R. V. Poduval, Director of Archaeology, Travancore, for giving him all facilities to visit the various sites and to collect painted stuccoes from damaged portions of the paintings.

3. D. V. Thompson, loc. cit. p. 39.

4. S. Paramasivan, "The Mural Paintings in the Brihadisvara temple at Tanjore, An Investigation into the Method", Technical Studies (Harvard University) V (1936-37), p. 224.

5. S. Paramasivan, "Technique of the Painting Process in the temple of Vijayalaya Cholisvaram", Proc. Ind. Acad. Sci. VII (1938), p. 284.

layer of some white material. The second junction lay between the thin white layer and the layer of rough plaster. Many of the stuccoes could be split along the first junction with a sharp pin, but not along the second. In a few cases, splitting can also be effected along the second junction. The significance of these results will be discussed later.

With a micrometer attached to the eyepiece of the microscope, the thicknesses of the different layers were measured and they were as follows :

Table I

| | Painted Stucco | Thickness of different layers | | |
		Rough Plaster	Thin White Material	Paint film
A. Cochin Paintings				
a. Vadakkunathan	1.7-11.1 m m	1.2-10.6 m m	0.3 m m	0.2 m m
b. Pallimanna	3.9-5.5 „	3.6-5.2 „	0.2 „	0.1 „
c. Perumanam	2.1-4.6 „	1.5-4.0 „	0.3 „	0.3 „
d. Chemmanlatta	1.9-4.3 „	1.7-4.1 „	0.1 „	0.1 „
e. Tiruvanchikulam	2.6-5.7 „	2.2-5.3 „	0.3 „	0.1 „
f. Mattancheri :				
First floor	5.5-6.1 „	5.0-5.6 „	0.3 „	0.2 „
Ground floor	0.7-1.4 „	0.4-1.1 „	0.2 „	0.1 „
B. Travancore Paintings				
a. Tirunandikkara	3.0-3.6 m m	2.5-3.1 m m	0.3 m m	0.2 m m
b. Ettumanur	5.7-12.5 „	5.3-12.1 „	0.3 „	0.1 „
c. Ruined temple at Padmanabha-puram	3.7 „	3.3 „	0.1 „	0.3 „
d. Padmanabha-puram palace	5.0-10.4 „	4.8-10.2 „	0.1 „	0.1 „
e. Padmanabhaswami temple :				
I	1.8-2.7 „	0.9-1.8 „	0.4 „	0.5 „
II	3.4-5.6 „	2.5-4.7 „	0.4 „	0.5 „
III Shrine of Krishna.	0.9 „	0.6 „	0.2 „	0.1 „

It is clear from the above tables that the thickness of the rough plaster varies widely in Vadakkunnathan, Ettumanur and the palace at Padmanabhapuram. In Mattancheri (ground floor) and in Krishna's shrine in the temple of Padmanabhaswami, the rough plaster is very thin. At Chemmanlatta, and in the palace and ruined temple at Padmanabhapuram, the white coat applied over the rough plaster, is thinner than in other places. So far as the paint film is concerned, those at Perumanam, in the ruined temple at Padmanabhapuram and the temple of Padmanabhaswami are relatively thick, showing lack of delicacy in the artist's handling of the brush.

Analysis of the plaster

In order to ascertain the composition of the rough plaster, it was completely freed of the layer of white coat and the paint film and analysed. The results of chemical analyses of representative specimens are as follows :

Table II
Cochin Paintings

	Vadak-kunna-than	Palli-manna	Peruma-nam	Chemm-anlatta	Tiruv-anchi-kulam	Mattan-cheri (Chemical Analyses)	
						Ground Floor	First Floor
Moisture	0.66%	0.18%	0.53%	0.13%	0.25%	0.51%	0.19
Carbon dioxide CO_2	18.33	17.74	25.10	15.89	22.15	35.10	18.37
Loss on ignition (excluding moisture & CO_2)	7.95	8.49	8.98	5.45	3.10	9.38	5.35
Silica, SiO_2	37.62	41.85	30.00	50.92	42.83	0.11	43.99
Iron & Alumina Fe O Al O	1.87	2.92	1.23	0.90	3.09	0.00	0.54
Lime, CaO	31.92	27.74	33.57	26.34	27.98	54.54	30.45
Magnesia, MgO	0.21	0.10	0.10	0.02	0.12	0.00	0.13
Sulphuric Anhydride, SO_3	0.19%	0.07%	0.15%	0.00%	0.00%	0.04%	0.01%
Undetermined (mostly alkalis)	1.25	0.91	0.34	0.35	0.48	0.32	0.97

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Table III

Travancore Paintings

| | Tirunandikkara | Ettumanur | Ruined Temple Padmanabhapuram | Padmanabhapuram palace | Chemical Analyses Padmanabhaswami Temple | | (Krishna's Shrine) |
					I	II	III
Moisture	0.93%	0.91%	0.22%	0.20%	0.34%	0.06	0.40
Carbon dioxide CO_2	12.68	22.49	11.27	10.33	18.53	19.03	18.67
Loss on ignition (excluding moisture & CO_2	1.28	5.01	0.83	5.84	2.49	0.41	12.65
Silica, SiO_2	28.98	31.55	71.10	62.46	55.47	54.55	42.32
Iron & Alumina, Fe O Al O	2.62	1.74	1.89	1.53	1.53	0.57	0.87
Lime, CaO	51.99	36.31	14.35	18.40	21.09	24.47	24.45
Magnesia, MgO	0.22	0.11	0.03	0.05	0.01	0.01	0.06
Sulphuric Anhydride, SO_3	0.04	0.05	0.08	0.14	0.07	0.07	0.01
Undetermined (mostly alkalis)	1.26	1.83	0.23	1.05	0.47	0.83	0.57

On treatment with dilute Hydrochloric acid, the thin layer of smooth white material, completely freed of pigment, dissolved with effervescence and evolution of carbon dioxide, and left behind a fine residue of silica. The solution gave tests only for calcium, thus showing that it was mainly composed of lime with silica occurring as impurity.

Hence the 'ground' was prepared out of lime plaster with lime and sand as the principal components, the latter having been purposely added to serve as an inert material.[1] In the case of the 'ground' in the ground floor of the Mattancheri palace, silica occurs to the extent of 0.11%. A pure rich lime was used here with silica occurring only as an impurity.

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1. S. Paramasivan, "The Mural Paintings in the Brihadisvara temple at Tanjore, an investigation into the method", Technical Studies V (1936-37), p. 231.

The lime and the silica contribute to the consolidation of the plaster.[1] A smooth coat of lime wash was applied to the rough lime plaster.

The results of analyses, show that the proportion of clay present in the plaster is very small. This is clear from the low percentage of iron and alumina. In other words, a pure rich lime having no hydraulic properties has been used. The percentage[2] of sulphuric anhydride is low. In other words, gypsum, which prevents the setting of mortar and causes efflorescence is present in negligible quantities.[3]

The low percentage of the impurities such as alkalies and other soluble salts, the fine gloss of the lime wash, the firm adherence of the plaster and the absence of slaking on the fresco 'ground' indicate that some sort of pit lime was used, or that special attention was paid to the preparation of lime. The excellent preservation of the paintings testifies to the precautions taken against the wetness of sand or open storage of lime.[4]

Many samples of the rough plaster were found to be so thin that carbon dioxide had penetrated through it to the back. This was shown by the fact that the particles of the rough plaster taken at different depths from the surface to the back of the plaster showed diminishing percentage of carbon dioxide content.

Inert Materials in the Plaster :

The chemical analyses of the plaster from all the sites in Cochin and Travancore revealed that sand alone had been used as an inert material. But if the artists had added marble dust as in ancient Italy or powdered shell or limestone—the original material from which the lime for the plaster had been prepared—they would not have been made known in the course of chemical analyses. Since they have the same chemical composition and give the same chemical reactions as carbonated lime, further experiments would be necessary to settle this

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1. J. W. Mellor, "A Comprehensive Treatise on inorganic and theoretical Chemistry (London : Longmans Green 1923), p. 677.

2. The untreated rough plaster is not ideal for painting. It cannot always be rendered smooth and even and hence, different parts of the grain take the paint differently and thereby produce different optical effects. Thus the the lime-wash serves (1) to even out the surface of the 'ground' and (2) to provide uniform 'ground' underneath the paintings.

3. S. Paramasivan, loc. cit. p. 228.

4. Max Doerner, The Materials of the artist and their use in painting (New York; 1934) p. 269.

point. Microscopic examination and density measurements[1] of the particles of the plaster revealed the absence of both. The sand grains looked sharp and angular and hence they contribute to the firmness of the plaster.[3]

Size of the particles in the plaster :

The rough plaster was carefully separated from the accompanying lime-wash and pigment and subjected to mechanical separation of the particles composing it by Robinson's method[2] and the proportions and sizes of the particles were as follows :

<div align="center">Table IV</div>

	Size & Proportion of the Particles		
	200*	200-700*	700*
A. Cochin Paintings			
a. Vadakkunnathan	67%	33%	nil
b. Pallimanna	50	50	nil
c. Perumanam	50	50	nil
d. Chemmanlatta	50	50	nil
e. Tiruvanchikulam	33	67	nil
f. Mattancheri :			
Ground Floor	33	67	nil
First Floor	33	67	nil
B. Travancore Paintings			
a. Tirunandikkara	50%	32%	18%
b. Ettumanur	50	32	18
c. Ruined Temple Padmanabhapuram	50	32	18
d. Padmanabhapuram Palace	38	12	50
e. Padmanabhaswami Temple			
I.	83	17	nil
II.	39	57	4
III. (Krishna's Shrine)	50	50	nil

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1. S. Paramasivan, "Technique of the Painting process in the temple of Vijayalaya Cholisvaram in the Pudukkottai State", Proc. Ind. Ac. Sc. VII, No. 4 p. 286-87.
2. S. Paramasivan, loc. cit. p. 284.
3. ibid.

Particles whose sizes are less than 200* are composed of lime, clay and sand, while the larger particles are mostly of sand.

The sand grains are larger in size in the rough plaster than in the lime wash, the latter containing only minute particles, whose diameters vary from 14* to 28*. The use of coarse sand grains for the underlayers and finer ones for the top is recommended by fresco painters in the west.[1]

Technique of laying the Ground :

From tables II & III it is seen that on ignition, the rough plaster suffered loss in weight. This must be due to the presence of combined water and organic material in the plaster. The problem is now to determine whether this loss in weight is due to the presence of any organic binding medium which had been added to the plaster to consolidate it. There was no stain[2] on the plaster when treated with solutions of methylene blue, methyl violet or acid green, thereby showing the absence of drying oil, glue, albumin or casein in the plaster.

A fragment of the plaster was not affected by soaking in water for about 15 minutes and then heating the water to boiling. On treating the fragment with dilute hydrochloric acid, it disintegrated with evolution of carbon dioxide and separation of silica. The solution gave tests only for calcium, thus showing that it was only lime that held the particles intact. In the paintings at Chemmanlatta, there are vegetable fibres. Perhaps they were purposely added to the plaster to consolidate it.[3] These experiments show clearly that the technique employed in preparing the 'ground' is one of fresco.

Method of Laying the Ground :

It is clear from the experimental results that the artists applied the first coat of rough lime plaster to a thickness indicated in column 2 of Table I, which varied according to the inequalities of the surface of the

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* The asterisk replaces the Greek letter "m" for typographical reasons.

1. A. P. Laurie, The Painter's Methods and Materials (London ; 1926) p. 193.

2. William Ostwald, Iconoscopic Studies (Microscopic Identification of Homogeneous Binding Mediums), translated. Technical Studies (Harvard University) IV, (1935-36) pp. 140-141.

3. Vegetable fibres when used with plaster act as binding agent and give tenacity to the material. Encyclopaedia Britannica Vol. 18, pp. 39-40. (14th Edition).

'carrier'. The rough plaster then received a coat of lime-wash to a thickness varying from 0. 3 mm to 0. 4 mm in the case of Cochin paintings and 0. 1 mm to 0. 3 mm in the case of Travancore paintings. From the strong binding between the rough plaster and lime-wash, it is evident that the latter was applied while the former was still wet. The surface was trowelled over to impart a fine gloss to it.

(c) The Pigments

The pigments employed by the ancient artists of Cochin and Travancore were indentified[1] as follows :

| Cochin Paintings	Travancore Paintings
Yellow Ochre	Yellow Ochre
Red Ochre	Red Ochre
Terre Verte	Terre verte
Carbon	Carbon
Lime	Lime

Thus only a limited number of pigments have been employed here, for, in a fresco process such as is emploped here, pigments which are sensitive to alkalies should not be used with lime.

(d) The Binding Medium

The paint is firmly adhering to the 'ground'. The pigment stood brushing over and soaking in cold and boiling water for about 15 minutes. It suffered no injury in either case. No vehicle or binding medium could be extracted by treating the painted layer with pure ether, chloroform, carbon disulphide separately and successively. At the same time, methylene blue, methyl violet and acid green left no stain[2] on the paint film. Thus there was no drying oil, glue, albumin or casein used with the pigment to serve as the binding medium. Under the action of dilute hydrochloric acid, a fragment of the painted film disintegrated completely with effervescence and evolution of carbon dioxide, the solution giving tests for calcium. These reactions were very consistent with several fragments of the paint

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1. Martin de Wild, The Scientific Examination of Pictures (London 1929), p. 59 ; R. J. Gettens & G. L. Stout, The Stage Microscope in the routine examination of Paintings (Technical Studies, IV. (1935-36,) pp. 224-228.

2. Loc cit.

1

2
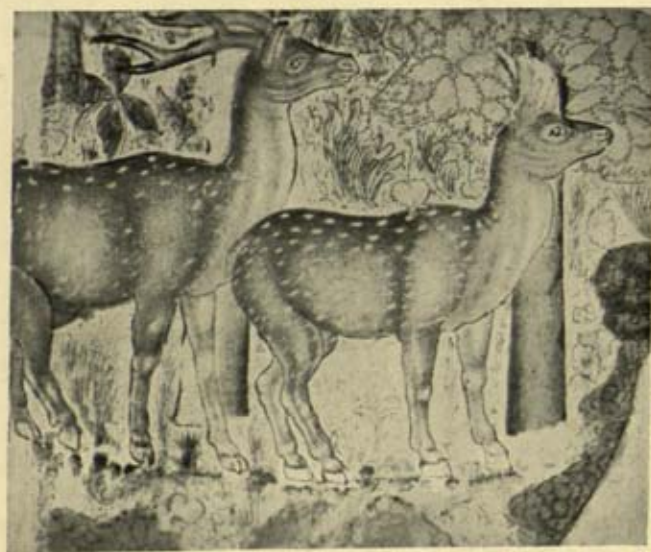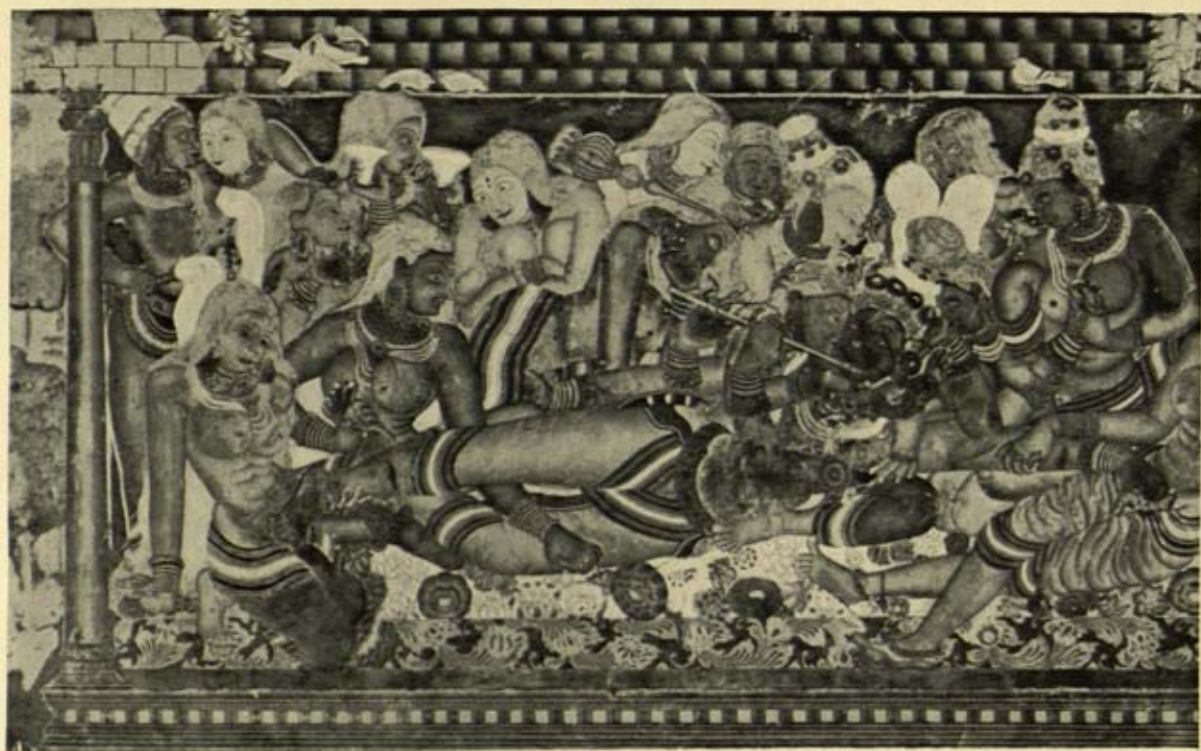
film collected from different sites. These experiments show clearly that lime and not any organic substance had been used to serve as a binding medium.

Black wets poorly and a little glue or gum must be added to it before grinding.[1] It has already been shown that all the paint films give no reactions for glue or for any other organic nitrogenous binding medium. On the other hand, the black paint film answers Molisch's test, giving a violet ring with alpha-naphthol, which is a characteristic reaction for carbohydrates including gum. Thus gum had been added to the black to serve as the binding medium. At the same time, lime water should have been added to impart the characteristics of fresco technique in common with other pigments.

The pigments have not interfused[2] into the plaster ground or spread beneath the stucco surface. It is thus clear that the paintings have been done in 'lime medium.' This is also confirmed by the absence of brush marks which would have been visible in the 'true fresco' process if the wet plaster had been dragged up by the brush in laying the pigments.[3]

Since the paintings are in 'lime medium', it is not easy to note the extent of the ground that was covered in the course of a single day. Joinings in the plaster are more easily visible in the 'true fresco' technique than in 'lime medium.' Further coloured background makes it very difficult to perceive any joint.

In conclusion, the author desires to express his thanks to Mr. V. R. Chitra of the Madras School of Arts and the organiser of the Cochin Art Gallery for selecting the photographs of Cochin paintings and to the Government of Travancore for selecting the photographs of Travancore paintings for illustrating this article.

B : LEPAKSHI AND SOMAPALAYAM

The ceilings of the Ardhamaṇḍapa and the Nāṭyamaṇḍapa in the Śiva temple at Lepakshi (13°48′N & 77°36′E) in the Hindupur Taluk of the Anantapur District (Pl. VI), and the ceilings of the veranda in front of the

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1. Technical Studies, V (1936-37) p. 233.
2. Mary Hamilton Swindler, Ancient Painting (New Haven, Yale University Press, 1929). p. 418.
3. Technical Studies, V (1936-37) p. 234.

main entrance to the Viṣṇu temple at Somapalayam (13°50'N & 78°18'E) in the Madanapalle Taluk of the Chittoor District in S. India, were at one time fully painted over.[1] But at present the paintings are in a lamentable state of decay.

There are two groups of paintings at Lepakshi, those in the Ardha-maṇḍapa being earlier, probably belonging to the 16th century A. D. The later paintings at Lepakshi and the paintings in Somapalayam were probably executed during the 17th century A. D. These paintings are representative of the 'folk art' of the Vijayanagar period. The earlier paintings at Lepakshi represent some of the best specimens of the 'folk art'; nevertheless, they still retain a few of the characteristics that animate the classical art of the Pallavas and the Cholas. The later paintings at Lepakshi and those at Somapalayam are inferior to them in technique and style.

Experimental Investigations

Damaged fragments of painted stuccoes were collected from the two temples,[2] to experiment with.

The stuccoes consist of three different layers, namely, a layer of rough plaster, with a smooth coat of some white material thereon, the latter supporting the paint.

(a) The Carrier

The ceilings in these two temples are constructed of blocks of hornblende-gneiss, which act as the 'carriers'. The fair adherence of the plaster is due to the hard, rough surface,[3] which is also responsible for the absence of efflorescence.[4]

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1. C. Sivaramamurti, Vijayanagar Paintings from the temple at Lepakshi, Vijayanagar Sex-centenary Commemoration Volume, pp. 75-85 ; C. Sivaramamurti, Paintings from Lepakshi, JISOA, Vol. V (1937) pp. 184-7 ; J. H. Cousins, Note on the Viṣṇuite Temple at Somapalayam, JISOA Vol. V (1937) pp. 145-6.

2. I am indebted to Mr. T. N. Ramachandran, of the Archaeological Survey of India who arranged for my visit to these places to study the paintings.

3. Daniel V. Thompson, The Materials of Medieval Painting (Yale University Press 1936) p. 39.

4. S. Paramasivan, "The Mural Paintings in the Brihadīsvara Temple at Tanjore, an Investigation into the Method." Technical Studies V. (1936-37) p. 224.

(b) The Ground
Study of the Microsection

Microsections of the painted stuccoes showing all the different layers composing it were prepared in the usual way.[1] On examining them under the microscope, each of them revealed the presence of two junctions due to the presence of three distinct layers, namely, of the rough plaster, the lime-wash and the paint film, with properties similar to those of other painted stuccoes in S. India,[2] except that the binding between the lime-wash and the paint film and the rough plaster and lime wash was weak.

The thicknesses of the different layers as measured with a micrometer attached to the eyepiece of the microscope were as follows :

	Lepakshi paintings		Somapalayam paintings
	Early	Late	
Painted stucco	2.5-12.9 mm	2.6-4.9 mm	2.68-8.08 mm
Rough plaster	2.3-12.7 mm	2.4-4.7 mm	2.6-8.0 mm
Lime-wash	0.1 mm	0.1 mm	0.04 mm
Paint film	0.1 mm	0.1 mm	0.04 mm

Thus the stuccoes from the earlier paintings at Lepakshi are relatively thicker than those from other paintings.

Analysis of the Plaster

In order to determine its chemical composition, the rough plaster was first separated from the white material and the paint film and analysed, the following being the results of analyses of representative specimens :

	Chemical Analyses		
	Lepakshi Paintings		Somapalayam Paintings
	Early	Late	
Moisture	1.02%	0.77%	1.30%
Carbon dioxide, CO_2	14.20	15.44	5.60
Loss on ignition (excluding CO_2 and moisture)	5.79	2.12	3.93
Silica, SiO_2	53.33	58.91	74.41
Iron & Alumina, Fe O Al O	3.86	2.65	2.20
Lime, Cao	19.65	18.10	10.26
Sulphuric Anhydride, SO_3	1.16	0.22	0.12
Magnesia, MgO	0.36	0.62	0.66
Undetermined (mostly alkalies)	0.63	1.17	1.52

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1. S. Paramasivan, Technique of the Painting Process in the temple of Vijayalaya Cholisvaram in the Pudukkottai State, Proc. Ind. Acad. Sc. VII. (1938) p. 284.

2. Technical Studies V (1936-37) p. 225, Proc. Ind. Acad. Sc. VII (1938) pp. 284-5.

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From the results of analyses, it is seen that the 'ground' was prepared out of lime plaster with lime and sand as the principal components, the latter being the inert material. They both serve to consolidate the plaster. It is also clear that the percentage of silica is higher and of lime lower in the Somapalayam plaster than in the Lepakshi ones.

The percentage of alkalies and other soluble salts in the early plaster at Lepakshi is lower than the corresponding figures for other plaster. The percentage of the impurities such as iron, alumina, gypsum, alkalies and other soluble salts is low. There is a fine gloss on the 'ground'. There is no evidence of any slaking in the plaster ground. Thus a pure rich lime has been used. Probably some attention should have been paid to the proper preparation of lime for painting work.[1] At the same time, the plaster has not firmly adhered to the 'carrier'. The significance of these results will be discussed latter.

The layer of white material over the rough plaster was carefully separated from the paint layer. On treating it with dilute hydrochloric acid, it dissolved with effervescence and evolution of carbon dioxide, and left behind a few particles of silica. The solution gave tests only for calcium. Thus it was clear that lime wash had been applied to the rough plaster to present a smooth surface. The lime wash contained fine particles of silica as impurity.

Size of the particles in the Plaster

After careful separation from lime wash and paint film, the rough plaster was crushed between the fingers and subjected to mechanical separation of the particles composing it by Robinson's method,[2] and the proportion and sizes of the particles were as follows :

		200*	200-700*	700*
Lepakshi paintings	Early	50%	50%	nil
	Late	50%	50%	nil
Somapalayam paintings		50%	50%	nil

Particles whose diameters were less than 200* were mostly composed of sand, lime and clay. The larger particles were mostly of sand.

1. Max Doerner, The Materials of the Artist and their Use in Painting, (New York 1934) p. 269 ; Technical Studies, V (1936-37) pp. 228-9.

2. Norman M. Comber, An Introduction to scientific study of Soils, 1927, pp. 48-49.
G. W. Robinson, Soils : Their origin, constitution and classification, 1932, pp. 12-13.

Inert Materials in the Plaster

The chemical analyses of the rough plasters indicate that sand alone has been used as an inert material. Microscopic examination and density measurements revealed that neither marble dust nor powdered shell (the original material from which the caustic lime might have been prepared) have been added to serve as an inert material.[1] On the other hand, the presence of hydrated yellow oxide of iron in the plaster (in addition to anhydrous red oxide) along with particles with density 2.72 revealed that unburnt limestone was also present as an inert material.

The plaster contains sharp and angular, and not rounded grains of sand which contribute to the firmess and strength of the plaster.

Technique of Laying the Ground

On ignition, the rough plasters at Lepakshi and Somapalayam suffered loss in weight to the extent of 4.79%, 2.12%, and 3.93%, respectively. That this is not due to the presence of organic binding in the plaster is proved by the absence of any stain[2] with methylene blue, methyl violet or acid green. A fragment of the rough plaster could be easily notched between the fingers. It is somewhat affected and softened by soaking in cold water. On treating it with dilute hydrochloric acid, it disintegrated with evolution of carbon dioxide and separation of silica, the solution giving tests for calcium. These experiments clearly show that though lime has been used for the plaster, there is not the usual consolidation that goes with lime plaster.

It has already been shown that the plaster contained anhydrous red oxide and hydrated yellow oxide of iron, thereby showing that both burnt and unburnt limestone had been mixed in the preparation of the plaster. From the ease with which the mortar is softened by water, it is also clear that the proportion of unburnt limestone was in excess of the burnt one. The probable composition of the limestone is as follows :

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1. Proc. Ind. Ac. Sc. VII, No 4 (1938) pp. 286-7.
2. William Ostwald, Iconoscopic Studies (Microscopic Identification of Homogeneous Binding Mediums) ; Technical Studies, Harvard 1935-36, IV, pp. 149-1.

	Early	Lepakshi Late	Somapalayam
Silica, SiO_2	54.47%	62.06%	77.17%
Iron & Alumina $Fe O Al O$	4.02	2.75	2.29
Calcium Carbonate $CaCO_3$	38.65	33.62	18.89
Gypsum	2.05	0.39	0.21
Magnesium Carbonate $MgCO_3$	0.81	1.18	1.44

Method of laying the 'ground':

From the preceding experiments, it will be seen that the artists applied the first coat of rough plaster to a thickness varying with the inequalities of the surface of the 'carrier'. The plaster has not firmly adhered to the 'carrier', and this is due to the fact that the lime had not been properly burnt, or that a large percentage of unburnt powdered limestone had been added to the burnt one. Over the rough plaster was laid the lime wash. The binding between the rough plaster and the lime wash is weak. This is to be expected from the poor quality of unburnt limestone used in preparing it. It might also have been due to the fact that the lime wash was given after the rough plaster had dried.

(c) The Pigments

The pigments used by the Vijayanagar artists at Lepakshi (Pls. V_1, VI) and Somapalayam were identified[1] as follows :

Yellow Ochre
Red Ochre
Carbon
Lime

It will be shown below that the technique employed at Lepakshi and Somapalayam is one of fresco, and hence, pigments which are sensitive to alkalies have not been used with lime. Thus the artists' palette is restricted.

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1. Martin de Wild, The Scientific Examination of Pictures (London, 1929); R. J. Gettens and G. T. Stout, The Stage Microscope in the Routine Examination of Paintings (Technical Studies) IV (1935-36), pp. 224-228.

(d)   The Binding Medium

The paint film is fairly adhering to the plaster. It stood brushing and prolonged soaking in cold and boiling water. At the same time, no vehicle or organic binding medium could be extracted with ether, chloroform or carbon disulphide. There was also no stain[1] characteristic of drying oil, glue, albumin. Under the action of dilute hydrochloric acid, a fragment of the paint film disintegrated completely with effervescence and evolution of carbon dioxide, the solution giving tests for calcium. From these experiments it is clear that the technique emyloyed is one of fresco. Since the pigment has not penetrated into the interstices of the plaster,[2] the painting has been done in 'lime medium' and not in 'true fresco'.

"Black wets poorly and a little glue or gum must be added to it before grinding.[3] A sample of black paint failed to give tests for glue or any other nitrogenous organic binding medium. But it answers Molisch's test, giving a violet ring with alpha-naphthol, which is a characteristic reaction for carbohydrates including gum. Thus gum had been added to black so that it might wet well and then lime water added to it to impart the characteristic of fresco technique to the paintings.

Since the paintings are in 'lime medium', it is very difficult to say the extent of the ground that was covered in the course of a single day. Joints in the plaster are more easily visible in the 'true fresco' technique than in 'lime medium'. Further the colours employed for the background make it difficult to perceive any joint.

C : TIRUMALAI

There are mural paintings in the Jain temple at Tirumulai (12°33′ N & 79°13′E) in the Polur Taluk of the N. Arcot District, Madras Presidency. The village has a hillock with rock-cut caves. The walls of a brick facade attached to the caves on the second floor are still covered with two layers of paintings. The inner or the earlier

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1.   William Ostwald, loc. cit.
2.   Mary Hamilton Swindler, Ancient Painting, p. 418.
3.   Technical Studies, V (1936-37), p. 283.

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group of paintings are visible on the walls of the last and the outermost of the five chambers or cells on the top floor. Covering them are the second or later group of paintings.[1] The earlier paintings constitute some good examples of 'folk art' of the Vijayanagar period of the 16th century A. D., while the later or outer layer probably belongs to the 17th century A. D.

Experimental Investigations

Experiments were conducted with fragments of damaged painted stuccoes collected from the Jain temple and they consist of a layer of rough lime plaster with a layer of what looked like lime wash which supported the layer of paint.

(a)   The Carrier

The ceilings of the rock-cut caves and the brick walls of the facade serve as the 'carriers'. The plaster has firmly adhered[2] to the rough rocky surface, which is responsible for the absence of efflorescence.[3] The plaster has adhered well to the surface of the brick wall, which shows that the brick wall should have been properly wet before applying the plaster, for on dry or poorly wetted walls, especially when they are porous, the binding will remain weak.

(b)   The Ground

Microsections showing all the different layers of the painted stuccoes were examined under the microscope. They showed two junctions separating the layers of rough plaster lime wash and paint film, from one another with properties similar to those of other Indian stuccoes.[5] The thicknesses of the different layers as ascertained with a micrometer attached to the eyepiece of the microscope, were as follows :

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1.   Vincent Smith, "A History of Fine Arts in India and Ceylon, 1st Edn. p. 344 ; T. N. Rama-chandran, Tiruparuttikunram and its Temples (Madras Museum Bulletin), p. 62 footnote ; St. Kramrisch, Dakṣiṇa Citra, JISOA, Vol. V, 1937, pp. 218—37.

2.   Daniel V. Thompson, The Materials of Medieval Painting, p. 39.

3.   S. Paramasivan, The Mural Paintings in the Brihadisvara temple at Tanjore, Technical Studies, Harvard University V (1936-37) p. 224.

4.   Technical Studies V p. 225 ; Proc. Ind. Acad. Sc. VII (1988) pp. 234—5.

	Thicknesses	
	Early Paintings	Late Paintings
Painted Stucco	2.46 mm—10.09 mm	2.5 mm—4.6 mm
Rough Plaster	2.15 mm— 9.78 mm	2.1 mm—4.2 mm
Lime Wash	0.15 mm	0.2 mm
Paint Film	0.16 mm	0.2 mm

Thus the earlier stuccoes were thicker than the later ones.

Analysis of the Plaster

For determining the methods and materials used by the Tirumalai artists, the chemical composition of the rough plaster and what looked like lime wash was ascertained. The results of analysis of representative specimens of the rough plaster are as follows :

	Chemical Analyses	
	Early Paintings	Later Paintings
Moisture	0.32%	0.54%
Carbon dioxide, CO_2	5.48	5.42
Loss on ignition (excluding moisture & CO_2)	3.76	7.34
Silica, SiO_2	75.82	73.36
Iron & Alumina, FeO Al O	1.47	0.94
Lime, Cao	10.55	11.26
Sulphuric Anhydride, SO_3	0.13	0.11
Magnesia, MgO	0.87	0.22
Undetermined (mostly alkalies)	1.60	1.01

Thus the ground was prepared out of lime plaster with lime and silica as the principal components, the latter having been purposely added to serve as an inert material. Mere lime alone would not have yielded a satisfactory plaster.[1]

The percentage of soluble impurities present in the plaster is low. At the same time, there is no evidence of any slaking on the 'ground', which has a fine gloss. The low percentage of iron and alumina and of gypsum (indicated by the proportion of sulphuric anhydride) are significant. The former shows that a rich lime having no hydraulic properties has been used. The latter shows that gypsum which prevents the proper setting of

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1. S. Paramasivan, Technique of the Painting process in the temple of Vijayalaya Cholisvaram in the Pudukkottai State, Proc. Ind. Acad. Sc. VII, No. 4 (1938) p. 286.

the plaster is present in negligible quantities. All these indicate that some sort of pit lime was used or that special attention was paid to the preparation of lime for painting purposes.[1] From the excellent preservation of the paintings it is clear that the artists should have taken the usual precautions against the wetness of sand or open storage of lime.

The rough plaster is very thin. Particles of the rough plaster taken at different depths from the surface showed diminishing percentage of carbon dioxide content, which shows that carbon dioxide has penetrated through it to the back.

That the rough plaster was given a coating of lime wash is proved by the fact that scrapings of the latter, dissolved with effervescence in dilute hydrochloric acid and evolution of carbon dioxide, the solution giving tests only for lime.

Inert Materials in the Plaster

The results of chemical analyses show that sand alone has been used as an inert material in the preparation of the lime plaster. From further experiments[2] conducted with the plaster, it was evident that neither marble dust nor powdered shell or limestone has been used as inert material. The sand grains looked sharp and angular and they contribute to the fineness of the plaster.[3]

Technique of Laying the Ground

On ignition, the rough plasters suffered losses in weight to the extent of 3.76% and 7.34% respectively, which excludes moisture and carbon dioxide. The rough plaster is fairly hard and stands prolonged soaking in cold and boiling water, which shows the absence of gum or glue as a binding medium in the plaster. By the absence of any stain[4] with methylene blue, methyl violet or acid green, it is evident that glue, albumin or casein has not been added to the plaster to consolidate it. These experiments clearly show that the loss in weight on ignition is due to the presence of

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1. Max Doerner, The Materials of the Artist and their use in Painting, p. 269.
2. Proc. Ind. Ac. Sc. VII, No. 4 (1938) pp. 286-87.
3. Loc. cit. p. 284.
4. William Ostwald, Iconoscopic Studies (Microscopic Identification of Homogeneous Binding Mediums), pp. 140-1.

organic matter present as an impurity and combined water. On treatment with dilute hydrochloric acid, the fragment of the plaster disintegrated with evolution of carbon dioxide and separation of silica, the solution giving tests for calcium. Thus the technique employed is one of fresco.

Method of Laying the Ground

From experimental evidence it is seen that the artist applied the first coat of rough plaster to a thickness varying with the inequalities of the carrier. The plaster contained some organic impurity. Over the rough plaster, was laid a coating of lime wash. The strong binding between the rough plaster and the lime wash indicates that the latter was applied while the former was still wet. Wherever the binding was weak, the lime wash should have been applied after the rough plaster had dried.

(c) The Pigments

The following pigments were identified[1] in the earlier and later paintings at Tirumalai :

<div style="text-align:center">

Yellow Ochre
Red Ochre
Terre Verte
Lime

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It will be shown below that the technique employed in the case of these two layers of paintings is one of fresco. Consequently, the colour scale is very restricted since pigments which are sensitive to alkalies must not be used with lime.

(d) The Binding Medium

The paint layer is firmly adhering to the plaster. It stood brushing and prolonged soaking in cold and boiling water. No vehicle could be extracted with ether, chloroform or carbon disulphide. At the same time, there was no stain[2] with methylene blue, methyl violet or acid green. Under the action of dilute hydrochloric acid, a fragment of the paint film disintegrated completely with effervescence and evolution of carbon

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1. Martin de Wild, The Scientific Examination of Pictures ; R. J. Gettens and G. L. Stout, The Stage Microscope in the Routine Examination of Paintings (Technical Studies), IV (1935-36), pp. 140-1.
2. William Ostwald, Loc. cit.

dioxide, the solution giving tests for calcium. From these experiments, it is evident that there is no organic binding medium in the plaster and that the technique employed is one of 'fresco'. Since the pigments have not diffused through the interstices of the plaster, the technique employed is one of 'lime medium' and not of 'true fresco'.

In the case of the black pigment, gum should have been added in preparing the paint, as seen from the fact that the paint film answers Molisch's test, giving a violet ring with alpha-naphthol, in addition to answering other tests already enumerated.

Since the paintings are in lime medium, it is not easy to note the extent of the ground that was covered in the course of a single day. Joints are more visible in true fresco technique, while the coloured background easily covers them in 'lime medium.'

The Plates :

III : Śiva Naṭarājā Ettumanur, Travancore.

IV_1 : Kṛṣṇa and Rādhā, Mattancheri palace, Cochin.

IV_2 : Animals on Govardhana hill (detail), ibid.

V_1 : Portraits of Vīraṇṇa and Virūpaṇṇa the chieftain brothers who built the Vīrabhadrasvāmi temple at Lepakshi.

V_2 : Kalyāṇasundara mūrti, the marriage of Śiva and Pārvatī, Padmanabhapuram palace, Travancore.

VI : Scenes from ceiling paintings, Lepakshi.

SACRIFICIAL ALTARS: VEDIS AND AGNIS

by N. K. MAJUMDER

The "twice-born" (dvijas) of ancient India, who followed the Vedic Scripture, had to perform certain rituals, called 'yajñas' (sacrifices). Some of these Yajñas were 'nitya', i. e., they had to be performed without any reference to any specific desire, e. g., Pāka-yajña, Darśa-pūrṇamāsa (performed at the New and Full Moon), Pitreṣṭi, etc., while some others were 'kāmya yajñas' (which were performed with the object of fulfilment of certain specific desires, e. g., attainment of heaven, gaining overlordship of a region, annihilation of enemies, getting a son, etc.).

For the performances of these 'yajñas' (sacrifices), certain Vedis and Agnis had to be constructed. A Vedi is a raised altar on which the 'yajña' was performed and on which sat the persons performing the ceremony, namely, the sacrificer, the Hota, the Adhvaryu, the Ṛtvik, etc. An Agni is an altar for keeping the fire.

The rules for the performances of the Yajñas, which are scattered throughout the Vedas and the Brāhmaṇas, have been collected together and summarised in canonical form in the Śrauta-sūtras, which are practical handbooks showing the methods of performing the sacrifices. Each Yajña has its special Vedi, e. g., Pāka-yajñiki Vedi (used for Pāka-yajña), Dārśa-paurṇamāsiki Vedi (used for Yajñas to be performed at Amāvasyā and Pūrṇimā, i. e., new moon and full moon), Māruti and Vāruṇi Vedis, the Pitreṣṭi Vedi, the Pāśuki Vedi (sacrifice of animals), and the Saumiki Vedi used for Soma sacrifice (Agniṣṭoma Yajña). Certain Agnis are connected with each Yajña and Vedi. The rules for the construction of these raised altars (Vedis and Agnis) are collected together in a chapter or chapters of the Śrauta-sūtras or in separate brief treatises called Śulba-sūtras.

As early as 1875 Dr. Thibaut had mentioned four systems of Śulba-sūtras, namely, (1) Baudhāyana Śulba-sūtra, (2) Āpastamba Śulba-sūtra, (3) Mānava Śulba-sūtra, all belonging to Kṛṣṇa Yajurveda ; and (4) Kātyāyana Śulba Pariśiṣṭa, belonging to the Śukla Yajurveda. Two others were discovered in the early years of this century, namely, Vāraha Śulba-sūtra, being only two chapters of the Vāraha Śrauta sūtra, belonging to the Maitrāyaṇīya Sākhā of Kṛṣṇa Yajurveda, and Vādhula Śulba-sūtra, being portions of the Vādhula Śrauta Sūtra. Of these the first four give elaborate rules for the construction of the Vedis and Agnis and also the geometrical theorems and propositions underlying such construction. While the Mānava Śulba Sūtra takes up most of the space in describing the methods of construction of the various Vedis, giving only one method of construction of the Agni, namely, Suparṇa-citi, the Baudhāyana Śulba-sūtra gives a detailed description of at least 16 Kāmya Agnis of different shapes, without neglecting the Vedis altogether. The Āpastamba Śulba-sūtra adopts a course similar to that of Baudhāyana Śulba-sūtra.

A list of Vedis and Agnis described by these three Śulba-sūtras is given in the Appendix. A brief reference to the fundamental principles underlying such constructions will be useful towards a correct appreciation of the diagrams following. Each Vedi or Agni is to be symmetrical about the east-west line, called the 'prācī' ; this 'prācī' line is also called the 'pṛṣṭhyā' (backbone) ; as the Vedi is compared to an animal, and as every animal is symmetrical about the backbone, so is also the Vedi about the 'pṛṣṭhyā'.

The Vedi is in the form of an isosceles trapezium, the longer parallel side being in the West and the shorter one in the East. The other sides are sometimes rounded off in the form of a circle with its convexity inwards (see Diagram A).

The primary Vedi (Diagram A) is surrounded by three 'nitya' Agnis, the Āhavanīya on the East, the Gārhapatya on the West and the Dakṣiṇāgni on the South. The Āhavanīya Agni is square-shaped, the Gārhapatya is circular and the Dakṣiṇāgni is semi-circular, but all have the same area. This leads to an important geometrical problem : How to convert a square into a circle or semi-circle of the same area, and vice versa ? The problem is solved in the Śulba-sūtras.

The Saumikī Vedi is placed to the East of the Āhavanīya Agni (Diagram B). The measures of this most important Vedi are given in the Taittirīya Saṃhitā (Kṛṣṇa Yajurveda) as follows: East side, 24; West side, 30; and Prācī (or Pṛṣṭhyā), the centre line perpendicular to the East and the West sides, 36. A small Vedi is constructed with small units, and a large Vedi with large units, but always with these proportions. Within this Saumikī Vedi, in the East, there is a place called Uttara Vedi for placing the fire, besides other fire altars on the north and the south of the Vedi, called Mārjālīya and Āgnidhrīya Agnis.

If the Yajña is to be performed for the attainment of a specific desired object, the Uttara Vedi is to be replaced by the proper 'kāmya' Agni. For different objects different 'kāmya' Agnis, of different shapes, are prescribed.

Prescriptions for Kāmya Agnis

Agni	Desired Object

I. According to Āpastamba

Agni	Desired Object
Praugacit (In the form of a Triangle)	Annihilation of rivals
Ubhayata-Praugacit (In the form of a Double Triangle)	Annihilation of rivals present and future
Ratha-Cakra-cit (In the form of a Wheel)	Annihilation of rivals
Droṇacit (In the form of a Trough)	Gaining food
Samuhyacit	Gaining cattle
Paricāyyacit	Overlordship of a region
Śmaśānacit (In the form of a Funeral Pyre)	Attaining the place where the forefathers have gone
Chandaścit (In the form of a Bird)	Gaining cattle
Śyenacit (Do.)	Attainment of heaven
Kaṅkacit (Do.)	Do.
Alajacit (Do.)	Do.
Kaṅkacit with Head (Do.)	Attainment of heaven, with one's head

II. According to Baudhāyana

Agni	Desired Object
Śyenacit (In the form of a Bird)	Attainment of heaven
Kūrmacit (In the form of a Tortoise)	Attainment of Brahmaloka—the World where resides Brahmā, the creator.

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But whatever be the shapes, the areas of the Agnis for a particular construction (i. e., construction of the Agni for the first, or the seventh, or the 17th performance of the Yajña) must be the same. Thus, if different sacrificers are each performing the first sacrifice, but with a different object, the 'kāmya Agni' will differ in shape according to the object, but, in every case, will be of the same area, namely, $7\frac{1}{2}$ square 'puruṣas', each square 'puruṣa'[1] being a square 90″ x 90″ (120 'aṅgulis' x 120 'aṅgulis', or 5 cubits x 5 cubits). For each subsequent performance of the Yajña, the area of the 'kāmya' Agni is to be increased by one square 'puruṣa', without however altering the proportions of the various parts of the Agni. This leads to two other geometrical problems, namely,

(1) How to construct figures of 'different shapes (square, rectangular, circular, trough-shaped, bird-shaped, wheel-shaped, etc.) having the same area' ? and

(2) How to construct figures of the 'same shape, but having different areas' ?

These problems are solved in the Śulba-sūtras.

Each Kāmya Agni (fire-altar for a desired object) may be either knee-deep or navel-deep or chin-deep, i. e., the height of the Agni shall be either 32 'aṅgulis' (24 inches) or 64 'aṅgulis' (48 inches) or 96 'aṅgulis' (72 inches). The Agni is to be constructed with burnt bricks, and only the best and selected bricks are to be used for the purpose, excluding bricks which are black, or unburnt, or broken, or cracked, or contain any foreign matter. Bricks of different shapes had to be made. Some of these are shown in diagram V.

The Agni shall consist of five layers, or ten layers, or fifteen layers of bricks, according as the height is 32, 64 or 96 'aṅgulis'. The height of each brick is therefore $^{32}/_5$ or $6^2/_5$ 'aṅgulis' (equivalent to $^{24}/_5$ or $4^1/_5$ inches).

The Agni shall consist of 1,000 bricks in five layers, or 2,000 bricks in ten layers, or 3,000 bricks in fifteen layers, each layer containing 200 bricks.

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1. A Puruṣa is equal to the length of a man with uplifted arms and hence i- equal to 5 cubits or 120 aṅgulis or, in modern measures, 90 inches.

But the bricks must be so placed in the consecutive layers as to avoid what is technically called 'bheda' (cleavage) within the area, i. e., a joint between two bricks in any layer shall not coincide even partially with a similar joint either in the layer below or in the layer above. There is however no 'bheda' at the boundary, i. e., at the boundary the ends of the bricks in each layer will naturally coincide so as to keep intact the shape of the Agni, and this is no violation of the general rule, which is meant for the solidarity of the construction.

In describing the construction of an Agni, the Śulba-sūtras therefore prescribe—(i) the construction of the shape of the Agni, (ii) the making of bricks of various shapes, (iii) the method of placing the bricks in the first layer, and (iv) the method of placing the bricks in the second layer, the placing in alternate layers being the same. The diagrams following show these prescriptions, and the two diagrams corresponding to each Agni show the method of placing the bricks in two consecutive layers, indicating how the 'bheda' is avoided within the area of each Agni. Particularly note the joints (of the head and body of a bird-shaped Agni, of the body and the wings, and of the body and the tail) and observe the ingenuity adopted to avoid 'bheda' or cleavage.

The great importance of sacrificial altars lies in the fact that their construction gave on the one hand a great impetus to the study of geometry and measurement of areas, and, on the other, supplied the prototypes of later architectural developments.

Diagrams

These diagrams (with the exception of W) were procured by the late Sir Asutosh Mookerjee for the Calcutta University from the Government Oriental Manuscripts Library, Madras, and are exact copies of a set in its collection.

The first three diagrams A, B and C represent three Vedis, namely,

(1) Darśa-pūrṇamāsa Vedi (Vedi used for the performance of Yajñas at New Moon and Full Moon) ;

(2) Pāśubandhika Vedi (Vedi used for Paśubandha Sacrifice) ;

(3) Saumikī Vedi (Vedi used for Soma-Yajña) with Agni, Sadas, etc. This Vedi is also called Mahāvedi.

It will be observed that the Uttara-Vedi in the Diagram B is replaced by a Kāmya Agni in the Mahāvedi in the Diagram C. For different

desired objects the shape of this Kāmya Agni in the Mahāvedi has only to be changed, without interfering with its position in the Mahāvedi.

All the other Diagrams, with the exception of Diagram V, give the shapes of the various Kāmya Agnis and the method of placing the bricks in two consecutive layers.

I. Square-shaped Agnis

The following Diagrams represent the first and second layers of square-shaped Agnis :

D and D′	...	Caturaśra-cit
E and E′	...	Samuhya-cit
F and F′	...	Caturaśra-Śmaśāna-cit

II. Circular Agnis

The following are circular Agnis :

G and G′	...	Parimaṇḍala-Śmaśāna-cit
H and H′	...	Ratha-Cakra-cit

III. Triangular Agni

I and I′	...	Prauga-cit

IV. Rhombus-shaped Agni

J and J′	...	Ubhayata-Prauga-cit

V. Agnis consisting of two Parts

K and K′	...	Caturaśra Droṇacit (body and handle in the form of square and rectangle)
L and L′	...	Parimaṇḍala Droṇacit (body and handle in the from of circles)

VI. Bird-shaped Agnis (consisting of three or four parts)

M and M′	...	Prathama-Caturaśra-Śyenacit
N and N′	...	Caturaśra Śyenacit (second kind)
O and O′	...	Paricāyyacit
P and P′	...	Upacāyyacit
Q and Q′	...	Chandaścit
R and R′	...	Alajacit

S	and	S'	...	Kaṅkacit
T	and	T'	...	Pūrva-Śyenacit
U	and	U'	...	Para-Śyenacit

VII. Agni with multiple parts

| W | ... | Kūrmacit (according to Baudhāyana)— with different parts : head, body, 4 sides and 4 feet. |

The Prauga-cit (Diagrams I and I') is a fire-altar in the shape of a triangle (or the head of an arrow or a spear), and is prescribed for Yajñas performed with the object of annihilating enemies.

The Ubhayata-Prauga-cit (Diagrams J and J') is a fire-altar in the shape of a double triangle (or double-arrow-head or double-spear-head), prescribed for a Yajña performed with the object of annihilating enemies present and future (born and not yet born).

The Diagrams H and H' represent the Ratha-cakra-cit in the shape of a massive wheel. In the Baudhāyana Śulba-sūtra, another species of Ratha-cakra-cit is prescribed in the form of a wheel with spokes and interspaces, the total area of which, excluding the interspaces, is to be equal to $7\frac{1}{2}$ square puruṣas.

The Śyenacits, in various forms, are Agnis constructed on the model of the shadow of a flying bird, e.g., Suparṇa-citi, Alaja-cit, Kaṅka-cit, etc. Some have outspread wings and a broad tail, while others have short wings and a long tail ; in the case of some, the wings are bent at a right angle (R. Alaja-cit), while in the case of others they are bent at various angles greater than a right angle ; some Agnis show the head, while in some (S. Kaṅka-cit) the head does not exist (i.e., the shadow of the head is lost in that of the body).

Normally, the different parts of the bird-shaped Agni are—(1) head, (2) body, (3) tail, and (4) wings (South and North) with or without feathers (Cf. Diagrams T and T'). The head of every Agni points to the East and the tail to the West.

In the Kaṅka-cit (Diagrams S and S'), which has no head, there is a circle within the body, perhaps indicating the shadow of the head within that of the body.

12

The following is a comparative table of the different Śyenacits (i. e. Agnis in the forms of birds) :

Agni	Head	Body	Tail	Wings	Total	Angle of bending of wings	Angle made by the slanting sides of the tail with the North-South Line
M. Prathama Caturaśra Śyenacit	Nil	4	$1^1/_{10}$	$2^2/_5$	$7\frac{1}{2}$	Nil	90 deg.
N. Caturaśra Śyenacit—second kind	Nil	4	$1^1/_{10}$	$2^2/_5$	$7\frac{1}{2}$	Nil	90 deg.
O. Paricāyyacit	3/16	$2\frac{1}{2}$	15/16	$3^7/_8$	$7\frac{1}{2}$	$2 \tan^{-1} (2.64)$	45 deg.
P. Upacāyyacit	3/16	$2\frac{1}{2}$	15/16	$3^7/_8$	$7\frac{1}{2}$	$2 \tan^{-1} (2.5)$	45 deg.
Q. Chandaścit	3/25	46/25	15/25	$123\frac{1}{2}/25$	$7\frac{1}{2}$	120 deg.	45 deg.
R. Alajacit	3/16	$2\frac{1}{2}$	15/16	$3^7/_8$	$7\frac{1}{2}$	90 deg.	45 deg.
S. Kaṅkacit	Nil	37/16	153/128	(4-1/128)	$7\frac{1}{2}$	$2 \sin^{-1} (51/62)$	$\tan^{-1} 2$
T. Pūrva-Śyenacit	3/16	$2\frac{1}{2}$	45/32	109/32	$7\frac{1}{2}$	$2 \cos^{-1} (1/3)$	$\tan^{-1} 2$
U. Para-Śyenacit	3/16	$2\frac{1}{2}$	15/16	$3^7/_8$	$7\frac{1}{2}$	$2 \sin^{-1} (25/27)$	45 deg.

The first two are primitive forms, with proportions which do not conform with realities.

The proportions of the head, body, tail and wings in O, P, R and U are the same ; in all of these, the slanting sides of the tail make an angle of 45 degrees with the North-South line ; but the angle of bending of the wings varies. The angle 90 degrees in the case of Alajacit is to be particularly noticed.

Q is peculiar in that it gives measurements in terms of 1/25, instead of 1/16, of a square puruṣa. The areas of the head, body and tail are much smaller than in all the other cases (M, N and S have no heads), and the wings are correspondingly larger.

In the cases of Kaṅkacit and Pūrva-Śyenacit, the slanting sides of the tail make an angle of $\tan^{-1} 2$ with the North-South line, which makes the tail appear much longer compared to its breadth.

Bricks

The straight lines shown in the diagrams running in different directions divide the total area of the Agni into a number of cells, and bricks have to be constructed to the measure of and to fit these cells. In fact, each cell may be taken to be the shape of a brick.

Diagram V shows 11 different kinds of bricks. These as well as various other bricks analogous to these types have been used in the diagrams. The bricks used are indicated at the foot of the diagrams.

There are, however, some general prescriptions about the bricks. Burnt bricks must be used, but no brick is to be used which has been burnt black (called 'jhāmā' in common parlance), nor any brick which is unburnt or partly burnt, or which is cracked or broken, or which contains any foreign matter. Only the best and selected bricks are to be used. There is no necessity of using a broken brick, as bricks are to be made according to every necessary shape.

General

The diagrams, as stated before, are exact copies of a set in the collection of the Government Oriental Manuscripts Library, Madras, and their importance lies in the fact that they are said to have been procured from a person who was still performing the Yajñas and was supposed to be conversant with the details of practical construction of the Vedis and Agnis. But it is to be regretted that the diagrams are defective in many respects. This must be due either to negligence or imperfect knowledge of the drawer of the diagrams about the prescriptions of the Śulba-sūtras.

In spite of these defects, however, they bring out quite vividly the general characteristics of the Vedis and Agnis and the methods of their construction.

A. Dārśikā Vedi (Vedi for Darśa-Pūrṇamasa or New Moon and Full Moon sacrifices).

(a) Prācī, east-west line, from Āhavanīya Agni to Gārhapatya Agni, is 8 'prakramas' (i. e. 240 'aṅgulis' or 180 inches).

(b) Āhavanīya Agni on the east, a square (4 cubits x 4 cubits), so called because the Gods are invited to the sacrifice through the Agni placed there, as Agni (fire) is taken to be the priest and the representative of the Gods.

(c) Gārhapatya Agni on the west, a circle, having the same area as the Āhavanīya Agni.

(d) Dakṣiṇāgni on the south, a semi-circle, having the same area as the Āhavanīya or Gārhapatya Agni.

N
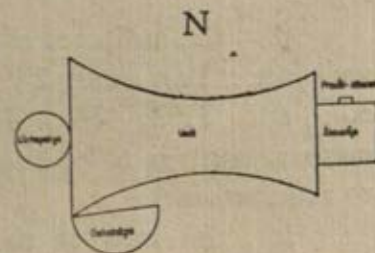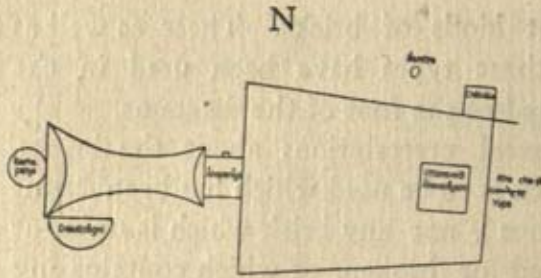
B. Pāśubandhikā Vedi (Vedi for Paśubandha or animal sacrifice).

(a) the Vedi is situated to the east of the Āhavanīya Agni.

(b) the Vedi contains an Uttara-Vedi on the east side.

(c) on the east of the Vedi there is the Yūpa for sacrificing the animal.

(d) the measures of the Vedi are : East side, 86 ; West side, 104 ; Prācī, 188.

C. Saumikī Vedi (with Agni), also called Mahāvedi.

(a) it is situated 6 'prakramas' (or 135 inches) to the east of Āhavanīya Agni.

(b) the measures of the Mahāvedi are : East side, 24 ; West side, 30 ; and Prācī, 36.   The unit of measurement is to be chosen according to requirements.

(c) the area of the Mahāvedi is 972 square units.

(d) the Sadas are 9 cubits by 27 cubits.

(e) the Kāmya Agni is placed on the site of the Uttara-Vedi.

E

49
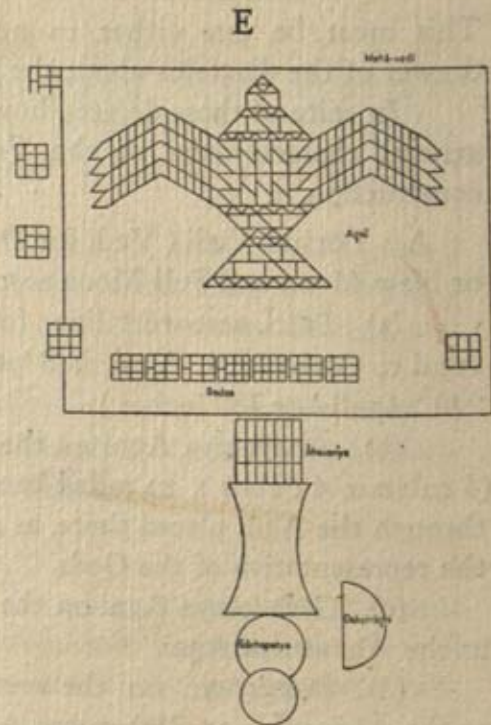
D. Caturaśra-cit (Agni in the form of a square)—first layer.

(a) measure : each side is k, where $k^2 = 7\frac{1}{2}$ sq. 'pur.'

(b) bricks used : k/12 x k/12, k/24 x k/24, and k/36 x k/36.

E

E
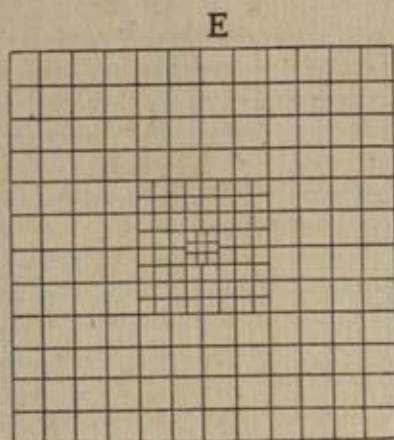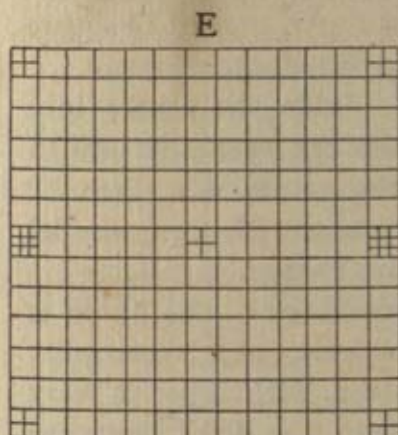
D́ Caturaśra-cit—second layer.

(a) measures as in the preceding diagram (D).

(b) bricks used : k/13 x k/13, k/26 x k/26 and k/39 x k/39.

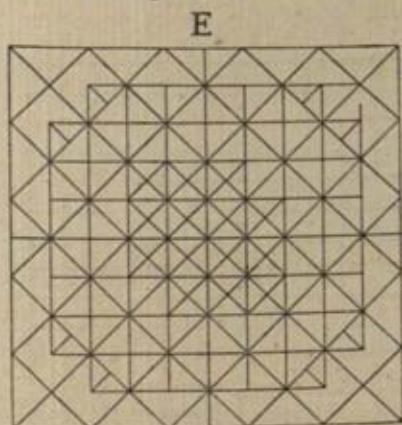E. Samuhya-cit (Agni formed by collecting earth, hence the name)—first layer.

(a) prescribed for the desired object of gaining cattle.

(b) measures :—$7\frac{1}{2}$ square 'puruṣas' to be converted into a square.

(c) the square is to be divided into parts as shown in the diagram.

(d) dig trenches around it, collect earth and fill up the divided parts.

E

E
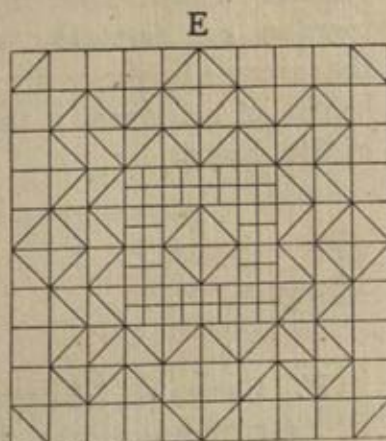
É. Samuhya-cit—second layer.
Same procedure as in the previous case.

13

E
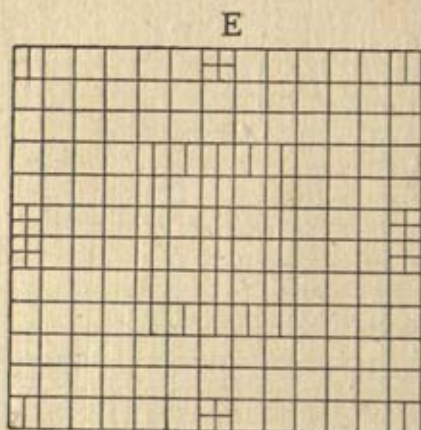
F. Caturaśra Śmaśānacit (Agni in the form of a square funeral pyre)—first layer.

(a) desired object : attaining where forefathers have gone.

(b) measures : An area of $7\frac{1}{2}$ square 'puruṣas' is to be converted into a square.

(c) bricks : Divide the square into 156 parts, by dividing the east side into 13 equal parts and the south side into 12 equal parts and drawing lines through the points of division parallel to the sides. Half-bricks and quarter-bricks are also formed.

(d) Baudhāyana gives a different form of Śmaśānacit : the shape is rectangular ; bricks are triangular in the first layer, and rectangular in the second layer ; the height of the bricks in the 'fifth' layer is very peculiar—a sixth layer is added, and the fifth and the sixth layers are together cut diagonally and the upper half removed ; thus, although the average height of the Agni is that of 5 layers, at one end it is of the height of 'six' layers, at the other end of 'four' layers, and at the middle of 'five' layers.

F'. Caturaśra Śmaśānacit—second layer.

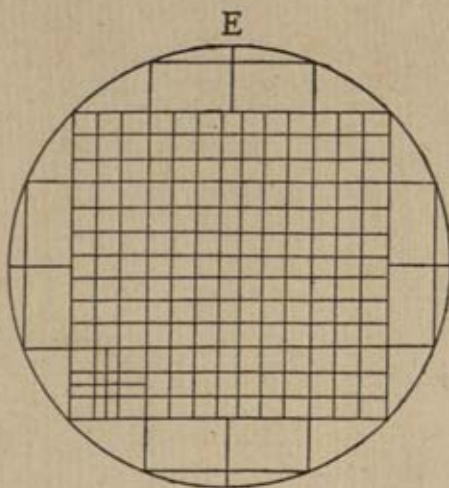(a) measures are the same as in the preceding diagram (F)

(b) bricks are formed by dividing the east side into 12 equal parts and the south side into 13 equal parts, and by forming half-bricks and quarter-bricks. This is how 'bheda' is avoided.

E
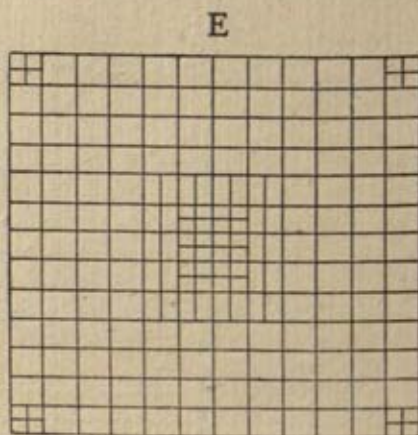
G. Parimaṇḍala śmaśānacit (Agni in the form of a circular funeral pyre)—first layer.

(a) An area of 7½ square 'puruṣas' is first converted into a square, and the square is converted into a circle.

(b) A square is inscribed in the circle, and is divided into 13 x 13 or 169 parts by lines drawn parallel to the sides. Each segment is then divided into 6 parts. The number '200 bricks' is completed by half-bricks and quarter-bricks in the inscribed square.
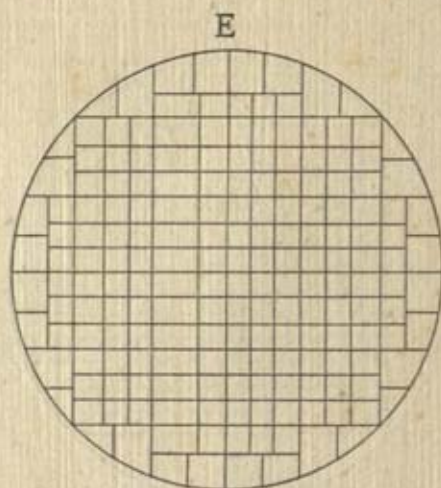
E

E
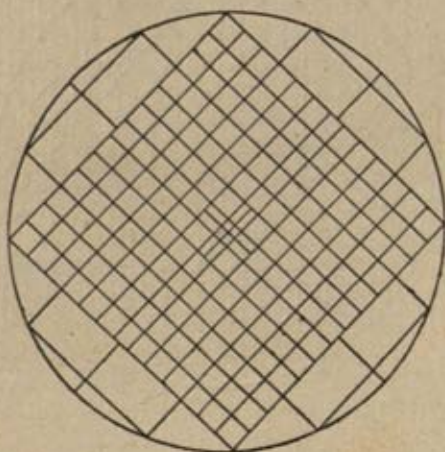
G'. Parimaṇḍala śmaśa nacit—second layer.

(a) Measures and construction are the same as in the preceding diagram.

(b) Division (for bricks) as in the preceding Diagram (G). 'Bheda' is avoided by turning the circle through half-a-right-angle.

52

E

H. Ratha-cakra-cit (Agni in the shape of a massive wheel)—first layer.

(a) Desired object—annihilation of enemies.

(b) Measures :—A square is formed with an area of $7\frac{1}{2}$ square 'puruṣas' and the square is turned into a circle.

(c) Bricks used :

(i) Inscribe a square in the circle and divide the inscribed square into 144 parts ;

(ii) Place six such bricks in each segment above the square, and divide the remainder of the segment into 8 parts.

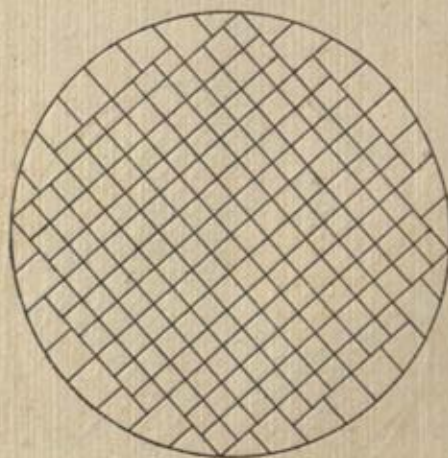(d)   Number of bricks :   144 plus 6 x 4 plus 8 x 4 = 200.

H'. Ratha-cakra-cit—second layer.

(a) Measures as in the preceding diagram H.

(b) Bricks as in the preceding diagram H.

(c) method of placing the bricks and avoiding 'bheda' : The first layer turned through half-a-right-angle becomes the second layer.

E

I. Prauga-cit (triangle-shaped Agni)—first layer.

(a) desired object : annihilation of enemies.

(b) measure : An isosceles triangle equal to $7\frac{1}{2}$ square 'puruṣas' in area.

(c) bricks used : Each side is divided into 12 equal parts, and lines are drawn parallel to the sides, dividing the entire area into 144 triangles, which give the standard size of the bricks. One such triangle is again divided into 4 and 9 smaller triangles, giving the second and third kinds of bricks.

(d) Total number of Bricks :

First kind	...	...	144—16—1
Second kind	...	...	64
Third kind	...	...	9
Total	...	...	200
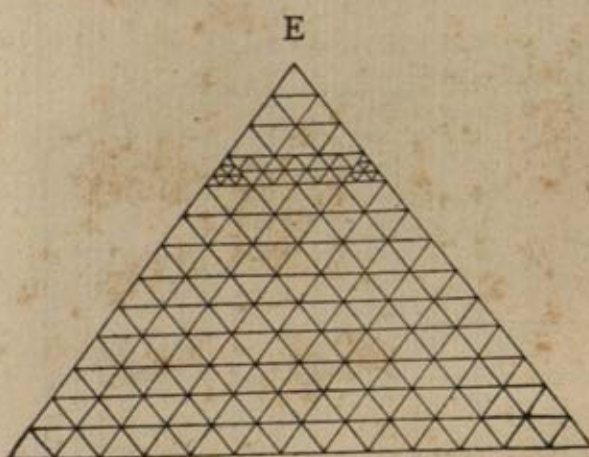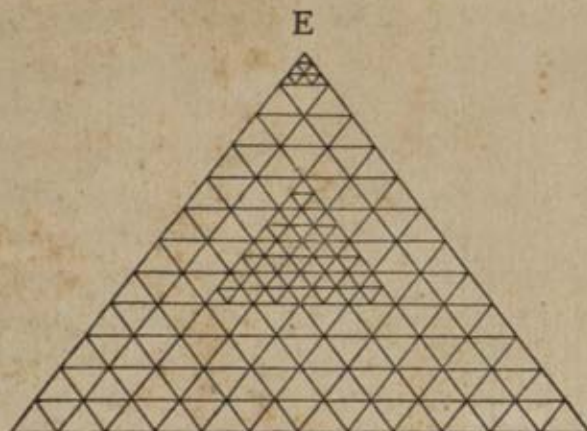
I'. Prauga-cit—second layer.

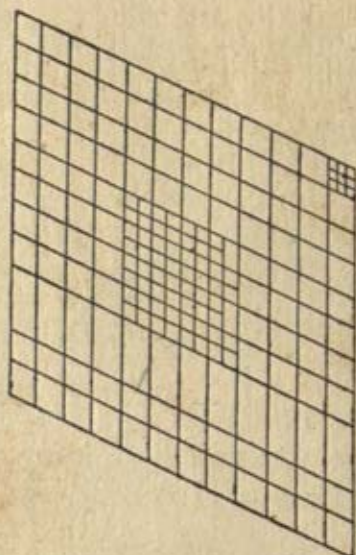(a) measures as in the preceding diagram I.

(b) bricks used :

(i) first kind—the whole area divided into 169 triangles by straight lines drawn parallel to the sides ;

(ii) second and third kinds—each such triangle divided into 4 and 9 smaller triangles.

(c) Number of bricks : (169—5—2) bricks of the first kind, plus 20 bricks of the second kind, plus 18 bricks of the third kind ; total, 200.

14

E

J. Ubhayata-Prauga-cit (Agni in the shape of a double triangle or rhombus)—first layer.

(a) desired object : annihilation of enemies, present and future.

(b) measures : Two squares are constructed and placed side by side, each equal to $7\frac{1}{2}$ square puruṣas. The middle points of the complete figure are joined, giving the rhombus of $7\frac{1}{2}$ square puruṣas.

(c) bricks used : The total area is divided into 144 parts (each a rhombus) by lines drawn parallel to the sides ; and one such rhombus divided into 4 parts ; and into 9 parts. These are the three kinds of bricks used.

(d) total number of bricks :

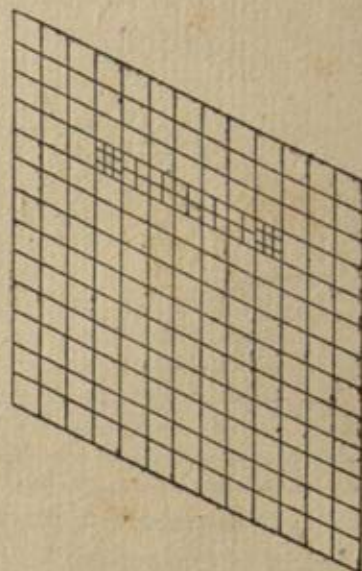|	
I kind	144—16—1
II kind	64
III kind	9
Total	200

J'. Ubhayata-Prauga-cit—second layer.

(a) measures as in the preceding diagram J.
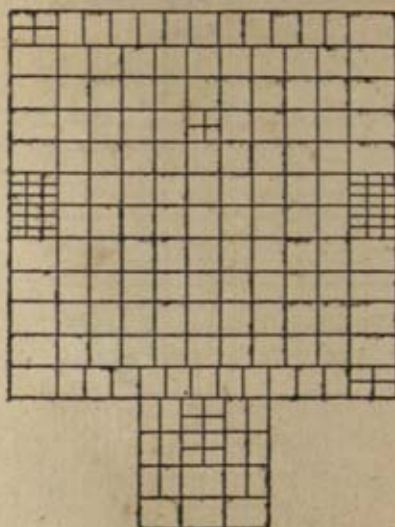
(b) bricks used and number :

I kind—total area divided into 169 rhombuses	169—5—2
II kind—I kind divided into 4 parts	20
III kind—I kind divided into 9 parts	18
Total	200

E

E

K. Caturaśra Droṇa-cit (Agni in the shape of a trough, the parts of which are rectangular) —first layer.

(a) object : gaining food.

(b) measures as given by Baudhāyana :
body ⚊ 320 'aṅgulis' x 320 'aṅgulis'
handle ⚊ 70 'aṅgulis' x 80 'aṅgulis'
which give a total area of 7½ square 'puruṣas',

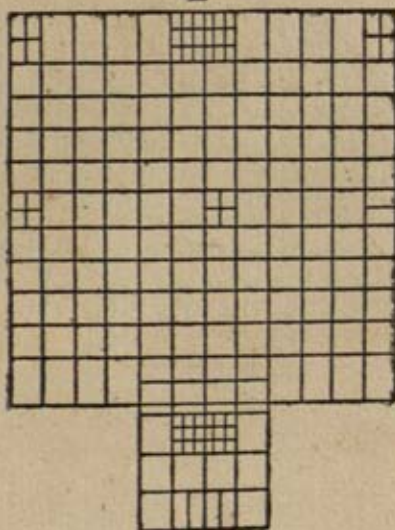The measures given in the diagram seem to be :

body ... 300 x 300
handle ... 100 x 125

which do not give the required area.

(c) bricks used : 25 x 25, 25 x 37½ and square and rectangular parts,

(d) this diagram and the next seem to be very defective in the method of placing the bricks,

K'. Caturaśra Droṇa-cit—second layer.

(a) measures and (b) bricks : same as in the preceding diagram K.

E

L. Parmimaṇḍala Droṇacit (Agni in the shape of a trough, the body and the handle of which are of circular form)—

(a) measures : take the body as 320 x 320, and the handle as 70 x 80. Convert the handle into a square, according to rule given in the Śulba sūtras. Convert the square body and the square handle into two circles. Place the circular handle to the west of the circular body and touching it.

(b) bricks : inscribe a square in the circular body ; divide it into 144 parts by lines drawn parallel to the sides ; divide each segment into 11 parts as shown in the diagram. Divide the handle into 15 parts as shown therein. Total number of bricks is 144 plus 4 x 11 plus 15, i.e. 203. If 4 bricks out of the 144 bricks be converted into one brick, the number will be reduced to 200.

E
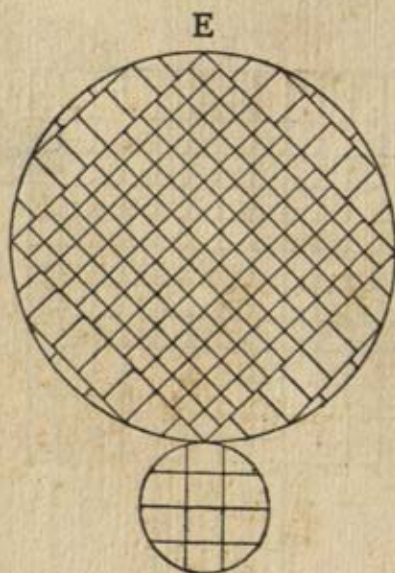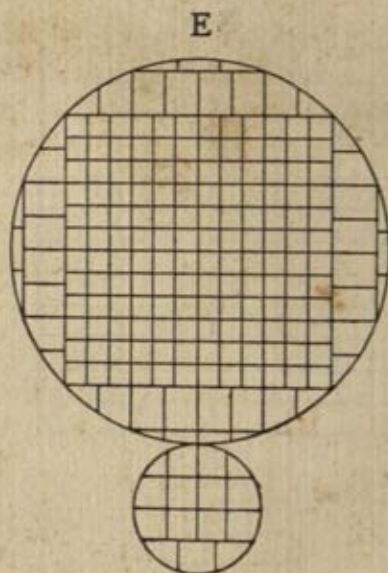
L'. Parimaṇḍala Droṇacit—second layer.

(a) measures as in the preceding diagram L.

(b) bricks in the body as before, but the body is turned round by half-a-right-angle. The handle is divided into 12 parts. Thus the total number of bricks is 144 plus 44 plus 12, i.e. 200.

E

M. Prathama Caturaśra Śyena-cit (a bird-shaped Agni with the body, wings and tail in the shape of square and rectangles resp., first kind)—first layer.

(a) desired object : attainment of heaven.

(b) measures : (i) body, a square, 4 square 'puruṣas' ;

(ii) each wing, a rectangle, $1^1/_8$ square 'puruṣas' ;

(iii) tail, a rectangle, $1^1/_{10}$ square 'puruṣas'. Total area, $7\frac{1}{2}$ square 'puruṣas'.

(c) bricks used :

(i) 24 'aṅgulis' x 36 'aṅgulis' ;

(ii) 24 'aṅgulis' x 24 'aṅgulis' ;

(iii) 12 'aṅgulis' x 36 'aṅgulis' ;

(iv) 12 'aṅgulis' x 24 'aṅgulis' ;

(v) 8 'aṅgulis' x 8 'aṅgulis'.

(d) bricks are placed over the joint of the body and the wings, but not over the joint of the body and the tail.
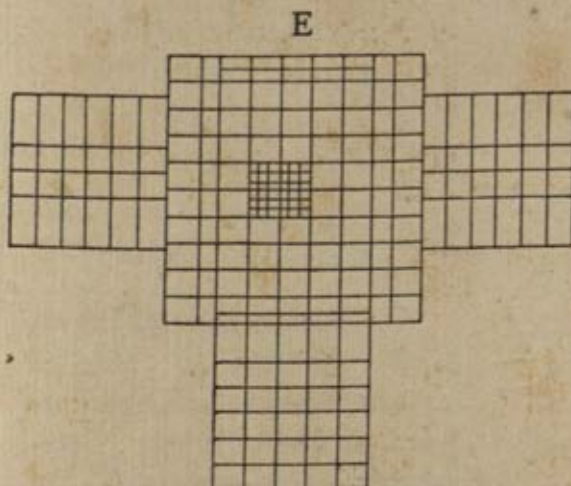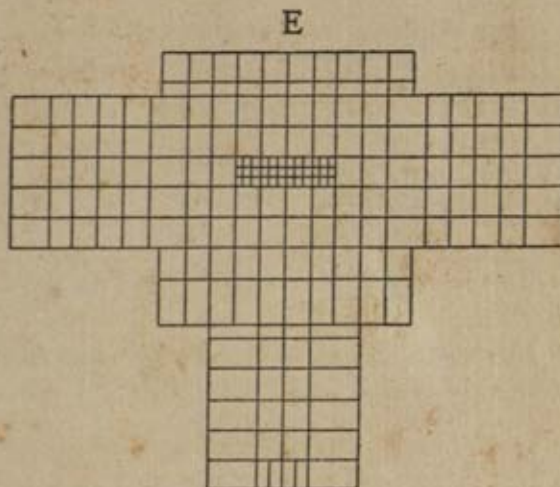
M'. Prathama Caturaśra-Śyena-cit—second layer.

(a) measures as in M.

(b) bricks used : as in M.

(c) bricks are placed over the joint of the body and the tail, but not over the joints of the body and the wings. The diagram is defective.

15

E
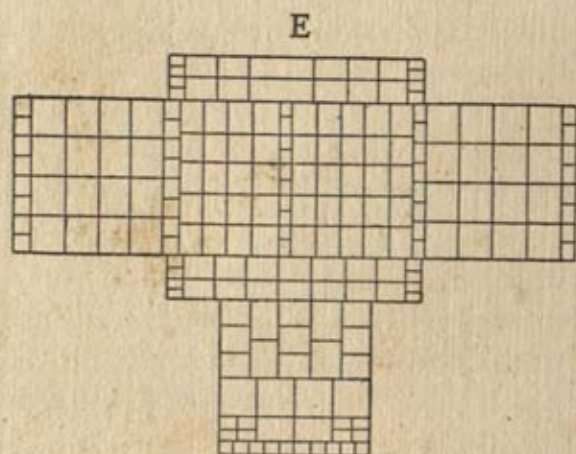
N. Caturaśra Śyenacit, second kind—first layer.

    (a)   measures : as in M.

    (b)   bricks used :

        (i) 30 'aṅgulis' x 30 'aṅgulis' ;

        (ii) 15 'aṅgulis' x 15 'aṅgulis' ;

        (iii) 24 'aṅgulis' x 24 'aṅgulis' ;

        (iv) 12 'aṅgulis' x 12 'aṅgulis'.

    (c)   bricks placed over the joints of the body and the wings.

N'. Caturaśra Śyenacit, second layer.

    (a)   measures : as in N.

    (b)   bricks used : 24 x 24, 12 x 24, 12 x 12.

    (c)   joint of body and tail covered by bricks.

E

E

O. Paricāyyacit (as shown by the diagram, a form of Śyenacit, bird-shaped Agni).

    (a)   desired object : over-lordship of a region.

(b) measures :

head = 60 'aṅg'. x 60 'aṅg'.—2(30 'aṅg'. x 30 'aṅg'. /2) = 3/16 sq. pur.

body = 240 ,, x 180 ,, —4(60 ,, x 60 ,, /2) = $2\frac{1}{2}$,,

tail = $\dfrac{(60+240)}{2}$ x 90   = 15/16 ,,

wings = $7\frac{1}{2}$—3/16—$2\frac{1}{2}$—15/16   = $3^7/_8$,,

(c) bending of the wings at angle 2 tan^{-1} (2.64).

(d) bricks used :

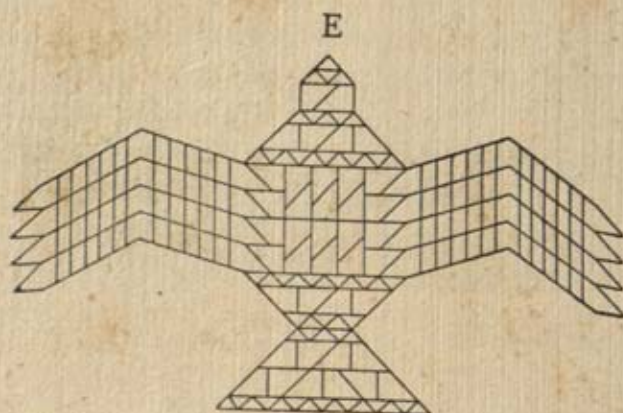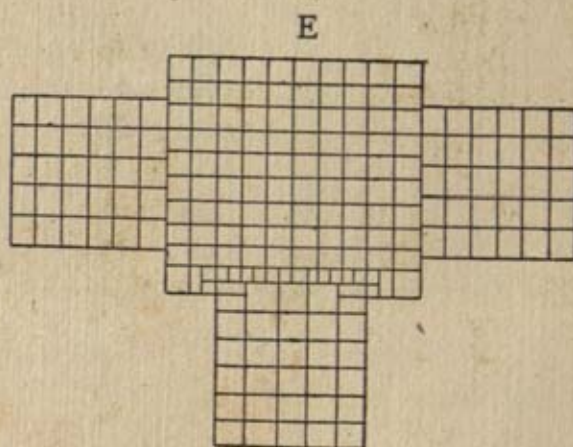| Bricks	Area, being fraction of sq. puruṣa	Head	Body (excluding portion of bricks at the junction of wings)	Tail	Wings (including bricks at joint)	Total
(i) right-angled triangle, sides 30, 21.21, 21.21	1/64	4	16	28	···	48
(ii) right-angled triangle, sides 30, 30, 42.42	1/32	···	2	2	···	4
(iii) right-angled triangle, sides 60, 42.42, 42.42	1/16	···	3	3	···	6
(iv) quadrilateral with sides 15, 30, 45, 30√2, the side 30 perp. to 15 and 45	1/16	2	16	4	···	22
(v) triangle, 40 x 30/2	1/24	···	18	···	···	18
(vi) parallelogram with sides 120/4 and 120/7 inclined at half the angle of bending of wings	$\dfrac{29}{8\times112}$				80	80
(vii) two parallelograms (vi) joined together	$\dfrac{29}{4\times112}$				8	8
(viii) parallelogram (vi) and triangle (ii) joined together	1/32 + 29/8.112				16	16
total number of bricks (202)[1]		6	55	37	104	202
total area (in sq. puruṣas)		3/16	$2\frac{1}{2}-\frac{1}{4}$	15/16	$3^7/_8-\frac{1}{4}$	$7\frac{1}{2}$

1. The number 202 is reduced to 200 by replacing 4 half-bricks by 2 full-bricks.

E
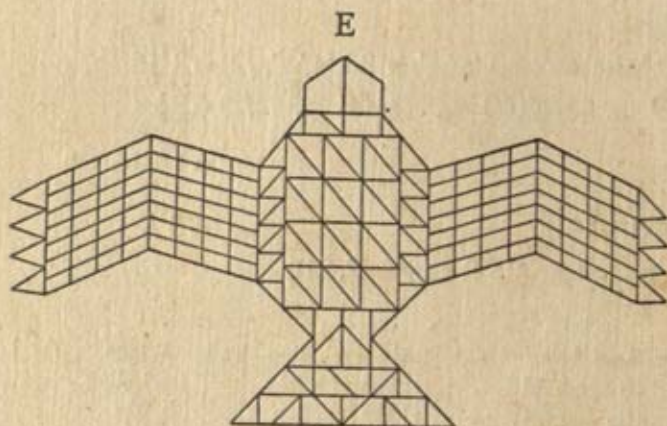
O'. Paricāyyacit—se-
cond layer.

(a) m e a s u r e s as
before.

(b) bricks used :

Bricks	Area of Bricks	Head	Body (excluding portion of bricks covering joint with Tail)	Tail (including portion of bricks covering joint with Body)	Wings	Total
(i) right-angled triangle—30, 30, 42.42	1/32	...	24	14	8	46
(ii) quadrilateral— 15, 30, 45, 30√2	1/16	2	2	10	...	14
(iii) parallelogram sides 120/4 and 120/7 at half the angle of bending of the wings	$\dfrac{29}{8 \times 112}$	...	...	...	112	112
(iv) rectangle 15 x 30	1/32	2	...	...	...	2
(v) triangle 40 x 45/2	3/48	...	24	...	...	24
total number		4	50	24	120	198[1]
total area (in sq. puruṣas.)		3/16	2½-1/8	15/16 + 1/8	$3^7/_8$	7½

1. The number 198 may be increased to 200, by replacing the 2 bricks 15 x 30 by 4 half-bricks.

Note how 'bheda' (cleavage) is avoided at the junction of the wings and of the tail with the body in the two layers.

The diagram is defective because the 'bheda' at the junction of the head and the body has not been avoided, but this can be easily mended.

To be continued.

CULT AND IMAGES OF THE PITṚS

by DAKSHINARANJAN SHASTRI

Among the lowest castes of the northern part of India, a reed is very generally fixed near a tank and water libations are poured upon it during the days of mourning. Certain images are erected by the Nāgas of the N. E. Frontier over their graves. The Khāriyas make images of the same kind. In South India the Nāyārs make an image of the dead man out of palmyra leaf and to this rice and other things are offered. The Kāfirs of the Hindukush have the custom of making straw effigies of the honoured dead which are paraded at their funeral and one year after the death an effigy is erected to the memory of every Kāfir of adult age. These images are of various kinds hewn and carved out of wood with axes and knives on traditional lines.

Among the higher classes of the Hindus, too, though the fact is generally denied by them, there are distinct traces of the existence of the use of images in connection with the worship of the Pitṛs, the dead. The description of some of the rites of ancestor worship, both modern and ancient, will expose the fact clearly. We shall describe here very briefly, in this connection, (1) the ancient rite of Pitṛmedha, (2) the rite of the burning of an effigy made of Kuśagrass, (3) a Brāhmaṇa made of Kuśagrass used in a Śrāddha rite, (4) the rite of burning an image of one's own self made of Palāśa leaves, (5) the rite of Nārāyaṇa vali in which an image of the Preta made of Kuśagrass or gold is worshipped, (6) the rite of offering lumps (Piṇḍas), in which the very lumps are the images, (7) the rite of Vilakṣaṇādāna in which a golden image of the Preta is given away and (8) the Vṛṣa Kāṣṭha in which the effigy of the deceased is, sometimes, carved.

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(1) Pitṛmedha—the construction of a monument

Section XXXV of the Vājasaneyī Saṃhitā and the Śatapatha Brāhmaṇa (XIII. 8. 1) contain the description of a ceremony which is known as Pitṛmedha. The sons and relatives of the deceased prepare a memorial for the deceased, either as a house or as a monument. It should be built a long time after the deceased man's death. When people do not even remember the years that have passed it is the best time for its construction. It should be constructed in uneven years, if the years are still remembered, under a single Nakṣatra and at new-moon. It should be built in autumn or in the month of Māgha or in summer. The sepulchral mound is to be made four cornered. It should be made on a ground inclined towards the north or any level ground. The spot should be pleasant and peaceful. It should not be made either on a path or in an open space. It should have the sun shining on it from above. It should have beautiful objects at the back. It should be erected on a salt soil, on such grounds as are filled with roots. It should not be built in a place near Bhūmipāśa reeds, Aśmagandhā, Aśwattha, Bibhītaka, Tilwaka. Sphūryaka Haridrā and Nyagrodha. For a builder of a fire altar one makes the tomb after the manner of a fire altar. It should not be too large; according to some, it should be as large as the fire altar without wings and tail. But the author of the Śatapatha Brāhmaṇa does not approve of it. According to him it should be just of man's size.

The performer should then bid others cut open the earth so as to be just of man's size. Then it is enclosed by means of enclosing stones. The site is swept with a Palāśa branch. Then one branch of Palāśa is thrown to the right and the other to the left side. The Adhvaryu then yokes a team of six oxen to the plough on the south side According to some this should be done on the north side. The author of the Ś. Brāhmaṇa here leaves the option with the performer saying 'he may do as he chooses'. The sacrificer then gives the order saying 'yoke'. He ploughs four furrows. He then ploughs across the body of the sepulchral site silently an undefined number of furrows. He now unfastens the team saying 'let the oxen be unyoked'. He removes this plough and team to the right side, to the left side and to all sides. He then sows seeds of all kinds of herbs. Next he pours out in secret the jar full of bones before

the sun rises. He then asks some one to proceed in the southern direction without drawing breath and having thrown down the jar to return without looking behind. Next he arranges the dead man limb by limb. Now thirteen unmarked bricks measuring a foot square are laid down silently. One of them he places in the middle with the front side towards the east; this is the trunk. He places three in front; that is the head. Three are placed on the right; that is the right side; three on the left which is the left side. He places three behind; that is the tail. Thus this, his body furnished with wings and tail, is just like that of the fire altar. He then bids some bring some soil from a cleft in the ground. Some now dig in the south-eastern quarter and fetch some soil from there. Others, again, do so towards the south-west and fetch it northwards from there. They may do as they choose.

The sepulchral mound should not be made too large. For a Kṣatriya it may be as high as a man with upstretched arms, for a Brāhmaṇa reaching up to the mouth, for a woman up to the hips, for a Vaiśya up to the thighs, for a Śūdra up to the knee. But it is better to make it so as to reach below the knee. While that mound is being made those who are engaged in making it hold a bundle of reedgrass to the left of it. Then barley grain is sown with the recitation of the formula 'May they ward off sin from me!' It is covered over with Avakā plants and Darbha grass.

They now fix pegs round it, a Palāśa one in front, a Śamī one on the left, a Vāraṇa one behind and a Vṛtra peg on the right. On the right side they dig two somewhat curved furrows and fill them with milk and water. On the left side they dig seven and fill them with water. They throw three stones each into the northern furrow and pass over them. Next they cleanse themselves with Apāmārga plants. Then they bathe at any place where there is water; they take water with their joined hands each and throw it in the direction in which he who is hateful to him may be. Having bathed and put on garments that have never yet been washed they hold on to the tail of an ox and return to their home. They proceed towards the village by reciting a formula. Then in the house having made up the domestic fire and laid enclosing sticks of Vāraṇa wood round it, they offer, by means of a spoon of Vāraṇa wood, an oblation to Agni. They then make offerings with the recitation of a formula.

The sacrificial fee for this ceremony consists of an old ox, old barley, an old arm chair with head cushion. This is the prescribed 'dakṣiṇā.' One may give more than this according to one's inclination.

Such is the performance in the case of one who had built a fire altar. In the case of one who had not built a fire altar there is the same mode of selecting the site for the sepulchral mound and the same performance. Some say that in the case of one who keeps up a sacrificial fire pebbles should be used instead of bricks. Others say they should not be used ; they would be liable to weigh heavily upon one who has not built a fire altar. Midway between the monument and the village a clod fetched from the boundary is deposited.

The description of the Pitṛmedha sacrifice recorded in the Śrauta work of Kātyāyana (XXI. 3. 1) is almost the same as in the Śatapatha Brāhmaṇa.

Here, Pitṛmedha is the name of a sacrifice. When the exact year of the death of the person is not remembered by people, or if the year is still remembered, in uneven years, in single stars, as opposed to twin stars, like Punarvasu, Viśākhās, etc. or in the new moon, in summer, in autumn or in Māgha this is to be performed. The sons and relatives of the deceased are to move towards the south with as many jars as there are people and a larger number of umbrellas and chowries. Then having collected and put the bones into the jars and placing them on a bedstead they cover them with a piece of untorn cloth. Big drums are beaten and harsh flutes are played and the sons and relatives of the deceased person with an upper garment on move around having carried the jar of bones perambulating thrice. Women also are allowed to join this procession. This ceremony is to take place in the earlier, middle or later part of the night. The day is one of dancing, singing, music and feasting. According to some authorities food is to be presented to the jar of bones also. In the ceremony of offering to the manes of the deceased ancestors, a libation must commence before the sun rises.

In a deep forest, or a big hollow on which at midday the rays of the sun do not fall obliquely. where the soil is salty and on a ground which is inclined towards the north (according to some towards the south) and from where no villages are seen, which is far away from the public thoroughfare and where Bata, Aśwattha, Bibhītaka, Tilvaka, Haridrā,

Sphuryyaka, Ślesmātaka and Kovidāra trees grow and which is suitable for funeral pyres, a burial ground (śmaśāna) should be made. For this purpose a pleasant and charming site should be selected. Behind it there should be forests of various kinds. If such a site is unavailable, one behind which or in the north of which there is water should be selected. It should have hollows and bushes. When the performers come out for this ceremony from the middle of the village, one of the performers should carry shoots of grasses fastened on a raised bamboo staff. They should not be kept down. So long as the rites continue they should be held up in the north and when the rite is complete they should be kept and carried back to the house. The corners of the burial ground should be measured according to the length and breadth of the deceased person. In front and at the back it should be wider. Then, from the north, Palāśa, Śamī and Vāraṇa trees and stones are to be placed and the field is to be made free from shrubs. Then six bulls are yoked for ploughing, and four furrows are dug. After this the bulls are set free ; seeds of all kinds (sarvauṣadhi) of herbs are sown. Then the bones are poured out in the centre of the ploughed land. Then any one, other than the Adhvaryu goes towards the south and throws away or breaks the jar silently. The bones are, now, arranged limb by limb. Next he places one of the thirteen bricks in the middle, silently. Then he places three bricks in each direction. In this way thirteen bricks are placed.

The sepulchral mound of a Brāhmaṇa should be as high as to reach up to the mouth, for a Kṣatriya to reach up to one's chest, of a Vaiśya up to one's thigh, of a Śūdra up to one's knee and of a woman up to one's hip or of all up to the lower part of the knee.

Here, barley seeds are sown. In the south two curved hollows are to be dug and they are to be filled with milk and water. Then seven hollows are to be dug in the east from the south to north and they are to be filled with water. Then they throw three stones each in each hollow. Now, they move towards the village and brush their body with Apāmārga twigs. Then they bathe, wear fresh garments, touch the tail of a bull and enter the village. In the midway between the village and the burial ground they deposit a stone or the stone of demarcation. Having been anointed with eye-ointment and oil, an offering from shrubs of Vāraṇa is made. The remuneration of the priest of this ceremony is an

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old bull and old barley. Gold and other valuable things may also be given if the donor wishes.

(2) The burning of an effigy made of Kuśagrass (kuśaputtalikā dāha)

When the funeral rites are performed for a person who died in a foreign country or whose bones cannot be found, a figure is made with three hundred and sixty leaves of Kuśagrass or with the same number of the twigs of Udumvara, distributed so as to represent the several parts of the human body according to an analogy of numbers.

According to the Bhaviṣya purāṇa quoted by Hemādri, forty leaves of Kuśagrass or Palāśa leaves of the same number are to be put into the head of the figure, ten into the neck, one hundred in two arms, twenty in the chest, twenty in the abdomen, thirty in the two hips, one hundred into the two thighs, thirty into the knees and shanks and in total three hundred and sixty leaves (?) are to be put into the entire body of the image. According to Pitṛdayitā of Anuruddha Bhaṭṭa, both Śara and Palāśa leaves will make the image. The frame work, probably, according to him will be made of Śara leaves, into which three hundred and sixty Palāśa leaves are to be put.

But according to Kamalākara Bhaṭṭa, the author of Nirṇaya Sindhu, who quotes Ṣaṭtriṅśanmata as quoted by Hemādri, it seems that the frame-work is to be made either with Darbha leaves or with Palāśa leaves or with sacrificial fuel the number of which will be three hundred and sixty.

The same author quotes a passage from the Bhaviṣya purāṇa which supplies us with the exact number of leaves to be put in the different parts of the image. Forty leaves are to be put in the head, ten in the neck, one hundred in the two arms, twenty in the chest, twenty in the abdomen thirty in the hips, one hundred in the thigh, thirty in the knee and the leg and ten in the toes. According to the Āśvalāyana Gṛhya Pariśiṣṭa the total number of the leaves to be put in the different limbs of the 'image' is the same as this, although the distribution is slightly different. According to that authority, forty leaves are to be put in the head, ten in the neck, thirty in the chest, twenty in the abdomen, one hundred in the two arms, ten in the fingers, six in the two testicles, four in the penis, one hundred in the two thighs, thirty in the knee and the leg, and ten in the toes.

According to Yajñapārśva, a coconut fruit will be the head of the 'image', a bottle gourd the palate, five gems the mouth, a plantain fruit the tongue, two cowries the two eyes, sands the nose, Palāśa leaves the ears, the shoots of a fig tree the hair, the fibres of lotus plants an entrail, earth fat, sulphur and yellow orpiment the serum or marrow of the flesh, quick silver semen, brass excrement, sesame paste joints, barley paste flesh, honey blood, the skin of an antelope skin, common limes the breasts, a lotus the nostrils, a lotus the navel, the egg plant the scrotum or the bag which contains the testicles, the root of the Gunja plant the penis, and barks the garment. According to the same authority the urine of the cow, cow-dung, sandal paste, and all herbs are to be applied all over the body of this 'image'. In short, an attempt is made to make this figure an exact effigy of the defunct.

According to Anuruddha Bhaṭṭa, the author of Pitṛdayitā, round the body must be tied a thong of leather from the hide of a black antelope and over that should be tied a woollen thread. It is then smeared with barley meal mixed with water and must be burnt as an emblem of the corpse.

According to Bṛddha Manu and Bṛhaspati, when no news is heard of a person gone to a foreign country, for twelve years, a figure made of Kuśagrass should be burnt for him, in the thirteenth year by his relatives.

According to the Bhaviṣya purāṇa, when one's father goes to a foreign country and if he does not come back within fifteen years nor is any news heard from him within that period, an image of him made of Kuśagrass should be burnt and thenceforth Preta offerings and Śrāddha offerings should be made to him.

According to Madanaratna, a son will wait for his father for fifteen years only. According to Gṛhya Kārikā, one is to wait for twenty years for one who is in the early part of his life, for fifteen years for one who is in the middle part of his life and for twelve years for one who is in the latter part of his life.

According to Parāśara, if the month of the death of a person who dies in a foreign country is known but the day of death is unknown, water and earth lumps should be offered to him on the eighth day of the dark fortnight, on the new moon day or on the eleventh day of the dark fortnight. In such a case, the full period of impurity should be observed for one who used to maintain the consecrated fire. For one who did not do

so, the impurity of a period of three nights should be observed. This impurity for three nights is recommended for a case in which the image is burnt ten days from the death of a person. In a case like this, also, the wife and the son who have not observed impurity for the death of the person, will observe impurity again for three nights. All other 'sapiṇḍas' will observe impurity for three nights in all cases of burning an image. Those 'sapiṇḍas' who have observed impurity beforehand will become pure by taking a bath after the burning of an image made of Kuśagrass.

This rite was introduced in conformity with the idea that for the welfare of a deceased person burning is absolutely necessary. Without burning the departed soul cannot be released from its Preta stage. If possible the entire body should be burnt ; if the entire body be, for some reason, unavailable then the bones should be burnt ; if the bones also be unavailable then an image of the deceased resembling a human figure and made mainly of Kuśagrass should be burnt. Anyhow, burning is indispensable. Without burning, the rites of the Preta period cannot be performed ; unless the Preta rites are performed the deceased cannot attain the stage of a Pitṛ. This idea is not very old. It was introduced in the Gṛhya period. In this rite two ideas are very distinct, the idea that burning is the only recognised method of the disposal of the dead and the idea that the Preta rites release the departed, of the Preta stage, or, in other words the conception of Preta is fully developed in this rite. The germ of the rite is, of course, available in comparatively older texts, where burying—burying of the entire body, gradually the burying of bones, if the bones are unavailable a beast representing the bones of the dead—was considered absolutely necessary for the welfare of a deceased person.

(3) A Brāhmaṇa made of Kuśagrass

The Brāhmaṇas play a very important part in a Śrāddha rite. Now if a Brāhmaṇa endowed with the requisite qualities be unavailable, what should be done ? Will the performer omit the entire Śrāddha rite, or will he appoint a substitute for the Brāhmaṇa ? The answer is that the performer will not omit the Śrāddha ; he will perform it with a substitute.

Jaimini, in his Pūrva Mīmāṃsā, Chapter VI, accepts the view that a rite may be performed with the substitute of a thing which is unavailable.

According to Chāndogya Pariśiṣṭa, when a thing which is positively enjoined, is unavailable, a thing which is like that thing, should be used. In absence of barley wheat and in absence of Brīhi the Śāli paddy are the substitutes.

The substitute of a Brāhmaṇa is the image of a young Brāhmaṇa made of Kuśagrass. In the Gṛhya Sūtra we find : 'Having placed a Brāhmaṇa of Darbha grass in the seat of Brahmā, etc.' From the Chāndogya Pariśiṣṭa, we learn of a Ṛṣi made of Kuśagrass. According to the Smṛtis : 'When the Brāhmaṇas are unavailable one is to perform a Śrāddha rite having made Brāhmaṇas of Kuśagrass. According to Nirṇaya Sindhu of Kamalākara, in absence of a Brāhmaṇa a Brāhmaṇa of Darbha grass is to be used. The Brāhmaṇas in a Śrāddha rite, represent the fathers (pitṛs). These Brāhmaṇas should be made of three, five, seven or nine fibres of hollow, pointed, sharp-ending Kuśagrass by tying them in a knot finished with two and half a turning in the right direction.

The custom of employing a Kuśa-Brāhmaṇa in a Śrāddha rite has become universal in Bengal. Here, the application of an actual Brāhmaṇa in the ritual of Śrāddha is almost unknown. The living Brāhmaṇas serve only as priests. It is only a Kuśa-Brāhmaṇa which is to serve the purpose of a Brāhmaṇa in the ritual. It proves that the Brāhmaṇas of Bengal have no confidence in their Vedic learning and Brāhmaṇic character. The custom, probably, owes its origin to the injunction of the Saura-Purāṇa which prohibits the appointment of a Brāhmaṇa of Bengal to the post of a Brāhmaṇa in a Śrāddha rite.

The Śrāddha for a man who is alive

(4) An effigy of one's own self made of Palāśa leaves is to be burnt

One who has none to perform his Śrāddha rite after death will do that himself when no hope of his surviving remains. The suitable place for performing such a Śrāddha is a mountain, the bank of a river, a forest, or a temple. According to Baudhāyana who gives an elaborate description of the rite, a man is entitled to perform a Śrāddha for his own self, when alive, even when persons entitled to perform a Śrāddha rite for him, after death, are available.

In the dark fortnight of the month of Āśvina (aparapakṣa) an image of one's own self made of Palāśa leaves is to be burnt and the full period of

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defilement is to be observed. On the second day after the lapse of impurity an Ekoddiṣṭa is to be performed. Then the monthly Ekoddiṣṭas are to be performed for a year. At the close of the year no Sapiṇḍī Karaṇa is to be performed. The anniversary Śrāddhas are to be performed for ten years. After a period of ten years, even that Śrāddha is to be stopped. If the person becomes incapable of performing the annual Śrāddhas for ten years, whenever he will feel himself unfit, he may employ those who are entitled to perform a Śrāddha rite for him.

Nārāyaṇa-vali or the offerings to Nārāyaṇa
(5) An image of the Preta made of Kuśagrass or of gold is worshipped

The rite of Nārāyaṇa-vali is a kind of atonement for those departed souls who were cursed, degraded, addicted to drinking or have committed suicide. This rite makes them fit for receiving funeral offerings.

The main conception of this rite is probably the conception of a Preta as identical with Viṣṇu, the all-pervading deity 'pretaṃ Viṣṇumiti smaran'. After finishing the Tarpaṇa, the performer is to utter the formal declaration of the rite or a vow to perform all the rites duly, which will contain the mention of the month, fortnight and the day on which he is going to perform it, the name and family of the deceased person, and the purpose for which he will perform the rite. He will perform it on the eleventh day of the light half of a month. Then the performer is to place 'five images' in five jars—one in each—the image of Viṣṇu which will be made of gold, the image of Brahmā which will be made with silver, the image of Rudra which will be made of copper, the image of Yama which will be made of iron and the image of the Preta which will be made of Kuśagrass. (Or, all the images will be made of gold).

Having worshipped them with sixteen materials of worship, and muttering the Puruṣa Sūkta the performer is to consecrate the fire and offer Caru food into it muttering each of the sixteen Ṛks of the Puruṣa Sūkta one by one and uttering the formula 'This to Nārāyaṇa' at the end of each Ṛk. Then he will contemplate the Preta as Viṣṇu seated at the front of the gods, on the Kuśagrass with tips towards the south, will mention the name and family of the Preta, and will offer ten lumps mixed with honey, clarified butter and sesame, with the sacred thread suspended over his left shoulder

with the formula : 'N. N. Preta, this lump is for you who are in the shape of Viṣṇu. Please accept it.' Then he will mutter the Puruṣa Sūkta, sprinkle with the water of the conch and will make the declaration 'I shall satiate the N. N. Preta who is in the shape of Viṣṇu with the offering of water.' Then he will satiate the Preta with each of the verses of the Puruṣa Sūkta separately. Then he will offer uncooked food placed in one pot to the five deities with the formula : May Brahmā, Viṣṇu, Mahādeva, and Yama with his servants, having accepted this offering do good to the Preta.

(6) The lumps are the images

Yama and Viṣṇu introduce a very interesting idea in connection with the offering of the three lumps, the lump of the father, that of the grandfather, and that of the great-grandfather. The first lump is the image (pratīka) of the extensive earth. It is to be thought of as the earth itself. The earth is compared with the spoon Darvī as it is, like the Darvī, the means of rice and the resort of rice. It is 'akṣita' or eternal gratification. The reason is that although enjoyed, always, by the movable and immovable beings, as the means of satiety, it does not decay. As it is the means of supernatural gratification of the Pitṛs, it is 'svadhā'. It is undecaying. The first lump is the image of the earth possessing these attributes. Again, just as Agni enjoys the earth as its master, so the offerer should contemplate the lump as the earth and the father as Agni or fire. Fire is the master of the earth ; the father is the master of the lump.

The second lump is the image of atmosphere. From atmosphere it rains. Therefore it is the means of food. It is beyond the reach of dust and therefore it resembles the sacrificial instrument Darvī. Just as Vāyu enjoys the atmosphere as master, so the grandfathers enjoy the second lump which is the image of the atmosphere. For this reason the grandfathers are to be contemplated as Vāyu and the lumps to be offered to them as the atmosphere.

The third lump is the image of Dyaus. Dyaus is Darvī as it removes pains. Just as the sun enjoys Dyaus as its master or presiding deity, so the great grandfathers enjoy the third lump as presiding deity. So the third lump is to be contemplated by the worshipper as Dyaus and the great grandfathers as the sun.

According to Vyāsa the first lump is the image of Varuṇa, the second of Prajāpati and the third of Agni. The author of Smṛti Candrika gives a different version of the statement of Vyāsa. According to him the fathers are to be contemplated as Varuṇa, the grandfathers as Prajāpati and the great grandfathers as Agni.

The remark of Yama in this connection is worthy of notice "śrutireṣā purātanī". 'This is an ancient instruction'. Though apparently the acceptance of 'pratīka' in explaining formulas seems to be comparatively of recent origin, according to Yama, it is actually very ancient. It is at least as old as the oldest Brāhmaṇa texts. Here, the worshipper contemplates the entire universe as inseparably connected and in this connection he views his own limited self.

(7) The ceremony of making a gift of a bed and a golden image of the Preta (vilakṣaṇā dāna)

On the day after the period of mourning has elapsed, the son or the nearest relation of the defunct gives away a bed with its furniture and a golden image of the deceased with clothes and various sorts of fruits, after making the image upon the bed, with some ceremonies and formal declarations. The bed is ritualistically known as Vilakṣaṇā. The bed and the image are to be given to a Brāhmaṇa or more commonly to a married couple who should be decorated with ornaments and clothes.[1]

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1. Asaucāntāddvitiyenhi śayyāṃ dadyāt vilakṣaṇām
   Kāncanaṃ puruṣaṃ tadvat phalapuṣpa samanvitam
   Sampūjya dvijadāmpatyaṃ nānābharaṇa bhūṣaṇaiḥ
   Vṛṣotsargaśca kartavyo deyāca kapilā śubhā.

   Matsyapurāṇa

   Dvijadaṃpatiṃ pūjayitvā kāncanaṃ pretapratikṛti
   Rūpaṃ puruṣaṃ phalavastrayuktaṃ śayyāyāmā-
   Ropya bhūṣita dvijadampatibhyāṃ śayyāṃ dadyāt

   Śuddhi Tattva of Raghunandana

(8) The ceremony of setting a bull at liberty

The effigy of the deceased carved on the sacrificial post (vṛṣa-kāṣṭha)

The rite of Vṛṣotsarga has originated from a Yajña in which animals were sacrificed, the carved post represents the Yūpa to which the animals were fastened on the eve of being immolated. Although the immolation is now out of practice, bulls and calves are still there, standing, and tied to a similar post only to be set free instead of being killed.

In the Vedic age a Yūpa was made of sacrificial wood, cut to size (five cubits long), octagonal in shape, with a crown at the top. Such a wood would be posted one cubit deep, to the east of an altar, and a rope was to be tied around its neck, through which a small stick of wood was also to pass.

Then in the Smārta age, a Yūpa becomes four cubits long, still of sacrificial wood, but special reference is made to the Vilva or Vakula tree for the Kali age. Instead of being octagonal, it is now round and thick. Besides, a bull now appears at the top without displacing the crown therefrom. But above all, there is a direction that the Yūpa should be beautiful to look at, and probably this hint gave rise to all additions and alterations of the later stages (see illustration on p. 72, a 'vṛṣa-kāṣṭha' from Bengal).

Hence in order to beautify the post various new figures came into existence, but none without some significance. Thus an effigy of the defunct is shown at the bottom, the bull shifts to the middle, and the God Śiva (sometimes the lingam) is situated at the top, inside a shrine.

Now, the idea is : the deceased wishes to reach the domain of Śiva, the highest object of one's attainment, but as he cannot do so without traversing the path of virtue, the bull who is often called Dharma himself occupies the middle position.

In a sacrifice, whatever instruments have been used, should be thrown into the water. Hence the Yūpa post, too, is carried in a procession which leads to some river or pool, and though the object of such esteem and remembrance is not actually thrown into the water, it is generally posted on the bank very near the water. It now partly serves the purpose of a monument.

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THE TRADITIONAL CONCEPTION OF IDEAL PORTRAITURE

by ANANDA K. COOMARASWAMY

The Śukranītisāra (IV. 4. 76) praises the making of images of deities, and condemns the portrayal of human likenesses as "not heaven-ward leading." The well known Cambodian and Javanese practice of erecting statues of deified ancestors in the likeness of a divinity is in perfect agreement with this pronouncement. It can readily be inferred from the text of Pratimānāṭaka (III. 5), where Bharata, visiting an ancestral chapel, is unable to recognize the effigies of his own parents, at the same time that he exclaims at the perfection of the workmanship and feels the moving power of the figures, that here too in India proper it must have been rather the deified man than the man as he had been on earth that was represented in the effigies. There are still extant, moreover, numerous later Indian votive bronze statuettes, which are specifically "portraits" of such and such a donor, and yet cannot be distinguished, or scarcely distinguished, from figures of deities ; as well as others in which the intention to represent a human being is evident, but the facial expression is altogether that of a type, without individual peculiarities. On the other hand, in the dramatic literature, there is an abundance of detailed references to a secular art of portraiture in which a real likeness to the living subject was essential to the social, and largely erotic, purpose of the work.

It is evident, then, that in India we have to take account of two different kinds of portraiture, respectively posthumous, hieratic, and ideal on the one hand, and taken from life, profane, and sentimental on the other. We shall find that there existed in Europe also a corresponding tradition of ideal portraiture, of which full account must be taken if we are to understand the underlying significance of facial expression in

mediaeval Christian art. Before going on to the European sources, however, we shall refer to two other Indian texts in which a distinction is drawn between the appearance of the man on the one hand, and the interior image of the very man invisible to the physical eye on the other but accessible to the eye of contemplation. The relation between the outward appearance and the interior image is analogous to that between the aesthetic surfaces of an actual painting and "the picture that is not in the colours" (Laṅkāvatāra Sūtra, II. 112-114).

A distinction between the looking-glass image and the veritable Spiritual-essence of the man is sharply drawn in the Chāndogya Upaniṣad VIII. 8. 5, where the question is posed of the nature of the Spiritual-essence, or very Self (ātman), in a dialogue between the Progenitor, the Angel Indra and the Titan Virocana. The Progenitor asks the two latter to adorn themselves as best they can, and to consider their reflection in a bowl of water. "What do you see ?" "We see ourselves just as we are, with all our adornments", they reply. "That is the Spiritual-essence (ātman), that is the immortal, that is God", he tells them, meaning that what they see is a form in the image and likeness of deity.[1] Indra and Virocana however, understand that the outward aspect and the Spiritual-essence of the man are one and the same thing, and they go away satisfied with this nothing-more-ish (nāstika) conclusion[2]. The Progenitor watches them as they go, and remarks, "They have gone away without understanding, without having known the very Self. Whoever has such an understanding as theirs, whether Angel or Titan, must perish". Indra, however, is not finally satisfied, and returns for further instruction ; he finally learns that this body (i. e. body with sensitive consciousness, or "soul") is mortal and in the power of death, but that it is the "standing-ground', of the immortal Spiritual-essence (ātman), the veritable knowing subject. It is, in fact, the whole burden of the Upaniṣads and Bhagavad Gītā to

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1. The Progenitor's answer may be compared to the Buddha's when he says "He who sees the Word sees Me" (Sam. Nikāya, III. 120), and Christ's when he says that "He who sees Me, sees the Father" (John, XIV. 9), where it is not meant in either case that what is actually and physically heard or seen is the "Me" or the "Father" intended.

2. The same image recurs in Bṛhadāraṇyaka Upaniṣad, II. 2. 8-9 : the ignorant Doctor Gārgya worships the person reflected in the water or in a mirror, i. e. his own person, and is corrected by the gnostic Ajātaśatru who says that he worships the Person 'in' a likeness and as the Refulgent, who is the archetype of the image, not as seen in physical waters or mirrors, but in the heart.

distinguish in this way the Spirit from the body-and-soul, the Knower of the Field from the field itself ; just as also in Christianity, "The word of God is quick and powerful, and sharper than any two-edged sword, extending even unto the sundering of soul from spirit" (Heb. IV. 12).

In the Uttaratantra of Maitreya, 88-91 there is a Parable of the Painters, illustrating what is meant by the realisation of the whole transcendent person of the Buddha (the whole painting) by means of a transformative constitution of all its parts (the various members of the painted representation) : it is, then, a question of ideal portraiture and the likeness of a "mystical body". There can be little doubt, indeed, that the reference in stanza 89 is to the occasion an which, as related in the Divyāvadāna, Ch. XXXVII, Rudrāyaṇa desires a portrait of the Buddha, and summons his court painters who, however, are unable to "grasp" the Buddha's likeness ; and the Buddha then projects his "outline" or "shadow" on the canvas, instructing the painters to fill it in with colours. We cite now the Uttaratantra passage from Obermiller's version in 'Acta Orientalia', Vol. IX, pp. 208-209 :

88. Suppose there were some painters,
   Skilful (in painting) various (parts of the body),
   And each of them, knowing his own special member,
   Would not be able (to paint) the rest.

89. (Suppose then) a mighty king would bid to them—
   On this (cloth) ye all must draw my portrait,—
   And hand the cloth to them with this commandment.
   And (the painters) having heard (his word),
   Would start their work of painting.

90. (Suppose again), of these painters engaged in the work,
   One should go abroad and, owing to his absence,
   Their number being incomplete, the portrait
   Could not be accomplished in all its parts.

91. The painters who are meant here
   Are Charity, Morals, Patience, and the rest,
   And that which is the highest point of excellence,
   The essence of all relative entities,—this is the picture.

"The picture", viz. "that is not in the colours", to repeat our citation from the Laṅkāvatāra Sūtra.

We are now in a position to consider the European parallels. The fundamental distinction between the outward appearance and inward reality of the enlightened, and in this case specifically initiated Hermes (who is really no more than the Buddha or Christ in the last analysis merely this or that man but the Universal Man and 'forma humanitatis') is made in the Corpus Hermeticum, lib. XIII (Scott, 'Hermetica', I. 241) ; in a dialogue between Hermes and his son Asclepius, who is himself about to be, but has not yet been, "born again". Hermes denies that Asclepius, who is actually looking at his father, can really see him. He says :

"I see that by God's mercy there has come to be in me a form which is not fashioned out of matter⋯I am not now the man I was ; I have been born again in Mind ('nous' = Skr. 'manas'), and the bodily shape which was mine before has been put away from me. I am no longer an object coloured and tangible ; a thing of spatial dimensions : I am now alien to all this, and to all that you perceive when you gaze with bodily eyesight. To such eyes as yours, my son, 'I' am not now visible".[1]

Porphyry tells us that Plotinus refused to allow his portrait to be made, objecting : "Is it not enough to carry about this image in which nature has enclosed us ? Do you really think I must also consent to leave, as a desirable spectacle to posterity, an image of the image ?"

The whole point of view is similar to that of the Chāndogya Upaniṣad cited above, where in the same way a sharp distinction is made between the spiritually essential 'person' and the empirical 'ego' : and it is significant that the as yet unregenerated Asclepius (like Bharata in the Pratimānāṭaka) fails to recognize his own father in this spiritual image of which he speaks.

When now in John XIV. 9 Christ says, "He that hath seen Me, hath seen the Father", it is very evident that in the same way "Me" does not mean the outward and physically visible and tangible man Jesus whom all men could see with their bodily eyes, but rather that spiritual essence of which he speaks when he also says "I and my Father are one."

We come next to a long but very significant passage in the Apocryphal Acts of John, 26-29 (M. R. James, The Apocryphal New Testament, ed. 1926, pp. 232-234). Here Lycomedes, who has just been raised from the dead by the mediation of John, summons his friend, a skilful painter,

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1. As in Gal. II. 20, "I live ; yet not I, but Christ liveth in me."

that he may "possess him (John) in a portrait." Unknown to John, the painter makes an outline, and on the next day filling it in with colours, presents the portrait to Lycomedes, who "set it up in his own bedchamber and hung it with garlands," and spent much of his time with it. John now, who has never seen himself in a mirror, goes into the chamber and sees there "the portrait of an old man crowned with garlands, and lamps and altars set before it." He asks what all this means: "Can it be one of thy gods that is painted here? for I see that thou art still living in heathen fashion." Lycomedes answers, "My only God is he who raised me up from death with my wife: but if, next to that God, it is right that men who have benefited us should be called gods—it is thou, father, whom I have had painted in that portrait, whom I crown and love and reverence as having become my good guide." Then Lycomedes brings him a mirror:

"And when he had seen himself in the mirror and looked earnestly at the portrait, he said: As the Lord Jesus Christ liveth, the portrait is like me: yet not like me, child, but like my fleshly image; for if this painter, who hath imitated this my face, desireth to draw (the very) 'me' in a portrait, he will be at a loss, (needing more than) the colours that are now given to thee, and boards and plaster (?) and glue (?), and the position of my shape, and old age and youth and all things that are seen with the eye.

But do thou become for me a good painter, Lycomedes. Thou hast colours which he giveth thee through me, who painteth all of us for himself, even Jesus, who knoweth the shapes and appearances and postures and dispositions and types of our souls. And the colours wherewith I bid thee paint are these: faith in God, knowledge, godly fear, friendship, communion, meekness, brotherly love, purity, simplicity, tranquillity, fearlessness, grieflessness, sobriety, and the whole band of colours that painteth the likeness of thy soul, and even now raiseth up thy members that were cast down, and levelleth them that were lifted up, and tendeth thy bruises, and healeth thy wounds, and ordereth thine hair that was disarranged, and washeth thy face, and chasteneth thine eyes, and purgeth thy bowels, and emotieth thy belly, and cutteth off that which is beneath it; and in a word, when the whole company and mingling of such colours is come together, into thy soul, it shall present it to our Lord Jesus Christ

undaunted, whole, and firm of shape. But this that thou hast now done is childish and imperfect : thou hast drawn a dead likeness of the dead."

It is unmistakeably the same point of view that we find again in Eckhart, who remarks that "Any face thrown on a mirror is, willy-nilly, imaged therein. But its nature does not appear in the looking-glass image : only the mouth, nose, and eyes, just the features, are seen in the mirror" (Evans ed. 1. 51.) ; and again, "My looks are not my nature, they are the accidents of nature······To find nature herself all her likenesses have to be shattered and the further in the nearer the actual things" (ib. I. 94 and 259) ; "According to philosophers, to make a portrait of a man one must not copy Conrad nor yet Henry. For if it be like Conrad or like Henry it will not recall the man, but will remind one of Conrad or Henry···given the knowledge and the art, one could do Conrad to the life, the very image of him. Now God both will and can : he made the like unto himself, the very image of himself" (ib. 128) : "If I paint my likeness on the wall, he who sees the likeness is not seeing me ; but anyone who sees 'me' sees my likeness and not my likeness merely but my child" (ib. 408) ; for "the more and the more clearly God's image shows in man the more evidently God is born in him. And by God's eternal birth in him we understand that his image stands fully revealed" (ib. 157). Nor is this merely a matter of human representation : "The most trivial thing perceived in God, a flower for example as espied in God, would be a thing more perfect than the universe" (ib. 206) : "any flea as it is in God is nobler than the highest of the angels in himself" (ib. 240). And finally, "Creatures all come into my mind and are rational in me. I alone prepare all creatures to return to God···I alone take all creatures out of their sense and make them one in me" (ib. 143), that is to say in that human nature that has nothing to do with time. "Intellect's substance is essence, not accident" (ib. 17) : will enjoys things as they are in themselves, whereas intellect enjoys them as they are in it" (ib. 394) ; "the intellect is higher than the will" (ib. 213).

In the face of this tradition of an ideal portraiture (ideal, of course, in the philosophical sense, that of Augustine when he says that it is by their ideas that we judge of what things ought to be like) can we wonder at the intellectual and impersonal character of Oriental and mediaeval

Christian art, in which the form is all important, and the figuration irrelevant ? If Jitta-Zadoks says of the tomb effigies of the twelfth century that "These statues first represented the deceased not as he actually appeared at death (nor, we may add, as he actually appeared in life) but as he hoped and trusted to be on the day of Judgment. This··· is apparent in the pure and happy expression of all the equally youthful faces which have lost every trace of individuality" (Ancestral Portraiture in Rome, 1932, p. 92) : if the Crucifixion, appearing in Christian art soon after the fourth century, had been at first and throughout the ages of faith an eminent symbol of the triumph over death, in which "the eyes are open and the position is not expressive of any suffering" and the figure is really that of a crowned King "retaining all the majesty of a god, even upon the instrument of his torture" (Bréhier, 'L'Art chrétien', 1928, pp. 81, 335) : and if on the other hand from the thirteenth century onwards it was less and less "how the dead would perhaps appear one day but how they had actually appeared in life (that) was considered important. More or less likeness was now wanted, (and)···as the last consequence of this demand for exact likeness the death mask, taken from the actual features, made its appearance" (Jitta-Zadoks, loc. cit. pp. 92 f) ; if "After the close of the XIIIth century···it is less the purpose of art to instruct than to arouse emotion by its development of the most painful aspects of the Passion···The Christ no longer opens his eyes ; he has died upon the cross ; his wasted body, of which the bones are visible, is now supported only by the two arms···the head falls sadly upon the breast. It is at the beginning of the XIIIth century that this tragic vision first appears in Italian paintings, and though the older figure of Christ alive on the cross survives for some time, it gives way at last to the new creation···We see how far apart are this humanised Christ and the noble and serene figures that French artists of the thirteenth century had conceived" (Bréhier, loc. cit. pp. 10, 336, 328) ; if the same thing can be recognized in the contemporary conversion of epic to romance, and generally in a reversal of the doctrine of the superiority of contemplation to action, and in a turning away from experience to experimentation ; if the form is now conquered by the figure, the intellect subordinated to the will, if the likeness of the dead now takes the place of the image of the living

principle, this extroversion and declension of the European consciousness (for which no parallel can be adduced in Asia before the nineteenth century) implies the triumph of another kind of man who could not, in fact, to quote the prescient and bitter words of St Thomas, "think of anything nobler than bodies" (Sum Theol. I. 1. 9),—the triumph of 'our' kind of man. Whereas it had been regarded as the splendour of truth that it "extended even to the sundering of soul from spirit" (Heb. IV. 12), and the proper man had been required to "hate his own soul" (Luke, XIV. 26), and taught that man's perfection depended upon a "last death of the soul" (Eckhart, Ruysbroeck), man had 'now' embarked upon the way that was to lead him to psychology and spiritualism, and the fetishistic worship of "aesthetic surfaces".

It is not our present intention to speak of the Truth : our current disciplines are interested less in Truth than in what opinions men have entertained at various times, less interested in the Philosophia Perennis (Sanātana Dharma) than in the "history of philosophy". We shall only remark that the common expression according to which it is said that with the European Renaissance interest shifted from the future to a present life[1] is a misleading half-truth ; the larger truth is that interest shifted from an inner presence to an outer present, from the spiritual essence of the very Man to the accidents of his sensitive outer ego, and that whereas it had been held that the very Man was literally capable of all things[2], the stature of this man was now to be reduced to that of a refined and sensitive animal, whose behaviourism should depend, like that of any other animal, on a merely estimative knowledge. It is the former Man, the God, that was to be represented in the ideal portrait envisaged by tradition ; the latter and animal man that is represented in our art.

The impersonality and serenity of mediaeval Christian and Asiatic art, its facies, so to speak, are precisely what such texts as we have cited might have led us to expect. We cannot pretend to have really understood such arts as these, merely from the provincial standpoint of our own

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1. It is not without interest to observe a reflection of this point of view in our willingness to exhaust and destroy the material resources of the earth for the sake of 'present' advantage and without regard to the needs of 'future' generations.

2. Hermes, Lib. XI. ii. 20 b "Think that for you too nothing is impossible" ; Matthew XVII. 20. "Nothing shall be impossible to you".

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humanism. The mediaeval and Asiatic artist did not observe ; they were required to be what they would represent, whether in motion or at rest. How can we propose to ourselves to judge these arts from a point of view connected historically with the use of death masks and nowadays with the posed model and the study of nature as still life ("nature morte") ? It would be idle to attempt to bridge the gulf between our art and that of mediaeval Europe and of Asia by the postulation of a common interest in "art" just as it would be idle to attempt to bridge the gulf between our own ideas and Christian or Asiatic religion by the postulation of a common interest in ethics.

Iconography is the constant essence, style the variable accident of art. All traditional art can be reduced to theology,[1] or is, in other words, dispositive to a reception of Truth, by original intention ;[2] its symbolism, in the phrase of Emil Mâle "a calculus", is the technical language of a quest. To repeat these formulae merely as in-significant "art forms" is to substitute a mimicry for a mimesis ; to repeat them merely for their vaguely emotive values puts them into a category with the "blessed word, Mesopotamia", to which most of our inherited "design" has long since been relegated. We cannot be said to have really known these forms by a merely formal analysis and part from a knowledge of their application, which implies an environment both physical and psychic. Works of traditional art are, as we said, bound up with a technique of pursuit ; and as Mallinowski has very pertinently expressed it, "Technical language, in matters of practical pursuit, acquires a meaning only through personal participation in this type of pursuit". We can only understand to the extent that we are able to identify ourselves with the mediaeval and Asiatic patron and artist in whom the final and the formal causes of the work subsisted, and whose knowledge was therefore, not as ours is, derivative and accidental, but essential and original.

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1. "Reduced" does not, of course, bear here its vernacular meaning of "diminished", but the etymological and technical value of "led back" as one leads back to or refers to its source what had been educed from it, as from that in which it subsists more eminently.

2. "To make the primordial truth intelligible, to make the unheard audible, to enunciate the primordial word, to represent the archetype, such is the task of art, or it is not art" (Walter Andrae, "Keramik im Dienste der Weisheit", Berichte der Deutschen Keramischen Gesellschaft XVII, 1936, p. 623.

ON INDIAN IMAGES

by JITENDRA NATH BANERJEA

The English word 'image' derived from Latin 'imago' has the basic connotation of 'likeness'; from this it came to denote a statue or idol of deities among other things, which were regarded as possible likeness of the gods and saints. Similarly the Greek term 'eikon' means a figure, a concrete representative of the likeness (mentally thought) of a deity or a saint, in painting, mosaic, sculpture, etc. which is specially meant for worship or which is in some way or other associated with the rituals connected with the worship of particular divinities. The Greek word 'eikon' with its above significance has its close parallel in such Indian terms as 'pratikṛti', 'arccā', 'pratimā', 'mūrti', 'vigraha', 'bera,' 'vimba', etc. The words are here arranged in a roughly chronological manner on the basis of their appearance in old Indian literary and epigraphic records. The word 'saṃdṛś' in some of the late Vedic texts has been taken by some scholars to signify images; the word occurs in the Kāṭhaka passage (II. 3, 9) "na saṃdṛśe tiṣṭhati rūpamasya na cakṣusā paśyati kaścanainam", i. e, 'he has no form visible to the eye; no one sees him with the eye' (this part is retained without any alteration in the first half of the Śvetāśvatara iv-20) and has been explained by Saṃkarācārya as 'saṃdarśanaviṣaye' (objects to be seen) which may or may not mean actual images of gods. But 'pratikṛti' is one of the earliest words which has this significance and may be compared to 'pratimā', 'vimba', etc. of the later texts. Pratikṛti occurs in the 5th Adhyāya of Pāṇini (V. 3. 96)-'ive pratikṛtau kan'; the Sūtra 'jīvikārthe cāpānye' in the same Adhyāya under the above as explained by later commentators refers to images of divinities. Patañjali commenting on this Sūtra uses the word 'arccā', i. e. object of worship ('mauryair-hiraṇyārthibhiḥ arccā prakalpitāḥ', i. e. images were made by the Mauryas for obtaining gold) which is one of the most significant designa-

tions denoting the images of the gods. This term emphasises the true character of these objects as so many sensible representations of particular divinities receiving the homage of their Bhaktas or exclusive worshippers. Herein lay the difference between them and some probable references to a few representations of Vedic deities like Indra and Puruṣa in some of the early and late Vedic texts. In the latter case they were not so many objects of worship (pūjā), but were component parts of sacrificial ritualism. Thus, the passage in RV. IV. 24, 10 about Indra being offered for sale in exchange for ten cows can be explained as referring not to an image proper of Indra but to some form of his concrete representation which was to be ritualistically used for 'abhicāra' purposes (doing harm to one's enemy by magic rites) by the purchaser. Similarly the figure of the golden man in connection with the Agnicayana ceremony can be explained as one of the necessary constituents of particular sacrificial rites. The word 'arccā' was frequently used in the later Pāñcarātra and Śrī-Vaiṣṇavite literature in preference to other terms on account of its close association with worship. 'Pratimā,' 'mūrti,' 'vigraha', etc. are very frequently found in later texts signifying the same characteristic trait noticed above. One of the earliest uses of the word 'pratimā,' in the sense of likeness, is to be found in the Śvetāśvatara Upaniṣad (IV. 19, 'na tasya pratimā asti yasya nāma mahad yaśaḥ,' i. e. there is no image or likeness of him whose name is great glory). There is no certainty, however, that the word here refers to any sensible object meant for worship. But it is used in its developed sense in the pedestal inscription of the statue of Yakṣa Maṇibhadra discovered at Padam Pawaya in Gwalior State, adjudged to be the site of the ancient Padmāvatī. The statue is approximately dated in the 1st century A.D. and the part of the inscription containing the word runs thus: 'Maṇibhadrabhaktā bhagavato Maṇibhadrasya pratimā pratiṣṭhāpayaṃti', i. e. the worshippers of Maṇibhadra enshrine the image of the holy Maṇibhadra. The Mora stone slab inscription of the time of (Sodasa) the son of the Mahākṣatrapa Rajuvula refers to the 'pratimā' of the holy Pañca-vīras of the Vṛṣṇis (tentatively identified by Lüders with Baladeva, Akrura, Anādhṛṣṭi, Sāraṇa, and Viduratha,—not the five Pāṇḍava brothers as was formerly suggested by Chanda) in the passage 'Bhagavatām Vṛṣṇinām paṃcavīrāṇām pratimā'. This inscription is also of unique importance as it refers to the images as 'arccā' in the last line which runs thus, 'arcādeśām

śailaṃ paṃcajvalata iva paramavapuṣā (translated by Lüders as 'the five objects of adoration made of stone radiant, as it were, with highest beauty ; Epigraphia Indica, Vol. xxiv, p. 196). The word 'pratikṛti', 'pratimā,' 'vimba' (a later usage) thus have a primary significance of 'likeness' and secondarily the significance of 'arccā', i. e. objects of worship. It must be noted, however, that the latter meaning is already attached to these terms in their early usages noticed above. The words 'vigraha, bera, tanu, rūpa', etc. are later usages describing the images as the very bodies or forms of the gods. For this manner of looking at the images of the divinities, the religious literature, especially the Pāñcarātra treatises are responsible ; for the latter lay down that the cult picture of the deity should be regarded as one of his five fold forms, viz. Para, Vyūha, Vibhava, Antaryāmin and Arccā, stereotyping the five ways of looking at the one personal god. This concept of the image is based on its unique sublimation to the very position of the godhead, the object of deep loving adoration to its devotee. The process pre-supposes a mental preparation—a studied effort on the part of the worshipper—which culminates in the attainment of that frame of mind in which an object fashioned by human hands reaches a superhuman level after due consecration. This concept of the image is essentially one of the characteristic features of the various religious cults of India in all of which the element of Bhakti was the main guiding principle. Thus, we shall be wrong to interpret the true significance of the image proper of the god from the point of view of a pure Vedantist ; and the passages quoted by many writers to explain this term from some late Upaniṣads which mainly deal with yoga or 'sannyāsa' seem to do injustice to the above named concept of the image. Thus, the dictum of the Jābāla Upaniṣad, an Upaniṣad mainly extolling the efficacy of 'sannyāsa' viz.

Śivamātmani paśyanti pratimāsu na yoginaḥ !

Ajñānāṃ bhāvanārthāya pratimā parikalpitāḥ !!

i. e. 'sages find Śiva within oneself, and not in images : images are made for being meditated on by those who are ignorant' is undoubtedly a one-sided presentation, taking very little account of the viewpoint of a true devotee. The Viṣṇuite or Śivaite saints, the Āḷvārs or the Nāyanmārs of the south, as well as those of the north and the Ācāryas or the intellectual expounders of the doctrinal tenets of the

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various religious systems of the early and mediaeval periods throughout India were by no means ignorant people. But their approach to the deity was different and in it the image certainly played a very important part.

It has already been suggested above that the images of the gods, in the proper and developed sense of the term did not play any part in the life of the Indo-Aryans of the Vedic times, especially of the early period. The nature of their religious practice precluded the use of images in a manner in which they came to be used in later times, and this is the most relevant explanation of the fact that we do not light upon any words among the early Vedic texts signifying images or temples. This observation however only holds good with regard to the higher sections of the Vedic Aryans about whose religious beliefs and practices we know much from the early texts. We know very little, however, about those of the people belonging to the lower walks of life or the original settlers of India with whom the incoming Aryans had to struggle before they became masters of the lands they conquered. Two compound words, however, viz. 'Śiśnadeva' and 'Muradeva' occurring in some of the Rgvedic verses as terms of opprobrium and contempt used in respect of people with whom the Vedic Indo-Aryans had nothing in common are very interesting and important in this connection. If we accept the interpretation of these two epithets as suggested by several scholars, then we may find some reference to certain practices of one section of the former. The first epithet has been explained by some scholars as 'the worshippers of the phallic emblem', while the second one by others as 'the worshippers of the false gods, i. e. the images of the gods'. The explanation of these two terms is not unanimously accepted, but one is tempted to uphold it on the basis of the interpretation of the phalli and terra-cotta (rarely stone) figurines which have been discovered in large numbers in the pre-historic sites of the Indus valley and which were most presumably used as so many cult objects. We do not know by what terms the early dwellers in this region denoted them. Their script has not been read as yet. We can presume that gradually the beliefs and practices of these people transformed to a great extent those of the people who were to them the newcomers to India. In the type of Brahmanical Hinduism which developed in the later stage of the Vedic culture, images of gods came to be accepted, perhaps

on sufferance at first, but allowed prominence subsequently. The Ṣaḍviṁśa Brāhmaṇa is a comparatively late addition to the Tāṇḍya or Pañcaviṁśa Mahābrāhmaṇa, one of the oldest Brāhmaṇas. In that part of the former which is known as 'Adbhūta Brāhmaṇa', really a Vedāṅga text dealing with miracles and omens, we find reference to the performance of certain rites for removing the evil effects of certain omens such as the trembling of the temples, the laughing, weeping, dancing, splitting, perspiring, the opening and closing of the divine images ('devāyatanaṁ kampante daiva pratimā hasanti rudanti nṛtyanti sphuṭanti svidyantyunmīlanti nimīlanti ; Ṣaḍviṁśa Brāhmaṇa, X, 5). This passage presupposes the partial recognition of the practice of the worship of images. In the various Gṛhya Sūtras, Pāraskara, Khādira, Āśvalāyana, etc. dealing with the rites which are to be performed by the householder of the twice-born class, images of the gods are recognised and are given the position of the gods themselves. Thus, in Pāraskara Gṛhya Sūtra (iii. 14, 8) the student (a 'snātaka') is enjoined, if riding on his chariot in the vicinity of temples (devagṛha) to descend from his chariot and after paying respects to the gods enshrined in them by circumambulation and such other acts to proceed to his business. Shrines of some particular divinities like Aparājita, Apratihata, Jayanta, Vaijayanta, Śiva, Vaiśravaṇa, Aśvina and the goddess Madirā were enjoined to be erected in particular sections of the royal fortresses by Kauṭilya in his Arthaśāstra (ch. 65). Patañjali's reference to the images of Śiva, Skanda and Viśākha for purposes of worship (sampratipūjārtha) is also significant and the very fact that the Mauryas thought of making money out of the trade in images shows that the demand was considerable and the practice of image worship had come to play its part in the life of the Indians of this period. A very great importance is assigned to the images of the gods in Manu Smṛti and there are various passages in the work which lay down that 'daivatam' (images of gods) are to be circumambulated (iv, 139), that one should not voluntarily step over the shadow of the gods (iv, 130) ; at the 'parvans' one should go to the images of the gods for protection (iv, 153), etc. A fact worth noticing here is that in the divinities whose images are explicitly referred to in the few passages mentioned above, we very seldom recognise the names of the orthodox Vedic divinities. From this period onwards the practice of image worship is regarded as one of the necessary concomitants of the various religious systems

that came to be developed. This composite Hinduism cast its appeal wide and we find a Greek who was a convert to Bhāgavatism erecting a votive column (Garuḍadhvaja) in honour of Devadeva Vāsudeva, in front of a Vāsudeva-Viṣṇu shrine at Besnagar and a Kuṣāṇa king who was a convert to Śaivism using invariably the figure of his god of choice viz. Śiva or his emblem as the reverse device on his coins. The imperial Guptas who were adherents of Vāsudeva-Viṣṇu, were worshippers of images of these gods but also did not fail to perform certain Vedic sacrifices.

The visible symbols for the various personal gods to whom their exclusive worshippers rendered homage served the same purpose as was served by Fire (Agni) in the Vedic ritualism. Fire was specially sacred to the Vedic priests, because it was the carrier of the oblations of the sacrificers to the respective Vedic gods ; in the case of a devotee, the image or icon or any such visible symbol of his deity was the medium through which he could transfer his homage to his deity.

It is of special significance that the early literary, epigraphic and extant monumental data refer to the images mostly of the intermediate divinities (the Vyantara devatās), the folk gods and goddesses who had very little or no place in the orthodox Vedic sacrificial ritualism. The early Buddhist monuments like Bharhut and Sanchi prove that when the higher god was not represented in an iconic form, these folk gods and goddesses were iconically represented. As most or all of them came gradually to be incorporated in the ever expanding Brahmanic pantheon, associated with and absorbed into particular cults, those cult objects also came to be iconically represented.

INDIAN TERRA-COTTAS

by ST. KRAMRISCH

Ageless types and timed variations

The chronology of Indian terra-cottas has given rise to much speculation and several conclusions have been drawn from the existence of the various types[1]. 'Primitive' types have been assigned an early and sometimes a pre-historic date[2]. The 'primitive types' however are as frequent at Mohenjo-daro in the third millennium B. C. as they are in the Ganges valley, etc., from the Śuṅga to the Gupta period, (Pl. VII, Figs. 1—10) i. e. roughly, before and during the first half of the first millennium A. D. and their number is not less today, made as they are by the potters and women in the villages of Bengal, Bihar, etc. Altogether, it is not here a question of any temporal conditions. It is a question not of sequence but of principle. The principle involved is that of ageless types and timed variations. The timeless types persist, essentially changeless; the timed variations result from impresses which the passing moment leaves on them (Pls. VIII, IX).

The two types occur side by side on the various levels of the different excavations. Today also the two types continue to be made,

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1. Cf. C. C. Das Gupta, Bibliography of ancient Indian terra-cotta figurines, JRASB Vol. IV. 1938, pp. 67—120.

2. The error of assigning an early date to certain supposedly archaic types is based on finds in excavations in India (Mohenjo-daro, Harappa, etc.) and outside India, in Kish, Susa and Assur, Tall Asmar, Jemdet Nasr in Mesopotamia; in Anau, Turkestan; Alishar (Anatolia), Troy, Adalia and other sites in Asia Minor, on early Cycladic and Cretan works, etc., to name only a few early occurrences. The nearest likenesses of the 'primitive types' are within Cycladic work in marble and in terra-cotta, also in Crete, under Mycenean rule where geometrical volumes and rounded lines are charged with similar rhythms. This refers to human figures, and to some female shapes from Buxar especially (see p. 94) but also to twentieth century terra-cottas from Bengal, etc., whereas the figures of animals, i.e., horses in the main, have more than one trait in common with those from Cyprus (8th—6th century B. C.).

the one as 'primitive' as ever, the other with all the attributes of style and local adaptations.

If an analogy of these two types of artefacts is sought within the more impressive range of 'works' in stone, the changing spectacle of the temples and their images ranges on the one side, the innumerable and changeless lingas and Śālagrāma stones (ammonites) on the other. The recorded kinds of lingas have not undergone any essential change; today as ever the emblem of Śiva is understood in its implications, and it depends on the extent to which the devotee is qualified to realise some, or all of them. The same is true about the Śālagrāma stone, emblem of Viṣṇu. The perfection of its form is not due to the work of man. Such as it is, it is shaped by nature.

These observations compel us to view afresh the field of objects of Indian art and cult. There are the ageless types and their timed variations. The latter have hitherto attracted all the attention. The former, if less spectacular and of little interest to an observer of form, are neither less in number nor in importance to the people who make and use them; their unchanging appearance is the work of man or of nature.

The makers then of these objects are : nature, and human beings, and among the latter, trained craftsmen who were efficient in work in stone and terra-cotta. To them are due the many varieties of images and figures fashioned in stone or clay. The village potters make the pots which are in daily use and also those in which dwell the gods ; they also make some of their images and the toys. The latter are also made by the women for use in their own household.

The Śālagrāma stone, a black, ovoid or cylindrical shape as emblem and seat of Viṣṇu is conclusively perfected in its natural form as are all the other emblems of nature, the Tulsi plant, the holy basil, (ocymum basilicum) or Bodhi trees of any species. In them the stuff they are made of and its shape are accepted as they are, as perfect. No other activity is necessary on the side of man, than his entering into a relation with them which makes them effective receptacles of spiritual influences. This is done by rites of consecration. The Śālagrāma stone in its wholeness round like an egg, becomes a sacred object. The stone however needs to be shaped by man, if taken as a fragment of the natural completeness of the hill where it had been quarried, so as to regain wholeness in his hands

and by his art. Definite rules are laid down for this purpose so that intrinsic wholeness is established in the artefact by proportionate measurement. Only the craftsman trained in accordance with established tradition can transform the stone. The quality of the work is a conditional expression of the essence which dwells in and altogether fills the form. If the same craftsman also works in clay he transforms it as well, although the technique is another one according to the exigencies of the material. The latter, in the main, demands no tools for its being worked ; it is fashioned directly by the hands ; it retains its nature in the process. Clay is the essentially plastic and passive, i. e. least resisting, material. It is a kind of earth. Earth, Sanskrit : 'bhū' is substance, the substance of all becoming, the matrix of things to be ; it is shapeless itself and undifferentiated.

Earth

In the process of becoming an "artefact", i. e. in the conception by the craftsman, its parts are meted out according to proportionate measurement ; differentiation of form[1] sets in, differentiation from the undifferentiated initial stage. Earth or clay is the primeval plastic material, the concrete correspondence of "prakṛti", universal substance. That is its nature. In the hands of the person who works it, it becomes commuted into such symbols as are founded on the nature itself of the earth. Images of the "Great Mother" under one name or another are in the majority among the timeless clay symbols found in all the sites, and still made by the women and potters in the villages. Earth, the great mother is frequently beheld under her aspect as Ṣaṣṭhī[2] and her clay figures are made without cease. Her other names are : Aditi[3], Śrī[4], Sinīvāli[5] ; the Vedas and Brāhmaṇas word her power which is sustaining, supporting, the great womb of all and their container.

Mahāmāi, the Great Mother, is known to all ; the barest allusion to

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1. i. e., rūpa-bheda, the first, of the six limbs of art (citra, i.e. sculpture and painting) as enumerated in Yaśodhara's commentary to the Kāmasūtra. 'Proportionate measurement' is the second limb.

2. On the sixth day of the birth of a child, the Goddess Ṣaṣṭhī (the 'sixth' part of Prakṛti) is invoked and set up as an image, to remove calamities, and grant health and long life to child and parents. On the 6th night the Vidhātā Puruṣa writes the future of the child on forehead.

3. Taittirīya B. I. 7. 6. 7, Śatapatha B. 2. 2. 1. 19.

4. Aitareya B. 8. 5.

5. Yajur V. XI. 56.

her feminine appearance suffices and may as well be omitted altogether. Her original shrine is an earthen platform with seven knobs of coloured clay at the head.[1] In this instance the knobs carry their meaning in their shape which is that of the sphere, the comprehensive shape of 'fulness'. It is for their shape also that clods of earth are given as offerings to certain other symbols, to a small mount for instance, erected by the roadside in honour of Dhelhā or Dhelwā Gosāin or Pir, the "Saint of clods".[2] Every passer-by offers such a clod. Every man can shape it. The material easily acquires roundness in the hand of every man and its symbolism is founded on its nature.

A more specialised kind of 'everyman' is the village potter, he makes also the timeless symbols in clay. And it is in the nature of the "earth" itself, that women, even if not particularly trained in the craft, should make of it figures which carry an ageless and traditional meaning and which need not change their shape to be properly understood and used by the going and coming generations.

All this applies to toys and images. There is no considerable, if any, difference between the ageless types of figures, human or animal by suggestion, whether they are to be worshipped or played with. The function of the timeless figure is not in itself determined. It becomes so by the relation established with the person who uses it. The meaning of these objects themselves does not change. They are toys to the child and, once they are consecrated, images to the worshipper. By his virtue he then comes up to the total which they symbolise ; the child, in its own world, has a similar relation to them. To the Indian child and to the grown-up people in the villages and at all times in Indian tradition, the same things are real, to each according to his power of understanding. There are no 'fairy tales for children', and there is no sacred preserve in an otherwise profane world. The ritual of life is binding on everyone from birth to death, and links him with the whole, of which his human presence is an emblem. The earth is another. It is one of the eight forms of Śiva ; in the Śāstras it is prescribed to ask forgiveness before planting the foot on

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1. W. Crooke, Religion and Folklore in Northern India, p. 28.
2. J. A. S. B. N. S. XXX, 1934, p. 20, S. C. Mitra, On a curious cult of Orissa.

1 2 3 4 5 6

7 8 9 10 11

12 13 14 15

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the earth after getting up from bed at day break[1]. The touch of the hand is not in need of this rite. It performs its own rite in accordance with tradition when following an implicitly understood and, in this respect spontaneous, practice.

The timeless types are made by hand ; no mould intervenes between the clay and the maker. They comprise human and animal figures and also chariots ; no vegetation forms occur in the ancient sites nor are they made today. The unchanging principle according to which the figures are fashioned reduces the existence of their prototypes to a distribution of simple volumes corresponding to the bulk of body, head and limbs. By rounding off or flattening, by drawing into points and pinching, by incising lines and affixing pellets (Pl. VII. Figs. 1-10, 12) the clay is shaped : by the pressure of the hand and such resistance as the substance of the clay offers, its weight yields to the touch. The absence of limbs, arms or legs, or the fact that they are made as short conical stumps, shows these figurines in the process of acquiring distinct form ; they are stages toward 'rūpa-bheda', differentiation of form[2].

The figurines (Pl. VII. Figs. 1-3) from Buxar, Patna and Taxila respectively, are some of the possibilities within one type, 'star-shaped', with or without arm or leg stumps, more or less drawn out, the entire volume more or less flattened[3]. Pl. VII. Figs. 4-6 from Pāṭaliputra are more

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1. Man in India, 1930, P. N. Bhattacharjee, Folk-custom and Folklore of the Sylhet District, p. 118.

2. This ontology of form may be compared with the description of Agni, when 'first born in his ground' and referred to as 'footless and headless, hiding both his ends' RV. IV. 1. 11-12 ; Coomaraswamy, Angel and Titan, J. A. O. S. Vol. 55. p. 411.

3. Star shaped figurines like the one from Buxar (Pl. VII. Fig. 1) are always roughly modelled by hand, flattened on back and front with four points marking the end of "arms" and "legs" and the whole topped by a rounded outline which terminates the head. The face is pinched so that the nose ridge results. The Buxar figurine is purest in type, the one from Patna (Pl. VII, Fig. 2) has lost (or was made without) the arms, which, to judge from the legs, must have been more differentiated, as is also the face with holes for the eyes.

Baskets full of such 'star shaped' figurines have been collected in Kauśāmbī and Bhita and are now in the Municipal Museum, Allahabad.

This type may still be further articulate (Pl. VII, Fig. 3 ; from Taxila) and the arm-stumps bent forward, the eyes modelled, etc. Related to this type are also the bodies of a whole group of male figurines from Mathurā, for inst. Coomaraswamy, Archaic Indian Terra-cottas, IPEK 1928, Fig. 33 ; Takacs, Pl. XIX, Fig. 6, JISOA, Vol. V, 1937.

smooth and flat with lines and ringlets incised ; they have animal snouts and horns or spade-like protuberances of the head ; these indicate their non-human significance ; whereas Figs. 1-3 may suggest the children, under the protection of Şaşṭhī ; they are modelled today clinging to the ample expanses of her fictile images. The spade-shaped head (Fig. 4) does not only belong to these figurines (Fig. 4) ; it is frequent with female types, from Mohenjo-daro (Fig. 7) and Kauśāmbī (Fig. 9) for example. The importance of the head shape and of the headdress, amplified and detailed in the time-bound varieties of female figurines and plaques, will be dealt with further on.

Pl. VII. Fig. 8 from Pāṭaliputra, shows the technique of affixed pellets which had been current in the 'Harappa culture' type (Fig. 7) and it has also the slim body without that the waist or the hips are especially emphasized. The majority of the female terra-cotta types outside the 'Harappa culture' combine the notions of potential motherhood and thin waisted elegance and this is shown by the over-statements in clay, such as Pl. VII. Fig. 10 and also by a lead plaque (Fig. 11) both from Pāṭaliputra. The latter presents not only the navel which has creative significance and the 'mekhalā' but it has also a large, raised crescent which marks with lunar symbolism the place of formation of individual existence'.

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1. There are more varieties of traditional types amongst the female figurines. Of the standing figurines found in the Ganges valley none is shown with a child, while the seated figurines clasp a child's figure, separately modelled against the breast. Amongst the standing figurines, types range from that of Pl. VII. Fig. 8 (from Bulandibagh) to that of Pl. VII. Fig. 10 (from Patna). The former is of dark grey terra-cotta and has a rectangular torso and separate pellets are affixed for the dog-collar and the broad girdle which covers the hips with its double row of ornaments. The pointed breasts too are separately modelled and affixed. In shape, this figurine is akin to many from Mohenjo-daro ; these differ also with their diminutive and band like skirts from such types as Pl. VII. Fig. 10. There are few exaggeratedly female figurines in Mohenjo-daro, (Mackay, Further Excavations, etc. Pl. LXXV 5). The Pāṭaliputra fragment (Pl. VII. Fig. 10) has the shape of a tuning fork with the excessive narrowness of waist, bulging hips and leg cones held apart, the abdomen flattened and with a double ringlet for the navel.

Figurines of the seated variety are preserved in especially large numbers in Buxar and Pāṭaliputra. There are two varieties, one a timeless type ; the other with time-bound traits (Cf. Journal, Bombay Histor. Society III, Fig. 6, Buxar Terra-cottas, "Series B.") The 'ageless type" is seated on a two legged stool, i.e. a flat shape making an arch. Her own legs and arms are bent cylindrical shapes ; the body, an upright cylinder with a neck of equal width, supports the head. Cylindrical breasts are modelled along with it and the child's figure, where present, is another volume added to the balanced coordination of geometrical shapes. The face here is broad and flat, with a partly pinched and partly modelled nose, a small line indicates the mouth and large lozenge shapes the eyes. The hair may or may not be indicated above the high brows, large ears stand up high and

Flat plaques with serpent heads (Pl. VII, Fig. 12)[2] have also the ample hips and thin waist and are distinctly female types. Without arms, and with legs which are barely more than stands for the vase shaped hip region, they are earthen types in which the "taking shape" is at the same time a technical and a conceptual process. It is equivalent with passages in the Ṛg Veda in which the procession of the sun, or that of dawn (uṣas) is worded. "This footless-maid came earliest forth to footed things." (RV. VI. 59, 6). According to Dr. Coomaraswamy "that is as much as to say that she who had been a 'serpent' now assumes an angelic-human form[3]." In current use, the benign and malevolent aspect of the serpent is recognised, for instance in Bundelkhand, as form of Devī, of the mother goddess[4].

Such is the emblem of 'becoming', of the earth, 'bhū', of the procession from darkness to light, and also of Vāc, (voice, word), 'which is this earth'[5]. Vāc and earth are called Sarparājñī, serpent queen in the Śatapatha Brāhmaṇa IV, 6, 9, 16-17. The Sarparājñī hymn (RV. X. 189. 1-3) is also called Mānasa Stotra, mental laud[6].

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have a cup-shaped ear plug (?) impressed with a 'lotus' design. The head in this, and in all the other examples of both the varieties of this type has, as a rule, three double holes, and in a few specimens a different number of holes. They must be present, it seems, to allow a high headdress to be inserted. No single part of this headdress has been preserved and it is possible that it was made of materials other than terra-cotta. The shape of the head varies ; it is dome-shaped or straight and has also in some examples two horn-like hillocks. The Pātaliputra examples of this type have only occasionally lozenge-shaped eyes. Elliptical shapes are the rule there, frequently suggestive in their curves, of the lozenge shape.

Often a greater amount of modelling is introduced, (the lips, especially the lower, the nose with nostrils, the hair which is affixed and incised) and there is a long conical neck. Gone furthest in the dissolution of the surface through modelling, is a face found in Patna (cf. JISOA, Vol. III. Pl. XXX. Fig. 4, where the head has been wrongly identified by Jayaswal). The broad and spatulate head with four double holes sends forth laterally the flat ear-surfaces. They frame a face in which the smile of contentment an 'archaic' smile—that hovers on the modelled variety of Buxar faces—, has deepened and grooved the face. The high cheek-bones are an upper limit to the enormous mould-like depression (cf. stone reliefs from Bharhut) around the mouth with its very heavy lower lip.

2. They are holed across the pointed top so that they can be hung up. Relief plaques of the time-bound varieties are similarly holed.

3. Coomaraswamy, The Darker Side of Dawn, Smithsonian miscellaneous collections, Vol. 94. p. 7.

4. W. Crooke, Religion and Folklore, op. cit. p. 50.

5. Śatapatha Brāhmaṇa IV. 6. 9. 16 ; Vāc turns away from the gods, creeps away along this earth.

6. Coomaraswamy, 1. c. p. 18.....because its verses are "recited mentally" ('manasā stuyante'), hence the name of the well known Bengali snake goddess, Manasā Devī, who is the Earth.

Manasā, the serpent goddess, is worshipped in Bengal anthropo-morphically, shaped as a woman weilding serpents, and emblematically as an earthen vessel, often surrounded and surmounted by serpent shapes which issue from it. She is also worshipped as a branch of her sacred tree, Siju (Euphorbia). 'Manas', the internal sense[1], the mental, is not pure intellect; it is not the ultimate consciousness but is the property of man as thinking being, as individuality; it is discursive and reflective. In order to attain to the ultimate state of pure consciousness, the functioning of the mental, which is a delimiting, through reason and imagination, has to be stabilised and dissolved and finally becomes extinct[2].

Manasā is not herself given serpent shape; in both her modes of being fashioned she holds the serpents, in her hands, or as a vessel. She presides over the ambiguity of the serpent, its beneficial and malign potentiality and is herself free from serpent shape. All that the earthen vessel of Manasā has in common with the female serpent emblems in terra-cotta found in Pāṭaliputra, Buxar, Kauśāmbī, etc. and belonging to the Śuṅga and Kuṣāṇa phases (i. e. about 100 B. C.—100 A. D. and later) is the association of the female with the serpent element. The plaque Pl. VII. Fig. 12 combines the two in one form. The serpent's head is there on the top, and the transition from serpent to human form begins at the bottom, in the rudimentary feet. On it rests the vessel-outlined body, the receptacle in which life is deposited and from which new life comes forth.

Differentiation as a function of the mind (manas), and the goddess Manasā; differentiation of form (rūpa-bedha) as for instance the evolving of a definite shape such as the hip region or vase shape; the serpent, along with the vessel shape of body or cult object: all these are present in the making of these earthen forms. The material itself, earth, contributes its own fictile nature to the total symbolism.

The serpent as a form of the power of darkness, of the unmanifested, stands for primordial unity; Manasā effects its adjustment to the human

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1. According to Sāmkhya; the other ten senses are external, five of sensation (buddhīndriya) and five of action (karmendriya).

2. In the Manasā Maṅgal by Vijaya Gupta (quoted by D. C. Sen, Bengali Language and Literature, p. 282) the merchant king Cānd Sadāgar, a devotee of Śiva, possesses 'mahājñāna', the "Great Knowledge" intellectual intuition. He foils the plots of Manasā. But when he falls in love with her, he dispenses with 'mahājñāna' and he bestows it on her. Beheld from the level of intellectual illumination, Manasā is seen in her malign aspect.

level. This is a narrowing down and an application of its power, to the world of man.

Physiognomy and costume

The deity in the darkness, unmanifested, is conceived of in theriomorphic shapes[1]. The figurines (Pl. VII, 4-6) have animal snouts. Physiognomy has to be understood from here in a wider sense than is customary. The "physis", i. e. the "becoming" is here seen ontologically with reference to the state—the unmanifested—from where the traits originate in the otherwise 'human' appearance. The head or skull is given special importance. It is drawn out into horn shapes. These are disguised in the time-bound varieties of terra-cottas, as headdress for instance in the Buxar types[2], and also from Kauśāmbī[3], and Basarh (Pl. VIII. Figs. 1, 2) and from Pāṭaliputra (Pl. IX, Fig. 5) where bicornate or unicorn arrangements are most elaborate on the female types, whereas turbans or their rudiments are employed in a similar way on the head of male figures, from Pāṭaliputra (Pl. VII. Figs. 13, 14) and Mathurā[4] (Pl. VIII. Fig. 12).

The head is the seat of the higher possibilities of the human being. If endowed with the non-physical mount of the Uṣṇīṣa[5], this is situated at a place where according to Indian tradition the human state is left and the more-than-human state is entered, at the moment of physical extinction or of spiritual illumination. It is one of the main signs on the Buddha image and visible when no crown is added. A capacious forehead and skull also distinguish the head of a Buddha, but they are equally conspicuous on the innumerable terra-cottas, of which a few are illustrated here (female figurines, Pl. IX). The wide dome of the skull in these figurines and plaques frequently bulges out with lateral bumps, where no "horns" are added. The bumps may be considered a lesser variety of the horns and reduced to the possibilities of anthropomorphic appearance (Pl. IX, Fig. 1). In order to achieve a special shape of the

1. Coomaraswamy, l. c. p. 2.

2. The Buxar figurines are reproduced by Banerji-Sastri under the title "Remains of a prehistoric civilisation in the Gangetic valley" Journal Bombay Hist. Soc. III, p. 187 ff; in the K. B. Pathak commemoration volume, 1934, p. 248 ff.

3. Cf. Annual Bibliography of Indian Archaeology, Vol. XII, Pl. V.

4. Agrawala, Mathura Terra-cottas, (reprint) Pl. VII, Fig. 23, etc.

5. Kramrisch, Emblems of the Universal Being, JISOA Vol. III. p. 149.

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head, the skull of the infant is artificially moulded in actual practice, for instance in Midnapore, Bengal[1]. The crowns (mukuṭa) carved without exception on all Hindu images encompass such transformed heads. The contents which, while still within the head reach up to the more-than-human levels, shine forth as luminous ray or flame[2] and are visible outside the compass of the skull, also as horns. While still within the head they dilate it into cranial bumps and protuberances. The horns in their theriomorphic implications are the highest residues of the dark 'ab intra' aspect which otherwise (Pl. VII, Figs. 4-6) also shapes the face of some of these types ; at the same time the horns shine forth from the head alike to the rays of sun and moon.

The veil (Pl. IX, Fig. 5 ; from Pāṭaliputra) covers a broad and high conical shape ; its central point has the height of the headdress worn to this day by Banjāra women[3]. The stick put on the apex of the Banjāra woman's head is called "singh" i. e. horn.[4]. It is given to the woman at marriage. The hair is wound around it and a head cloth is wrapped over it.[5]. This 'unicorn' variety of the headdress is also favoured by the royal ladies of the Ye-tha country and by the women of Hi-mo-ta-lo[6].

The Vedic headdress "opaśa" might belong to this class[7]. The bicornate headdress is still worn in different ways in Kafiristan and also by other tribes in the Hindukush[8]. Terra-cotta figurines and plaques have it either symmetrical[9], or else with a larger shape or 'pouch' on the left. The turbans worn by male types have also the left side more developed, or

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1. Man in India, 1922, p. 228.

2. Kramrisch, Emblems, l. c. p. 153 ; the sun is 'maṇiśṛṅga' (jewel-horned), Harivaṃśa, 12, 367.

3. W. Crooke, The headdress of Banjāra women, JBORS, Vol. IV. pp. 247-256.

4. Cf. Ṛṣya Śṛṅga (JISOA, Vol. IV, Pl. XI). The horn in these instances implies procreative power.

5. Re. other varieties of conical or triangular headdress of women, cf. Figurines from Buxar.

6. S. Beal, Si-yu-ki, Buddhist records of the Western world i, Introd., cf. also corresponding medieval European headwear of women.

7. Sāyaṇa explains 'opaśa' as 'ā-upa-śī', to rest against, and interprets RV. I. 173 6 Indra's Opaśa as horn. Cf. Vedic Index II 313, 'viṣāṇin' i. e. having horns. a tribe mentioned in RV.

8. References given by Crooke, J B O R S, l. c. p. 251.

9. Coomaraswamy, IPEK Fig. 14 ; Banerji-Sastri, Remains of a Prehistoric Civilisation in the Gangetic valley, K. B. Pathak commemoration volume 1934 plate facing p. 251.

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the 'horn' or 'turban' is altogether confined to the left side of the skull (Pl. VII. Figs. 13, 14, from Pāṭaliputra).

Strands of hair, ribbons and ornamented plaques make up the enormous pouches or 'wings' into which the bicornate headwear bulges in a number of varieties which, each in its own way, belongs to a particular find-place. Apart from the many specimens of varied type from Pāṭaliputra and Buxar, the most explicit headdress is moulded on a plaque, now in the Indian Institute, Oxford and which must have come from (Tamluk) Kauśāmbī.[1] On the right and lesser of the two pouches of her head-dress, and along its edge are shown five devices ; each of them differs from the others and is placed on top of an 'amalaka' shaped knob. It appears as if these devices were pin-heads, stuck into the beaded and ornamented hair. Five corresponding devices similarly are shown, on the left of the other and lesser fragment from Kauśāmbī. Some of the devices are similar to those current on silver punch marked coins[2] ; they are (1) 'aṅkuśa' (2) a kind of 'triśūla' capped by a horizontal device (3) an arrow-head ; the arrow issues from a vertical pole (4) a 'triśūla' similar to 2, but capped by a triangular device (5) a blade-like device. Each of these symbols has a row of beads on top, and such bead chains are profusely laid also on the head[3], and elsewhere. They are "bindu maṇḍala's", garlands of dots. "By knowing the undiminishing 'bindu maṇḍala'. the

1. Annual Bibliography of Indian Archaeology XII. Pl. V ; a similar although coarser plaque (head portion only preserved) has been excavated recently in Kauśāmbī and is now in the Indian Museum, Calcutta. Prof. Johnston in the Report for the year 1938—39 (Curators of the Indian Institute) assigns the former to about 200 B. C.

2. Durga Prashad, ' Classification and significance of the symbols on the silver punch marked coins of Ancient India," J. A. S. B. Vol. XXX, 1934. The following correspondences of the five devices (from below upwards) are :

(1) Aṅkuśa ; cf. Durga Prashad, Pl. 24. Fig. 236 ; Pl. 31. Coin 21. Symbol. 7.

(2) and (4), The main symbol is identical, it is a kind of 'triśūla' ; it is topped by a different device in each case, i.e. 2) by a comb-like device 'pañca vāṇa, (?) cf. Durga Prashad Pl. 27, Fig. 97 ; from Mohenjo-daro ; (also Pl. 28, symbol 4, etc) ; Pl. 24, 179, Pl. 4, Nrs. 44, 46 ; Pl. 23, 108.

(4) by a triangular (arrow-head) device, cf. l.c. Pl. 28, symbol 30 (from Mohenjo-daro), Pl. 24, Fig. 183.

(3) Arrow-head like device ; it issues horizontally from an upright staff ; cf. l.c. Pl. 26. Fig. 2a ; Pls. 13, etc. symbol 2 ; arrow-heads may be an analogy of the rays of the sun. On the lesser Kauśāmbī terra-cotta plaque, symbol (1)=1 of the Oxford plaque, the Aṅkuśa being rectilinear instead of curvilinear ; (2)=3 ; symbols 3-5 are indistict, and appear to belong to the type of symbols 2 and 4 on the Oxford plaque.

3. They frame the forehead of the female faces at Buxar, Mathurā, etc.

performer attains salvation, the eternal peace[1]". Even if the full signi-
ficance of the Bindu, the 'dot', was not present to the makers and users
of this and other plaques, some of its implied meaning was beheld in
connection with that of the other symbols.

The symbols are worn as crests on one pouch like "horn" of the
headdress, of a female figure of lavish beauty and apparel. Such crests are
called "cūḍa." Śiva who wears the moon on his Jaṭāmukuṭa, in his braided
hair, is called Candracūḍa (moon-crested)[3]. The crescent moon is Śiva's
share of the products churned from the ocean[4]. The meanings of 'cūḍa'
are : protuberance, crest, tuft of hair. The Cūḍāmaṇi is a jewel worn on
the crest of the head ; the Cūḷāmaṇi-cetiya in the heaven of the 33 gods
houses the jewel-crested turban which the Buddha cast into the air[5].

Pañcacūḍā, i. e, having five crests, is an Apsaras produced at the
churning of the ocean[6]. The gods churn the drink of immortality as
'quintessence' from the milky sap of the world ocean. They also churn
the Pārijāta tree which satisfies all desires, the cup of the moon, the lotus,
and others. The Apsaras Rambhā, who is called Pañcacūḍā is also one
of these wish fulfilling embodiments[7]. On her head she wears five
symbols of auspicious meaning[8]. That they are five in number agrees
with the general significance of the number five, which is the number
of vegetation (flowers have mostly five petals), the symbol of earthly life,
the number of Aphrodite ; its emblem is the pentagon, 'pañcakoṇa' ; it
kills all sins. Should the 'Pañcacūḍā' of the two Kauśāmbī plaques enable

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1. Durga Prashad, l.c. p. 18, from Kālīvilāsa Tantra, Ch. XXV, Śl. 27-29.
2. Re. the 'bindu', cf. "Ein Punkt der in den Zirkel geht
      Der im Quadrat und Dreyangel steht,
      Kennst Du den Punkt, so ist es gut,
      Kennst Du ihn nicht, so ist's umbsonst"
This German medieval quatrain applies to the 'bindu' in every Yantra.
3. Rāmāyaṇa V. 11.
4. The moon is beheld as a white bull radiant with a pointed, full horn ; Rāmāyaṇa V. 20, cf.
"cornucopia". The various symbols lie close together in meaning, shape and position.
5. Coomaraswamy, The Buddha's cūḍā, etc., J. R. A. S. 1928 Pl. IV. Figs. 2, 3; id., Uṣṇīṣa and
Chatra, The Poona Orientalist, III, p. 2.
6. Mahābhārata 13, 3, 11,=191 ; 13, 38, 2=2203 ; Holtzmann, Die Apsaras nach dem Mahābhārata,
ZDMG Vol. 33, p. 637 renders "pañcacūḍa" as "with five tresses".
7. M. Bh. 13, 38, 2 calls her Puṃścalī (meretrix).
8. Kālīvilāsa Tantra, ch. 33, śl. 13.

us to identify the female figure wearing them, as the Apsaras Pañcacūḍā, many similar figurines and plaques could be taken to be Apsarases, and especially the alluring, time-bound varieties.

Conveyance

Before a survey of the timed variations is made, the ageless types of animal figurines will be considered. They are moulded by hand, and reduce the proportions of the respective animal species to those of cylinders, cones and like geometrical shapes representing their bodies and limbs. The same animals, elephants, horses, etc., are also moulded, subject to the variations of style at the different sites and at different periods (Pl. VIII, Figs. 4, 5). The supernatural animals, the griffins (Pl. VIII, Fig. 3 ; cf. Sanchi, W. gate, S. pillar) are moulded according to the style of the timed varieties. A more explicit description is required to make them recognisable, thên lies within the scope of the timeless types. In general, the timed varieties are moulded, the ageless types are modelled by hand in large numbers. The single figurines in themselves did matter but little and they could always be replaced. They may not always have been baked, and dissolved into the earth of which they were made.

The main terra-cotta animals are: horse, elephant and ram ; and other quadrupeds such as the humped bull, the monkey, in Mathurā specially, dog, etc. ; furthermore birds, lizard and frog, fish and Makara. There are chariots with bulls, and rams used as 'tricycles'. Horses and elephants, or the spirits of these animals[1], are the vehicles of the spirits, in the villages in India today. In life, the human body is the conveyance. Clay figures of horses and elephants are offered for instance to Ghanaśyāma, one of the chief deities of the Gonds and allied tribes. He was killed by a tiger, soon after his wedding. Brahmans who have died a violent death and whose spirits are specially powerful are being presented with clay figurines of the same animals which are placed under a Banyan tree[2].

The south (dakṣiṇā) is the region of Yama (death). The Dakṣiṇāyana, the southern passage of the sun[3], is the Pitṛyana. Along

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1. Man in India 1922 p. 228. re. Midnapur, Bengal.
2. Crooke, l.c. pp. 99, 199.
3. Re. Uttarāyaṇa and Dakṣiṇāyana, see. B. G. Tilak, The Arctic Home in the Vedas, p. 67 and passim.

it move the ancestors, the Pitṛs, on the way of transmigration. Yama, the Pitṛpati (lord of the manes) and Pretarāja (king of the ghosts) is the son of the sun. Horses draw the chariot of the sun. The terra-cotta horses are the vāhanas of the Pitṛs, who are lorded over by Yama, son of the sun ; doubly the horses are related to the sun, in its southern course. The sun sinks into the nether world and rises from the lap of death in the east. The elephant, vāhana of Indra, the recoverer of light, is the guardian of the east.

Elephants, richly caparisoned, and horses are in the nightly procession of the Vetāla (by whom a dead body hanging from a tree is possessed) in the Vetālapañcaviṃśati. The terra-cotta horses and elephants are often caparisoned and especially the elephants are decked out more or less lavishly. On a fragment of an elephant figurine (light grey t. c. with black slip, Śuṅga date) found at Kauśāmbī (Kosam) (Pl. VII, Fig. 16) a rug is impressed vertically with alternating rows of circular devices consisting of radial lines around a circle around a dot[1], and a not quite distinct figure[2] ; along its two edges, five ovals hold each a figure with inflated body and a long thin snout. These are figures of Pretas, of the ghosts of the dead. During the year between death and the final judgment of Yama, these feeble creatures suffer from thirst ; their body is inflated and they have a pointed snout with a pin prick opening too small to quench its thirst[3]. A Preta cannot touch the ground. They are carried on elephants and horses, offered to them.

The other animals, are all vāhanas of the gods, or differently associated with them, as for instance the dove, the messenger of Yama, the god of death. The Makara, vehicle of Varuṇa and Gaṅgā, the elephant as vāhana of Indra, the horses of the sun, all are symbolic conveyances ; their multiple meaning is inter-connected. Every single animal figurine 'conveyed' one or the other aspect. Such a conveyance is not only the animal but also the chariot and cart[4].

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1. Cf. Durga Prashad, l.c., Pl. 22, 16-25 (Paramābīja mudrā) p. 20, the emblem ef 'astravidyā', the science of arms and warfare.

2. l. c. Pl. 23. Fig. 140 ; Pl. 25, 109 ; Pl. 26, Fig. 53. considered to be an insect (?), p. 46.

3. Cf. Sūcīmukha, in medieval stone carvings from Bihar, for inst. Kramrisch, Pāla and Sena sculpture, 1929, Fig. 46.

4. The symbolism of the wheel, hub, axle (RV. X. 89. 4) and body of the chariot is the subject of many texts.

The chariots from Kauśāmbī have a front wall on which are two or four bullocks or bulls in relief ;

As vehicle in either sense the ram is used and there are two leading types of the so-called "tricycle toys"[5], one from Kauśāmbī, the other from Basarh. The ram is the vāhana of fire, Agni ; its name 'aja' (agent) means 'pushing, drawing, moving'. All this it does partly with its horns as far as animal, and partly with its shape and use as 'tricycle' which is holed so that wheels are easily attached to it.

On the ageless types, the passing generations have sometimes left their impress, not altogether with the definition of the timed varieties and yet sufficient to date them (Pl. VII, Figs. 13-15)[6]. The multiple uses to which the ageless types lend themselves offer permanent opportunities for as many applications as there are epochs, localities, and persons trained according to the tradition of their craft.

Timed Variations
1) Date and technique

Some of the small terra-cotta figurines and plaques have been found in sanctuaries (Maniyār Maṭha, Rājgir), others within or near buildings of which the foundation walls do not reveal their religious or domestic character. What matters most is that they were found in large numbers in the many buildings of the ancient towns, where they must have been in use. That the traditional types and the time-bound varieties occur by the side of one another has nothing surprising when it is known that also today the timeless types,—female figurines for instance, with a solid cone as the body and which affords a relatively large circle to stand on. with pinched faces, pellets affixed for the eyes and no mouth marked— can be found in the same household where Rādhā-Kṛṣṇa figurines of a banal prettiness have their effect on the same people.

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the carts are open in front and have raised sides, against which the members of a so-called "pleasure-party" recline. Cf. Kramrisch, Madhupāna scenes, JISOA. Vol. VI. p. 197 ; The subjects of the large stone carvings dealt with there, and the occupants of the terra-cotta carts have the same aim. They are shown in various stages of 'pilgrimage' and engaged in 'rites' which are also continued while on pilgrimage. These carts and their passengers are "timed" and follow, in their appearance and execution, the style of their period.

5. In Kauśāmbī the body and head of the ram are shaped into a massive and fleecy lump ; the Vaiśālī (Basarh) type is articulate and elegant with a smooth surface of head and body impressed with flowers and leaves.

6. The insertion of time-bound traits into ageless types has varied results. Pl. VII. Fig. 14 (from Patna), a light gray, very hard terra-cotta with traces of black slip has a flat top knot on the left, similar to that of the vase-bodied male figurine, found at the same spot (cf. Jayaswal, Terra-cottas dug out in Patna. JISOA, Vol. III Pl. XXXII 2-3). It appears despite the "primitive appearance" also to belong to the same age. Moreover it is to be compared with terra-cottas found in the Nilagiris (J. W. Breeks, An account of the primitive tribes and monuments of the Nilagiris, Pl. XXXVI). Pl. VII. Fig. 13 (from Bulandibagh) has a larger amount of time-bound traits. The double earrings (spirals), the top knot, etc. assign it as well as Fig. 14 to the first century A. D. approximately, to which date also belongs the vase shaped figurine referred to.—Pl. VII, Fig. 15 is another variety and has a light ochre slip.

Some of the figurines are modelled on a flat plinth or on a hollow pedestal. Others have no such stand and the majority of plaques were made so as to lean against the wall. They seem to have been placed on shelves or in wall recesses whereas not a few plaques of Śuṅga date are holed at the top, for a cord to be threaded across and hung on the wall.

The material of the terra-cottas is clay, carefully washed with an admixture of mica as the main gritty material to avoid cracking when it was fired. From the Kuṣāṇa period onward and in some varieties only, the material is coarse, with a considerable admixture of chopped husk, etc. The majority of Indian terra-cottas are baked to various shades of ochre and red ; the shade depends on the chemical components in the material and also on the heat and the process of firing. If the air has free access during baking the iron which is contained in the clay will be oxidised and this produces the red colour ; if however the combustion is imperfect, the terra-cotta is grey or black. The latter process is also widely practised ; charcoal is kept glowing around an earthen vessel in which the clay object to be burnt is surrounded and covered with husk. In order to intensify the colour of the terra-cotta, a slip, of deeper red colour as a rule is applied to the red figures, while the grey-black figures have a rich black and shiny slip or coat of paint.

Most of the terra-cottas of Mathurā, prior to the Gupta age are grey-black, sometimes with a black slip which however easily comes off. In all the other sites, the majority of the terra-cottas show various reds, with red slip. Light grey terra-cotta objects however have been found also at Patna and Kauśāmbī. Objects of the same age, burnt to a rich black colour come from Patna and Basarh, and dark grey terra-cottas occur sporadically at Buxar, Patna, etc. The light grey ware which is relatively heavy in weight shows in most of the specimens traces of a thick black glaze ; this moreover was daubed on with light ochre colour. This type of decoration (on animal figurines) seems to belong to the late Maurya or Śuṅga age. The thick black glaze occurs also on a few red terra-cottas.

The grey objects must not as a whole, be taken to ante-date the red ones. The ochre and red colours are in the majority from Mohenjo-daro onwards.

There are traces of polychrome colouring on Mohenjo-daro terra-cottas.[1] Some of the Pāṭaliputra figurines may have been coloured ; there is however no distinct trace left. Two fragments from Mathurā, of the Śaka and Kuṣāṇa period, and now in the Patna museum, show remnants of silver and gold respectively with which they were coated, or else the gold was employed in the polychromy of the plaque.

Neither the method of baking nor the technique of the figurines lend support to speculations about the sequence of the terra-cottas. From Mohenjo-daro, etc. on, modelling by hand and also moulds were common. The former process persists in the timeless types.

In certain well-known series from Mathurā and Buxar the timeless type of body is modelled and the face is moulded and dated in all its traits. This may be a technical expedient for in many other cases, modelled heads only are preserved along with a tenon to be inserted into a body made of one or the other material of which no trace exists. It may however also mean that the body retains its timeless significance, whereas the face is 'free' to assume any countenance, or none at all ; it suffices that its position is marked. This paradox is documented by versions of the Gupta plaque with Pṛthvī from Bhita, ASIAR 1911-12, Pl. XXIII, Fig. 40, where the squatting feminine body is headed by a lotus flower instead of a face ; the body itself is of the timed variety.

Moulds are used as a rule for the timed variations. Moulded faces and affixed head-dresses and ornaments are common with all the figurines to which a relatively "early" date may be assigned. The complex and separately affixed devices however give way later on to types completely moulded. Yet even on 'Gupta' heads the ear plaques are sometimes separately affixed. Amongst the later, i. e.

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1. E. Mackay, Further Excavations at Mohenjo-daro p. 260.

Post-Śuṅga variety of terra-cottas, plaques remain in vogue, i. e. only the front is pressed in the mould, the back, as a rule is a plain and flat surface. During the Gupta age a type of plaques, very light in weight and of light ochre is very frequent. From late Śuṅga days the practice of moulding the head only along with a tenon is also maintained. In larger figurines of human and animal shape, the head, as a rule, is massive and the body hollow. It is especially in the Gupta period that such heads are moulded in two parts, front and back separately and joined laterally, whereas there are also attempts of moulding the two halves separately and joining them along the ridge of the nose. None of the shapes (as observed already) into which the head with its tenon meant to be inserted has been recovered as yet.[1] From the Kuṣāṇa age onward, larger heads usually of a coarse material and provided with tenons are frequent. They too are pressed in moulds ; the back makes frequently a curved surface. At the same time also complete figures in the round of relatively large size and representing very frequently Pāñcika and Hāritī are common. Grooves, holes in the pupils and at the corners of the mouth are deepened after moulding.

A number of findplaces have yielded post-Gupta terra-cottas. In Belwa for instance the reduction of 'Gupta' effects to conventional shapes is symptomatic. From our scanty knowledge of later terra-cottas it must not be thought that their production was diminished. The works of earlier centuries were protected underground and brought to light by excavations whereas the figurines offered to the gods and worshipped by subsequent generations were exposed to the passing days and their vicissitudes ; they were broken, and forgotten while fresh ones continued to be made. Large sized heads from the vicinity of Benares, Belwa and Gaya, belonging to different ages have been found recently.

Terra-cotta figurines and plaques are but part of the output in clay modelling. Different types of clay figures are made for definite Pūjās, several times every year and immersed in the rivers immediately afterwards. Temples, etc. such as Mirpur Khas, Bhitargaon, Chausa, Paharpur, etc. of the Gupta and subsequent phases and most of which now are dust, had their surfaces covered with reliefs and figures in terra-cotta and brick. The tradition has been maintained in Bengal till the last century (cf. also the upper stories of S. Indian temples). The terra-cottas hitherto excavated are but a fraction of Indian work in clay ; even so they represent an inventory of contemporary Indian form, more complete than the stone sculptures give. None of the terra-cottas is inscribed and the few inscriptions on stone objects found at some of the sites which have yielded small terra-cottas are not dated. Palaeographically, two refer to the "Mauryan" age, the one on a stone ring excavated in Patna (JISOA, Vol. III, Pl. XXX, 3) at a level of 14′ the other on a fragment from a similar stone disc from Kauśāmbī, in the collection of the Bharata Kalā Pariṣad, Benares. There are also inscribed seals from Buxar, referable to the same age and others from Patna².

Assuming even that in every instance the depth of the find-spot has been accurately recorded, this does not help in any way towards fixing the date of the terra-cottas. In Basarh, Bulandibagh and Kumrahar for example objects definitely of Kuṣāṇa "style" are found at a much lower depth than work which cannot be later than the late Śuṅga period and in several cases is anterior to it.³ Gupta terra-cottas also have been found at the same level with earlier work. There is no such thing as far as terra-cottas are concerned as a "Maurya level", etc. The same moulds may have been in use for some time. Still, few of the objects as yet found are made in the same mould. This incidentally shows

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1. A combination of terra-cotta shapes with other materials is peculiar to bird-figurines which have small holes into which legs made of metal only could have been inserted. This technique however is also represented in Mohenjo-daro (Mackay, op. cit. Pl. LXXV, 5).

2. JBORS, vol. X. pp. 190-192, 194-201 ; Vol. XVII, pp. 410-11.

3. No find-spot or depth are recorded of the terra-cottas from Mathurā, and of those from previous excavations at Kauśāmbī.

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that a very small fraction of the whole output is preserved at most of the sites.[1] Numbers of these small, light and fragile objects, once damaged, may have been thrown away and accumulated in some pit. Earthquakes too, are not infrequent, and account for the confusion underground. Some of the most important groups of terra-cottas, i. e. from Mathurā, Buxar and to some extent also the outstanding figurines from Pāṭaliputra have been assigned dates at variance.[2]

2) Places

Many recent excavations and finds (cf. ASIAR 1935-36, Pls. XXII, Lauriya Nandangarh ; XXXVI), in the North West (Sari-Dheri), from the United Provinces to Bengal, in Central India, in Hyderabad (Maski) have added a widened range to the possibilities within the timed varieties. Their local features are easily discernible. Each site had its own 'manufacture' of the current varieties. These are relatively most distinct in three places, i. e. Patna, Buxar and Mathurā. The plentiful recent finds from Kauśāmbī, Bhita, others from Gaya, Bangarh in Bengal, etc. etc. and also the former finds from Basarh. Saheth Maheth (Śrāvastī), Pawaya (Gwalior) appear as local variations and adaptations of the types known from the three sites mentioned.

PATALIPUTRA

The three sites of Bulandibagh, Kumrahar and the "Patna" excavation are situated within the ancient Pāṭaliputra.[3] An inscribed steatite plaque has been found in the "Patna excavation" with Mauryan' characters. This gives the only hitherto available and more or less definite indication towards a dating of some of the terra-cottas found in "Patna".

Female figures are more numerous than the male, and this refers to the ageless types and to the timed and stylistically differentiated alike. The datable varieties are here assembled according to groups ; a relative chronology is based on them. A standing figurine from Bulandibagh[4] appears to be the earliest amongst the standing figurines the like of which have not been found outside Pāṭaliputra. Made of very fine and hard, grey-buff terra-cotta, the figurine, but for the face, is modelled by hand, in several separate parts (plinth, costume, jewellery, headwear) affixed to the body before firing. There is no considerable affinity between this moulded face and that of the carved and colossal shape of the Didarganj Yakṣī which on grounds of style belongs to the first century B. C. approximately. Physiognomically[5] closely

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1. The "Dampati" couples from the Bhir mound, Taxila, of which a considerable number of replicas are in the Taxila museum and elswhere are among the few exceptions.

2. Cf. Coomaraswamy, Early Indian Terra-cottas, M. F. A. B. pp. 90-96, Boston 1927, and id., Archaic Indian Terra-cottas pp. 64-76, IPEK, Leipzig, 1928 ; Codrington, A note on the pottery of Bhiṭah, p. 136 f. Man, 1929 ; id. Some Indian Terra-cotta figurines p. 141 ff, Indian Antiquary, 1931 ; Banerji-Sastri, Remains of a pre-historic civilisation in the Gangetic valley, pp. 187-191, Journal of the Bombay Historical Society, 1930 ; and id., Remains of a pre-historic civilisation in the Gangetic valley pp. 248-261, Pathak Commemoration Volume 1934 ; Gordon, The problem of Early Indian Terra-cottas, Man, 1935, p. 117 ; Agrawala, Mathurā Terra-cottas, pp. 6-38, pls. I-XIX ; Gordon, Age of Frontier Terra-cottas, IRAQ. pp. 85-88, Pls VI-IX.

3. cf. A.S.I.A.R. 1915-16, Pt. I. p. 14 ff ; 1917-18, Pt. I. p. 27. f. ; 1926-27 Pl. XXXI, and Ann. Rep. A.S. Eastern Circle, 1914-15, p. 45 ff, 1915-16 p. 27 ff ; K.P. Jayaswal, Terra-cottas dug out at Patna, JISOA 1935 p. 125 ff.

4. Kramrisch, Die Indische Kunst, Springer, Vol. VI, p. 241, fig. 246 ; Coomaraswamy, IPEK, l. c., Fig. 51.

5. Coomaraswamy, IPEK, Pl. II, Fig. 14.

related to this figurine is a head of a young girl, but a sharpness of slanting surfaces meeting at angles and a somewhat heavy lower part of the face, relate more to stone carvings from Bharhut for instance this bicornate head than to those of the Maurya phase.

This head is to some extent akin in treatment to carved stone heads from Sarnath[1]. With almost equally 'abstract', i. e. 'post' shaped legs as those of the above mentioned figurines[1] some others show slim and well disciplined bodies with the most delicate touches of modelling on the chest. Skirts of this type of figurines are extravagant with hoops, and a flutter that is telling.[2] Greek terra-cotta figurines —long after the Nike of Paionios—were made in the third century B. C., the skirt forming moulds and flutings with less regularity but more alive with actual movement.[3] The invasion of Pāṭaliputra by Eucratidas, about 175 B. C.[4] may have been instrumental in refreshing the knowledge of Greek art which some of the craftsmen of Pāṭaliputra might have had of types current in Greece, some time ago. This knowledge came to stay.

All the figurines have an excessive width and height of the head with lateral bumps which may be exposed and accentuated even further by the headwear, horns or turban, or hidden away behind its volume. In the later Śuṅga phase the hair is shown cut in steps with a trapezoidal or zigzag outline against the forehead, not noly in Pāṭaliputra but also in the other findplaces of terra-cottas. Another mode of emphasizing the very high head is characteristic of very young boyish figures ; one of them is carried by a large female figure (from Bulandibagh) another is standing (Pl. VIII. Fig. 7 ; top of headdress broken) another young figure (from Patna) is seated in a yogin's 'āsana'. These boyish figures show the 'ūrdhva liṅga', wear some coarsely beaded chains and may be trained in the discipline which leads to yoga ; this lends them their youthful looks and radiant countenance. A similar discipline may be read from the upright carriage of the female figurines.

As in the timeless so also in the timebound varieties of feminine figurines, the youthful type, just on the verge of femininity, and the other, emblematic of potential motherhood, occur. A torso,[5] belongs to the family of the Yakṣī of Didarganj ; in richness of apparel the plaque from Kauśāmbī in the Indian Institute, Oxford, is superior to it.

Figurines modelled by hand and with moulded faces, jewellery and apparel affixed continue to be made in the late Duṅga period, (Pl. IX. Fig. 2), when plaques become more frequent. With a further increase in the heaviness of the face is now combined a weight of pensiveness sunk into its own depth, glanceless, whith eyes closed. The high cheek-bones on which the smile was pegged in the earlier figurines have subsided ; the face droops with heavy cheeks. The lateral bumps of the head are still there (Pl. IX. Fig. 1) although diminished as if by their contents the weight of the face was fed. There are magnificently modelled busts (Pl. IX, Fig. 1) ; tresses affixed on the back are turgidly rounded and different from the thin stalk shapes affixed on the earlier figurines. With the drooping of the countenance the entire form physiognomy of the body in other figurines keeps pace.

In the terra-cottas, nomad fashions on the whole are most conspicuous amongst male types in Mathurā ; in Pāṭaliputra the veil worn over the 'horn' high on the head on a late Śuṅga or Kāṇva plaque (Pl. IX, Fig. 4) is conspicuous. An almost completely preserved plaque (Pl. IX, Fig. 5) shows the entire costume along with a 'hooped' kind of dhoti. The heaviness of the Śuṅga countenance remains, in the once more differentiated modelling which also belongs, together with the open eyed face, to Kuṣāṇa stone sculptures.

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1. Bachhofer, Early Indian Sculpture, Vol. I, Pl. XII. They are possibly of late Maurya date.
2. A. S: I. A. R. 1926-27. l. c., Fig. k.
   The figurines of this type have heavier cheeks and their faces conform with types from Sāñcī.
3. For instance, a Nike from Kyme, etc. ; J. Charbonneaux, Les Terres-Cuites Grècques, No. 62.
4. Tarn, Greeks and Bactrians in India, p. 132.
5. Jayaswal, JISOA, Vol. III, Pl. XXXI.

Certain types persist from the late Maurya to the Gupta age and on the type once laid down, successive generations imprint their own physiognomy. One of the series that can thus be traced is that of the female figurine plaque of which the figurine referred to (p. 106 Footnote 4) is the earliest known example. Not only in Patna (Pl. IX, Fig. 2), but also in Kauśāmbī, post-Śuṅga and Kuṣāṇa versions (Pl. IX, Fig. 3) occur and at the latter site Gupta varieties are fashioned with a high attainment (Municipal Museum, Allahabad). The serial persistence of these types is a parallel—limited in extent —to the traditional types with which the more allusive versions apparently shared the same meaning.

The sequences and transformations to which the female types are subject, are equally apparent in the male types ; Pl. VIII, Fig. 6. appears in material and form a late Maurya or early Śuṅga type of "Yakṣa" proportion and the same type of physique, with a Kuṣāṇa "Hellenistic" modelling and drapery of loin cloth is that of Pl. VIII, Fig. 9.[1] Delicacy due to Hellenistic training is exemplified in Pl. VIII, Fig. 10, and also a recrudescence, in Pl. VIII, Fig. 11, of Scythian origin, also from Bulandibagh.

Hellenism is obvious in the fragment (Pl. VIII, Fig. 8) of the lower part of a plaque with a bare legged male figure (Hermes ?) and a ram on his left. A replica of this plaque is also in the Patna Museum.

BUXAR (SHAHABAD DISTR.)

1. The results of Dr. Banerji-Sastri's excavation in Buxar, Shahabad District, have been published by him under the title "Remains of a pre-historic civilisation in the Gangetic Valley" in the Journal of the Bombay Historical Society III, pp. 187-191 ; and in the K. B. Pathak commemoration volume, 1934 pp. 248-261. Dr. Sastri indicates the findspot of most of the figurines as 52" underneath the surface of the riverside, whereas the Brāhmī seals with characters "of the third century B. C." were found at a depth of 32". (Pathak Vol. 1. c. pp. 254-261).

The female types, with faces pressed in the most delicately modelled moulds and with varied types of headgear have bodies of the "ageless" type.

Whatever their headgear—which is separately modelled, or moulded, and affixed—triangular or with lateral "horns" and whatever the ear ornaments, large plaques with floral or wheel-lotus and related motifs or else small rings clasping the enormous ear-loops, the faces, allowing for slight variations in fulness, etc. and quality, belong to one and the same type. It is an altogether modelled type, with the most delicate transitions from forehead to eye and cheeks and a roundness given to the small nose which makes a stronger accent above the equally small lips. The features seem to hover in the face to the extent of faintness, no lines frame the eye and the lips of which no corners are marked are embedded in oval depressions into which their own smile places them. It is pegged on the cheek bones and along with the veiled eyes and fulness of face makes it a truly Indian equivalent to the 'archaic' smile of Greek and Sicilian terra-cottas of the sixth century A. D. This has no implications regarding their date.

Some heads have a headgear approaching a turban-shape[2], similar to turbans worn by male figures in the Bharhut relief. There however the central part is much smaller in proportion to the whole broadly bulging mass of the turban.

Bead chains (also in Mathurā, cf. Bindumaṇḍala, p. 99) frame the high foreheads. Śuṅga faces from Patna in stone and terra-cotta (Yakṣī, Didarganj, etc.) have this type of modelling. The accents there are stronger.

Subsequently, it seems as if the imposing headwear becomes a thing of the past.

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1. Cf. m. figure, upper story, Rānī Gumphā Udayagiri, Orissa, carved out of the living rock.
2. J. B. H. S., l. c. No. 3.

The few coarsened 'Buxar' types in Patna and Kauśāmbī, (Pl. VIII. Fig. 1.), the few Patna types in Buxar, seem to indicate a period of contacts, towards the end of the Śuṅga period.

A figurine of Kuṣāṇa type and fully modelled in three dimensions is one of the noblest contributions in terra-cotta, from a site which maintained a high level in its work for several centuries.

MATHURA (MUTTRA)

The terra-cottas from Mathurā have already been discussed by several scholars. The differences with regard to the dating of these fictile objects are considerable. The traditional figurines, it has been shown (p. 89) are not more ancient than the time-bound varieties with moulded faces. They run parallel. A relative date can be assigned to the moulded types. They are not homogeneous and while retaining the same material (grey or blackish terra-cotta, black shiny paint or slip) and a certain sameness of type they are yet sufficiently varied to show their sequence. The female figurines illustrated in several publications[1] appear to begin the series, if a comparison is made with the Buxar and Pāṭaliputra terra-cottas. They are seen to align themselves in date with the Buxar figurines. Whether lean or full, there is, if not a smile, yet an animation all over the modelled face which, once more is pegged on the cheek bones, even though the wide and open eyes with their distinctly moulded rims, appear to lie flat. This animation is absent from stone carvings prior to 100 B. C.[2]

There are also technical affinities, especially the separately modelled or moulded parts affixed before firing which the figurines from Patna, Buxar and Mathurā share, besides such motifs as the bicornate headdress, etc. Apart from these points in common to figurines from the three sites, there is at least an equal number of symptoms by which the finds of each site can be distinguished. Not too much stress should be laid especially on the types of jewellery, tresses of hair and the like. The rows of beads for instance above the parting of the hair or framing the forehead of Mathurā figurines of this type and also of the corresponding Buxar type are "worn" also by heads of Kuṣāṇa and Gupta date, from Mathurā[3] and it has been shown already that one type, in its setting of headwear, ornaments, etc. can be followed across the centuries, (p. 108).[4] Another way of arriving at a relative date is afforded by a comparison with a definitely "Hellenistic" head from Basarh[5] which belongs to a period after the invasion of Demetrius, i. e. to the second quarter of the second century B. C. There, the Hellenistic modelling around the mouth relieves, but does not dissimulate the hard and taut expanse of the cheeks.

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1. For instance : IPEK, op. cit. 5. 18 ; Codrington, Some Indian Terra-cotta figurines, I. M. 163, 166 (1929), Indian Antiquary 1931, Pl. facing p. 141 ; Agrawala, op. cit. Pl. III. Fig. 9, IV. Fig. 12.

2. Kramrisch, Indian Sculpture, Fig. 32.—There is more affinity of 'school' between certain stone sculptures from Patna and the carvings in Sāñcī than with Bharhut.

3. Coomaraswamy, M. F. A. B., l. c. Figs. 18, 19.

4. Codrington's dating of these female types from Mathurā in the late second-first century B. C. rests on comparisons of fashions (l. c., p. 144) and on the fact that the "moulded features have nothing primitive about them" ; Lt. Colonel Gordon, following Codrington goes even further in "The problem of Indian terra-cottas", Man, 1935, p. 111 when he sees no essential difference between early Mathurā terra-cottas and the Yakṣī on the Bhuteśvar railing.

5. A. S. I. A. R. 1913-14, Pl. XLIV, b. (702).

Pl. VIII, Fig. 2 is a cast from a mould found in Basarh, A. S. I. A. R. 1913-14, No. 336 ; of Śuṅga date, a specimen of the local work, untouched by Hellenism.

The female types have their male analogies in Mathurā and these as well are not of one date ; some conform with Śuṅga proportions, others (Pl. VIII, Fig. 12, Pl. IX, Fig. 6) with a "Hellenism" of the Kuṣāṇa school, the "naturalism" of which makes it differ from the "Hellenism" of the Basarh head referred to. These phases correspond, retarded as they are, to the respective phases of Hellenistic sculpture. This may be seen also in Pl. VIII, Fig. 13.[1] The material of the last mentioned head is red, and not grey, terra-cotta.

Red and ochre terra-cotta is the prevalent material of the plaques (excepting some of the Śuṅga plaques of Vasudhārā, of black-grey colour) from Mathurā, as it is elsewhere.

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1. The terra-cottas illustrated on Pls. VII-IX are in the Patna Museum, Patna.

BRAHMA-ŚĀSTĀ
A FORM OF SUBRAHMAṆYA

by V. RAGHAVAN

The Kumāra-bhāgavatas glorified their deity so completely that before their boy-god, Brahman and even Śiva became small. Kumāra was once at the gates of his father Śiva's abode when Brahman, the creator and the author of the Vedas, arrived to pay a visit to Śiva. The young war-god hauled up Brahman, asking him who he was. Brahman showed off his greatness as the author of the Vedas upon which Kumāra began to examine Brahman on the meaning of Praṇava. The old god created a poor impression. Kumāra immediately threw him into prison and himself assumed the work of the creator. Thus did Kumāra become the subduer of Brahmā, Brahma-śāstā.

In his 'Hindu Iconography', Vol. II, pt. II, Gopinatha Rao has given the forms of Subrahmaṇya-Kumāra. One of these forms as described in the Kumāra tantra is that of Brahma-śāstā. Gopinatha Rao says (p. 439): "Brahma-śāstā : This is the aspect of Subrahmaṇya in which he put down the pride of Brahmā by exposing his ignorance of the Vedas. He should be represented with a single face and four arms ; he should have only two eyes. In the back hands there should be the 'akṣamālā' and the 'kamaṇḍalu' and the front hands should be held in the 'varada' and 'abhaya' pose. The colour of Brahma-śāstā should be the red of the lotus flower." On p. 432, the author gives sixteen forms of Subrahmaṇya, the twelfth form of which is Brahma-śāstā. In the table of objects in Subrahmaṇya's hands on p. 426, the combination marked 'b' is 'abhaya' and 'akṣamālā' (both right) and 'varada' and 'kamaṇḍalu' (both left). In appendix B, p. 222, the author quotes the text describing the Brahma-śāstā form from the II Patala of the Kumāratantra.

Gopinatha Rao could not however find any sculptural representation to illustrate this form of Brahma-śāstā.

It was the good fortune of the present writer to notice that a sculptural illustration of Brahma-śāstā existed in the image in worship in the Garbhagṛha in the Subrahmaṇya shrine at Tirupporūr, a pilgrim centre, about forty miles from Madras. This image bears in its two uplifted arms the 'akṣamālā' and the 'kamaṇḍalu', which are the emblems of Brahmā whom Brahma-śāstā Subrahmaṇya subdued and whose functions were also taken over by him. The image has on either side two Śaktis, Vallī and Devasenā.[1]

Subsequently T. G. Aravamuthan and C. Sivaramamurti, Curators, Madras Museum, found an isolated sculpture standing in the fields at Valasaravākkam, eight miles from Madras, over a mound known locally as Temple Medu (ruins of a temple). A photograph of this image was published in The Hindu, Madras. This image also is a representation of Brahma-śāstā. C. Sivaramamurti thinks that this image may be assigned to the 13th century. The Tirupporūr image does not seem to be even as old as this.

On enquiries, it is understood, that there are two more shrines in South India where the form of Subrahmaṇya worshipped is the Brahma-śāstā. One of these is Kuḍakarkoil on the way to Vedāraṇya in the Tanjore District. It is also understood that the Madras Museum will be shortly acquiring a small bronze figure of the Brahma-śāstā found in a treasure trove recently.

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1. The present temple of Subrahmaṇya at Tirupporūr was, even according to tradition, built only during Mohammedan times. According to Taylor's Catalogue of the Mackenzie Mss. Vol. III, p. 343 this temple was built only in Śaka 1429, A. D. 1507. But the place once possessed an old temple, which fact tradition also confirms. Taylor's Catalogue refers to four inscriptions in the temple (p. 343), mentioning Ko Parakesarivarman (Parāntaka I? 10th cent.), Vijayagaṇḍagopāla (c. 1250) and Vikrama Cola (1118-1135). There is also a Pallava grantha inscription of Narasiṃhavarman II (end of the 7th cent). See Rangacharya, Ins. of Madras Presy. I, pp. 344-5.

PARĀNTAKA COLA'S ERUMBŪR TEMPLE

by S. R. BALASUBRAHMANYAN and K. VENKATARANGA RAJU

The Colas were one of the three ancient lines of Southern Indian rulers. Many famous kings of this house belonging to the Śangam Age are known to us. After a short eclipse they rise once more to power in the middle of the ninth century A. D. The leader of this revival was Vijayalaya Cola who made Tanjore his capital. Every succeeding ruler added by his achievements both in the realms of art and peace, to the glory of the house. Āditya Cola conquered the Kongu deśa, and the Tondaimandalam. Nearly half a century after the foundation of the Vijayālaya dynasty, there came to the Cola throne one of the greatest of its rulers, Parāntaka, in the year 907 A. D. In his long reign of nearly half a century he made large conquests. He conquered the Pāndya country whose capital was Madura; he conquered Ilam; he overthrew the Bānas. He kept under subjection the Gangas; and the Cola rule extended from Nellore to Cape Comorin. He had the titles of 'the Conqueror of Madura and Ceylon', 'Madiraiyum-Ilamum-Konda Parakesari', Vīra-Nārāyana, Vīra-Cola, and Colap-perumānadigal.

Under the imperial Colas the great tradition of art followed by the Pallava kings Mahendravarman, Narasimhavarman and Rājasimha, was continued. Kings, members of the royal family, officers of the state and pious benefactors vied with one another to fill the land with structural temples of brick and stone which reached their height of perfection in the Rājarājeśvaram and Gangai-Konda Coliśvaram under Rājarāja I and his son, Rājendra I.

After the decline of the Pallavas, the temple of Parāntaka at Erumbūr (Urumūr) is one of the few temples of south India which can be definitely dated: there is an inscription on its southern wall on the proper left of Dakṣiṇāmūrti that it was constructed in the 28th year of Parāntaka viz. 935 A. D.

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We may incidentally mention that this inscription[1] which refers to the construction of this temple in stone is not the oldest of the inscriptions found on its walls. There are a few belonging to a Para-kesarivarman (perhaps Parāntaka ?) from his fifth to his sixteenth regnal years ; and three of Madirai-koṇḍa Parakesari, i. e. Parāntaka belonging to the period prior to the building of this temple in stone.[2] Most probably the earlier inscriptions must have been copied on the walls of the newly built temple from stray stones on which the earlier documents had been engraved.

Uṟumūr, now known as Eṟumbūr is a small village in the South Arcot District of the Madras Presidency and lies on the main road from Chidambaram to Vriddhachalam ; it is situated about three miles from Śettiyatoppu where the Madras trunk road to Trichinopoly cuts the former road.

Uṟumūr is said to be a 'devadana' in 'Vedakarai-Nelvayalūr-Kūṟṟam till the days of Rājarāja I ; then it is described as a 'devadana' and 'brahmadeya' in Nelvayalūr nāḍu, a subdivision of Rajendrasiṃha Valanāḍu. In the days of Vikrama Coḷa, this village gets the new name of Vikrama Coḷa-Caturvedimaṅgalam in Virudha-rājabhayankara Valanāḍu. In its proximity lay the village of Vaḷavan-madevic-Caturvedimaṅgalam, now called Vaḷaya-madevi, a 'brahmadeya' in Merka nadu in the subdivision of Rājadhirāja Valanāḍu (Rajendra II's reign).

The deity enshrined is known as Śiru-Tirukkoyil-Perumānaḍigal or Mahādevar and it is now called Kaḍamba-vaneśvarar.

The temple faces east. The original temple consisted of a central shrine built of stone with a gopura and eight sub-shrines all round the main shrine. This is clear from the inscription already referred to. The relevant portion of this inscription is :

1. Svasti Śri madirai-koṇḍa Kopparakesari-vanma (r) ku yāṇḍu (28) irupattet-
2. ṭāvadu vaḍakarai nalvayaluṟ (r) k-kūṟṟattut-tevadānam uṟmūr-c-cirut-tirukkoyil
3. Perumanaḍigaḷukku Śri Vimānaṅg-kaṟṟaḷi yeḍupittu aṣṭaparivāra koyil
4. seyvittu uḍaiyār Coḷapperumānaḍigaḷ Śri Parāntaka devaṟkku iruṅgoḷa
5. ṇ guṇavaṇ aparājitaṇ viṇṇappañjeyya...etc.

It declares that the Vimāna was constructed of stone (kaṟṟaḷi) and

1. 384 of 1913.
2. 389, 394, 393, 391, 379, 382, 381 of 1913.

along with it the gopura and shrines for the 'aṣṭaparivāra devatās' in the 28th year of Parāntaka deva by one Iruṅgolan Kunavaṇ Aparājitan.

The main central shrine built in the days of Parāntaka consists of a 'garbhagṛha' and an 'antarāla.' Both are built of stone and the walls are supported by pilasters four on each side of the 'garbhagṛha'. The pilaster is 6′ 6″ high. It consists of a shaft (kāl), kalaśam, kumbam and palagai. These pilasters support the fluted corbels above.

The dome-shaped 'śikhara' over the 'garbhagṛha' is a later structure of brick. Evidently it has been rebuilt in recent times after the collapse of the old edifice. The 'garbhagṛha' in which the linga is installed is a square 8′ 4″ in dimension surrounded by thick walls measuring 3′ 6″ to 4′ 6″ in width. The Antarāla in front of the linga is an ante-chamber eleven feet by seven. One or two empty sub-shrines built of brick are found round the main shrine, but no traces of the gopura or the 'aṣṭaparivāra devatās' (except the Nandī and Bhairava found in the 'mukhamaṇḍapa'). In the place where the tower (gopura) and the wall of enclosure stood, we can still dig out large-size bricks which had been used in their construction in those times ; they measure 1′ 2″ × 7½″ × 2¾″.

The 'mukhamaṇḍapa' is a later structure and measures roughly 29′ by 24½′ with an arch-roof in brick and mortar. It is in a northern projection of the 'mukhamaṇḍapa' that a shrine for the goddess has been provided for in an area 15′ 9″ by 6′ 6″ ; and the only inscription that refers to the goddes is that of Maravarman Vīra Pāṇḍya[1] of the middle of the 13th century (1267 A. D.) Most of the early Coḷa temples have only a sanctum and an ante-chamber. Separate shrines of the goddess came into existence from the days of Kulottuṅga I (acc. 1070 A. D.) ; they form additions to the main central shrine.

The only other important temple of Parāntaka's days, known to us, is the Koraṅganātha temple at Srinivasanallur (Muśiri Taluk, Trichinopoly District). The Erumbūr temple forms a noteworthy addition to our knowledge of early Coḷa temples prior to Rājarāja (I).

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THE DANCING BODY

by P. BANERJI

The human body is the medium of dancing as a musical instrument is the medium of music. The different parts of the body are letters which when arranged properly and systematically speak to the audience the language of the dance. Āṅgikābhinaya (drama by means of limbs or body) is dance. Āṅgika Abhinaya is divided into Śārira (that which relates to the body), Mukhaja (that which relates to the facial expression) and Ceṣṭā (that which relates to the movement). This division is found in Bharata's Nāṭya Śāstra, but Nandīkeśvara in his Abhinaya Darpaṇa does not make this classification. Here we shall speak of the Śārira, and to a certain extent also of the Ceṣṭā portions.

Āṅgika (with relation to body in general) is named so because it is expressed in three ways by Aṅga (major limb), Pratyaṅga and Upāṅga (minor limbs).

According to Nandīkeśvara (Abhinaya Darpaṇa), Aṅgas are six, i. e. head, hands, chest, sides, waist and feet. Others add also the neck to these.

अङ्गान्यत्र शिरौ हस्तौ वक्षः पार्श्वा कटीतटौ ॥ ८२ ॥

पादाविति षडुकानि ग्रीवामप्यपरे जगुः ॥ ८३ ॥

(Abhinaya Darpaṇa)[1]

Saṅgīta Ratnākara also quotes the same Aṅgas. The Nāṭya Śāstra agrees with the above enumeration of six Aṅgas. (N. Ś. VIII. 13). Most probably the six limbs in connection with dance are based upon an analogy of the six accessories, Ṣaḍaṅga, for Vedic studies which are as follows :

छन्दः पादौ तु वेदस्य हस्तौ कल्पोऽय पठ्यते ।

ज्योतिषामयनं चक्ष निरुक्त श्रोत्रमुच्यते ।

शिक्षा घ्राण तु वेदस्य मुखं व्याकरण स्मृतम् ॥

(द्वितीयाकण्डिका महामुनिशौनकोक्तम् चरणव्यूहपरिशिष्टसूत्रम् ।)

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1. Coomaraswamy, Mirror of Gestures, p. 17 puts "armpits" (kakṣa) for chest (vakṣa).

(Caraṇavyūha Pariśiṣṭa Sūtra by Śaunaka, 2nd Kaṇḍikā 1st. 6 lines) : Feet for metre, hands for rites, eyes for illumination, nose for smell or perception, ears for hearing speech and mouth for articulating Vyākaraṇa (grammar) and for correct expression. There are also six limbs of painting ; they are mentioned by Yaśodhara, commentator of Vātsāyana.

Pratyaṅgas according to Abhinaya Darpaṇa are also six, i. e. the shoulder-blades, arms, back, abdomen, thigh and shanks. Others include four more viz., wrists, elbows, knees and neck.

प्रत्यङ्गान्यथ च स्कन्धौ बाहू पृष्ठं तथोदरम् ॥ ४३ ॥
ऊरु जङ्घे पण्डित्याहुरपरे मणिबन्धकौ
जानूनी कूर्परावेतत्तमप्यधिकं जगुः ॥ ४४ ॥
ग्रीवा स्यादप्य

<div align="right">(Abhinaya Darpaṇa)</div>

The same enumeration has been given in Saṅgīta Ratnākara. Nātya Śāstra does not enumerate the Pratyaṅgas though it mentions the word once in this connection (vide N. Ś. VIII. 12.).

अङ्गप्रत्यङ्गसंयुक्तः षडङ्गो नाट्यसंग्रहः ॥ २२ ॥

"In drama there are six Aṅgas which are constituted of Aṅgas and Pratyaṅgas."

Abhinaya Darpaṇa mentions twelve Upāṅgas in connection with the head. They are :

उपाङ्गन्तु स्कन्ध एव जगुर्बुधाः ।
दृष्टिभ्रूपुटताराश्च कपोलौ नासिका हनू ॥ ४५ ॥
अधरो दशना जिह्वा चिबुकं वदनं तथा
उपाङ्गानि द्वादशैव शिरस्यङ्गान्तरेषु च ॥ ४६ ॥[1]

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1. Saṅgīta Ratnākara mentions the same Upāṅgas. Manmohan Ghosh translates the above śloka as, "Scholars called shoulder an Upāṅga and eyes, eye-brows, eye-balls, cheeks, nose, jaw, lips, teeth, tongue, chin and face are also called Upāṅgas. Thus Upāṅgas in the head are twelve in number." (Abhinaya Darpaṇa, page 12, lines 1-3), and B. V. Nārāyaṇasvāmī Nāidu and others in "Tāṇḍava Lakṣaṇam" as, "the eye-balls, eye-lids, pupils, eye-brows, temples, nose, cheeks and lower lip are Upāṅgas" (page 13). The latter interpretation seems to be incorrect, because the enumeration does not constitute twelve in number, there is no mention of 'temples' in the text and also the meaning of the phrase दृष्टिभ्रूपुटताराश्च is not properly brought out. Abhinaya Darpaṇa in mentioning all the

Upāṅgas mentioned in Nāṭya Śāstra are only six viz., eyes, eye-brows, nose, lips, cheek and chin.

नेत्रभ्रूनासाधरकपोलचिबुकान्युपाङ्गानि ।

Abhinaya Darpaṇa does not give in detail the movements of Pratyaṅgas and Upāṅgas in dancing, for the simple reason that, when an Aṅga moves, the Pratyaṅga and Upāṅga also move and are not described in this work.

अङ्गानां चलनादेव प्रायङ्कोपाङ्गयोरपि ॥ ४८ ॥
चलनं प्रभवेत्तस्मात् सर्वेषां नाल लक्षणम् ।

(Abhinaya Darpaṇa)

But this omission is in sharp contrast to the elaborate treatment of Upāṅgas in Nāṭya Śāstra (ch. VIII, ślokas 37-171) which gives the special movements of Upāṅgas, although the latter work does not make any distinction between Upāṅga and Pratyaṅga but on the other hand describes the movements of Aṅgas and Upāṅgas with meticulous care.

These are the divisions and 'limbs' of the human body. The next important factor is how these limbs are put into action to produce harmony in dance rhythm. This can be estimated by looking at the bends (bhaṅgas) of the body. The ideal postures of the body in movement are based upon these Bhaṅgas or bends which represent the deviations of the body from the central plumb line of the figure. Bhaṅga is the basis of Bhaṅgī (gait). Bhaṅgas are not mentioned in either of the two authorities and encyclopaedias of dancing viz., Abhinaya Darpaṇa and Nāṭya Śāstra. The conception of bends is of later origin and the word is first found in the Mānasāra. Bhaṅgas are of four kinds : (1) Abhaṅga (slight flexion),

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Aṅgas and Pratyaṅgas gives its own total number and later on adds those given by other scholars. Similarly in this case also it says that scholars call shoulder an Upāṅga and then gives its own enumeration. If we exclude shoulder from the total, we have to include "Puṭa" (anything which closes, here : eye-lid) separately and not as "Tārāpuṭa". Secondly, shoulder cannot be included in the 'limbs' which have a direct connection with the head, hence we have to exclude shoulder from the twelve Upāṅgas. Abhinaya Darpaṇa adds the following four as Upāṅgas, viz., heels, ankles, toes and fingers to those given by other authorities.

पाष्णिगुल्कौ तथाङ्गल्यः करयोः पादयोस्तले ।

(Abhinaya Darpaṇa, 1st. line of V. 47).

(2) Samabhaṅga (equipose), (3) Atibhaṅga (excessive flexion) and (4) Tribhaṅga (three flexions).

सर्वेषां देवदेवीनां भङ्गमानमिहोच्यते ।

अभङ्गं समभङ्गं च अतिभङ्गं त्रिधा जगत् ॥

(Mānasāra, ch. 67, last śloka).

The Abhaṅga pose is shown in standing gracefully with the weight of the body placed on one leg. It indicates meditation, repose and serenity. Samabhaṅga is the "plastic equivalent to spiritual equilibrium" of seated or standing figures. Atibhaṅga is concerned with the dramatic dance forms called Tāṇḍava, i. e.. the Naṭarāja poses of the dancing Śiva, the ecstatic dance of Kṛṣṇa and others. Tribhaṅga posture is the thrice bent figure in which the head is inclined to one side, the torso is bent in the opposite direction and the part of the body below the waist takes again the reverse direction. The Tribhaṅga actions are dramatic, dynamic flexions.

Now we come to the actual movements of the body. An explanation of the 'limbs' and 'bends' was given in order to be helpful for the understanding of the movements. 'Movements' are either Cāri or Sthānaka, dynamic or static. The whole of chapter X of Bharata's Nāṭya Śāstra deals with Cāri and Sthānaka 'movements'. Sthānakas have been mentioned in the Mānasāra also. The harmonised co-ordination of the foot, leg, thigh and waist are known as Cāri. There is no dance without Cāri actions.

Sthānakas begin from śloka 48, but Bharata does not mention in detail the chief characteristics of Sthānakas. The body movements are elaborately and exhaustively dealt with in Bharata's Nāṭya Śāstra, but Abhinaya Darpaṇa does not deal with them and attaches more importance and gives more attention to the hand gestures. According to Nāṭya Śāstra body movements are divided into the following groups : Karaṇas, Aṅgahāras, Recakas and Pindibandhas. The Karaṇas are single postures, the special features of them being that the left hand is generally put on the chest while the right hand follows the movements of the feet. Bharata defines a Karaṇa in the following manner : "Let it be understood that, in what is to be said hereafter, the movements of the hand and foot should accord with those of the waist, side, chest, back and abdomen. Each unit (of dance) consists of certain positions, movements and poses

of the hands. A combination of these constitute a Karaṇa." Again in verse 172,[1] "As a general rule the left hand should be placed over the chest in producing the Karaṇas, the foot and right hand should accord with it." Bharata (ch. IV) says : "O Dvijas, I shall describe the performance of these with the Karaṇas and also how the actors are to combine the movements of the hands and feet in the several Aṅgahāras and Karaṇas. Aṅgahāras have their origin in Karaṇas. I shall describe these (Karaṇas). A Karaṇa in dance is the co-ordination of the movements of the hands and feet."

"There are one hundred and eight Karaṇas enumerated by me."

One hundred and eight varieties of Karaṇas have been mentioned, but Abhinavagupta, the commentator of Nāṭya Śāstra, states that the list is by no means exhaustive.

Aṅgahāras arise out of a combination of either two, three or four of such Karaṇas or single units (Mātṛkā, to be explained later).

Bharata illustrates thirtytwo varieties of such Aṅgahāras. Abhinavagupta explained the meaning of the term Aṅgahāra in two ways : the movements of limbs in proper directions or the movements of limbs as displayed by Śiva.

The sage mentions four types of "Recaka" which imply the movements of the foot, the waist, the hand and the neck, and "Pindibandha" is the finished figure developing from a particular series of dance movements. He does not properly define and clearly explain the Aṅgahāras, Recakas and Pindibandhas.

Movements are divided again into Mātṛkā, Kalāpaka, Bhaṇḍaka and Saṅghātaka. A single unit (Mātṛkā) of action consists of two Karaṇas. Three Karaṇas make a Kalāpaka and four a Bhaṇḍaka. A combination of five Karaṇas is called a Saṅghātaka.

द्वे नृत्तकरणे चैव भवतो नृत्तमातृका ॥ ३२ ॥
त्रिभिः कलापक' चैव चतुभिमण्डक' भवेत् ।
पञ्चैव करणानि स्युः सङ्घातक इति स्मृतः ॥ ३२ ॥

(Nāṭya Śāstra, ch. IV)

1. Verse 172 is a repetition of verse 57 and this is found in the Gwalior edition which adds four ślokas more at the end. It is not so in the Jaipur edition.

Bharata in another śloka (Verse No. 173, Ch. IV) gives a contrary definition of Mātṛkā. Here he says that Mātṛkā or prime unit is constituted by Cāris and Nṛtta Hastas.

चार्यश्चैव तु याः प्रोका नृत्तहस्तास्तथैव च ।
सा मातृकेति विज्ञेया तन्भेदात्करणानि तु ॥ २७३ ॥

(Nāṭya Śāstra, ch. IV)

It is obvious that a Karaṇa is the nucleus of all the movements. In the present paper we confine ourselves to the treatment of some of the one hundred and eight Karaṇas as inscribed in the Cidambaram temple, especially those which have a virile aspect. In the compartments of the East and West Gopuras in the Naṭarāja temple at Cidambaram in South India these Karaṇas were carved in stone with appropriate verses from the Nāṭya Śāstra underneath each of the postures. Strangely enough, all the postures are exhibited by female figures.

Bharata does not draw any line of demarcation nor does he make any distinction between male and female dance. Dance according to him is Tāṇḍava and he calls the whole chapter IV of his book, Tāṇḍava Lakṣaṇam. This certainly does not mean that all the postures and Karaṇas should be performed by women dancers. Still, though Bharata does not clearly lay down any rules and regulations regarding movements for men or women, when he trains his hundred sons and disciples each in the part for which he is best fit, he discovers that certain aspects of the dance could be expounded only by women. Faced with this difficulty, he approaches Brahmā who immediately creates the Apsarasas (celestial nymphs). By the Apsarasas the Kāiśiki Vṛtti (graceful style, suited especially to the passion of love), which is one of the four modes of dramatic style, is introduced. The dancers of Kāiśiki should be women who alone are fit to expound this type of dance. (N. Ś. ch. I).

Abhinaya Darpaṇa does not make any distinction regarding dance with regard to men or women performers. In Dhanañjaya's Daśarūpa however we find the following difference being made. A dance which is sweet is 'Lāsya' and one which is virile is 'Tāṇḍava'.

मधुरोद्धतभेदेन तद्वयं द्विविधं पुनः ।
लास्यताण्डवरुपेण नाटकाद्युपकारकम् ॥

(दशरुप—२०)

In Saṅgīta Ratnākara, we find that 'Tāṇḍava' dance arises from the teachings of Taṇḍu; it is of virile type and any soft kind of dance is known as 'Lāsya'.

तण्डुकमुद्वतप्रायप्रयोगं ताण्डवं मतम् ॥ ३१ ॥

लास्यं तु सुकुमाराङ्गं मकरध्वजवर्धनम् ॥ ३२ ॥

(Saṅgīta Ratnākara, सप्तमो नर्त्तनाध्याया)

According to Nārada Saṁhitā, Puṅ-Nṛtya (male-dancing) and Strī-Nṛtya (female dancing) are generally known as 'Tāṇḍava' and 'Lāsya' respectively[1]. Taṇḍava and Lāsya we may infer are modes of dancing to be used by men and women dancers as well. According to their respective character however, certain authors assigned them only to men and women dancers respectively.

When Tāṇḍava is violent, it may be meant for men as well as women dancers. We have a Tāṇḍava dance of a violent type demonstrated by Kālī, the consort of Śiva, and it is also possible to have Lāsya dances of sweet, amorous and 'madhura' (pleasing) sentiments performed by men.

The legend of origin of Lāsya and Tāṇḍava dance, as described by both Bharata and Nandīkeśvara, traces the distinction of the two types to a first male and female dancer respectively. The word Tāṇḍava is derived from Taṇḍu, one of the attendants (Gaṇas) of Śiva. In the Nātya Śāstra we find that Brahmā and Bharata supplicate Śiva for a knowledge of dancing. Thereupon the Lord of the worlds bids Taṇḍu to initiate His devotees into the secrets of the difficult art and Bharata says, "I shall now enumerate the Aṅgahāras taught by Taṇḍu and also the Karaṇas and Recakas."

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1. Coomaraswamy in his "Mirror of Gestures" translating Nandīkeśvara's Abhinaya Darpaṇa and after dealing with the difference between Nātya, Nṛtya and Nṛtta goes further and states that 'Lāsya' dancing is very sweet and 'Tāṇḍava' dancing is violent (p. 14). This remark goes beyond any statement in the text; it can be inferred that the idea is borrowed from either Daśarūpa or Saṅgīta Ratnākara. Rajah Surīndra Mohan Tagore writes, "Tāṇḍava accompanies Sarita having Dhruvas and other kinds of songs. It has various movements of the eyes, eye-brows and hands chiming in with the sentiment of love" and he probably quotes Saṅgīta Ratnākara, but does not mention the fact. (The Eight Principal Rasas of the Hindus, p. 22.)

B. V. Nārāyaṇasvāmī Naidu in 'Tāṇḍava Lakṣaṇam' p. 16 writes, 'The Nartakī might sit and make her Abhinaya (in which case the dance is called 'Lāsya') or she might stand and gesticulate (in which case the performance is called 'Tāṇḍava'). There is no basis for such a statement and Nātya Śāstra also does not mention this kind of division. Moreover, he does not quote any authority to support his view.

प्रयोगमङ्गद्वाराणमाचक्ष्व सुरसत्तम ।
ततस्तण्डुं समाहूय प्रोकवान् भुवनेश्वरः ॥ २७ ॥
प्रयोगमङ्गद्वाराणामाचक्ष्व भरताय वै ।
ततो द्वे तण्डुना प्रोकास्त्वङ्गद्वारा महात्मना ॥ २८ ॥

(Nāṭya Śāstra, ch. IV)

Nandīkeśvara however draws the following distinction. Śiva caused Bharata to be instructed in that art by his attendant Taṇḍu. On account of his love to Bharata he gave instructions in Lāsya through Pārvatī. Having learnt Tāṇḍava from Taṇḍu, sages spoke of it to mortals. Pārvatī on the other hand instructed Ūṣā, the daughter of Bāṇa, in Lāsya. The latter taught it to the milk-maids of Dvārikā, and they taught this to women of Saurāṣṭra, who in their turn taught it to women of other countries. Here we find that Lāsya dancing is taught by a woman and Tāṇḍava by a male dancer.

तण्डुना खगणप्रण्या भरताय न्यदीदिशत् ।
लास्यमस्याग्रतः प्रीत्या पार्वत्या समदीदिशत् ॥
बुद्धवाऽथ ताण्डवं तण्डोर्मर्त्येभ्यो मुनयोऽवदन् ।
पार्वती त्वनुशास्ति स्म लास्यं बाणात्मजामुपाम् ॥
तया द्वारवतीगोप्यस्ताभिः सौराष्ट्रयोषितः ।
ताभिस्तु तत्तद् देशीयास्तद्शिष्यन्त योषितः ॥

(Abhinaya Darpaṇa, 4-6)

Thus we find that dancing is of superhuman origin and having mentioned Taṇḍu and Pārvatī as first teachers, the two different narrations show them as Gurus of their lines of disciples. Nandīkeśvara postulates that a student of dancing must take lessons from an expert in the art who will demonstrate before the student the exact gestures and postures (Abhinaya Darpaṇa, v. 324).

The works which make a clear distinction between Tāṇḍava and Lāsya are of later date than the Nāṭya Śāstra and the Abhinaya Darpaṇa. Those two works are earlier in date than the Cidambaram sculptures and undoubtedly the craftsmen followed the earlier texts and ignored the distinction made by the later writers.

A legend tells that once there was a dispute between Śiva and Kālī as to who was the better dancer. Śiva danced and Kālī successfully followed

him. On perceiving that Śiva would be defeated, he lifted one of his legs to the top of his crown and began dancing. Kālī was modest enough and stopped following her husband there. The pose is known as Lalāṭa Tilakam and the dance as Ūrddhāva Tāṇḍava, as in Karaṇa No. 50.

It will not be necessary to deal with all the 108 Karaṇas demonstrated by Śiva. Selected poses will be quoted to show the co-ordination of the movements in each instance[1].
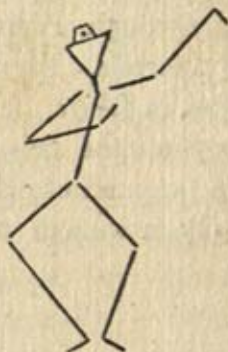
K. 12. In this Karaṇa the hand is in Apaviddha in the Sūci pose, the leg in Nikuṭṭa and the side in Sannata. 'Apaviddha Sūci hand' is joining the tips of the middle finger and the thumb and the remaining fingers curved. 'Nikuṭṭa legs' are bending the legs from the knees as is shown in the accompanying figure. Sannata is a bend of the head on one side. The Karaṇa is termed Arddha Recita or "half-whirl".

K. 12

K. 14. In Unmatta the legs are bent and the hands are in Recita. Recita of the hands is lifting them up and throwing about, moving round and round and drawing them back. The sentiment underlying is that of frenzy.
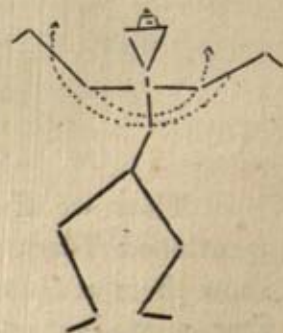
K. 14

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1. The ślokas have already been translated in 'Tāṇḍava Lakṣaṇam' by B. V. Nārāyaṇasvāmī Nāidu, who does not however explain the technical terms.

In some cases the figures are not the actual representations of the ślokas inscribed underneath each of them. In Karaṇa 12, according to Verse 73, the right hand is in Apaviddha in the Sūci pose and the left hand, as a general rule of Karaṇas, should be on the chest, instead of raising it upwards, as depicted in the relief. The right hand should move in accordance with the movement of the feet. So the position of the right hand is immaterial here and it can be put at any place. Such misrepresentations can be detected in many instances. It seems that the workmen did not strictly illustrate the verses; they adhered in a general way to the movements of the dancing body as described in. Nātya Śāstra.

The drawings reproduced here are linear sketches indicating the movement of the figures carved in Cidambaram.

K. 87. The left hand is placed on the chest. The right hand is in Proddheṣṭita Tala. The legs are in Añcita. Proddheṣṭita Tala occurs when the hand in Tripatāka (the third finger is bent and all the other fingers are pointed upwards close to each other) is raised to the ear and put in Uddhveṣṭita (pointing downwards). Añcita of the legs occurs when all the toes are stretched. This Karaṇa is termed Karihasta (elephant's trunk) and seems to be very suitable for women dancers.

K. 87

The following Karaṇas are of a forceful type and some of them express virile qualities : 26, 42, 44, 46, 47, 50, 52, 53, 64, 66, 70, 75, 76, 80, 83, 84, 99, 100. 106, 107 and 108. The respective numbers of the verses are 87, 103, 105, 107, 108, 111, 113, 114, 125, 127, 131, 136, 137, 141, 144, 145, 160, 161, 167, 168 and 169. These Karaṇas are twenty-one in number and of the remaining eighty-seven Karaṇas some seem to be specially suited for female dancers.

K. 26. Keep one leg in the Vṛścika pose, the left hand on one side in a bending manner and the right one at the tip of the nose. It is called Nikuñcita or bent. Vṛścika occurs when the right leg is bent backwards (so as to look like the uplifted sting of the scorpion). This pose is used in virile dance.

K. 26

K. 42. Put the leg in Vṛścika (explained above) and the two hands in Nikuṭṭa. Nikuṭṭa hands are placing the tips of the fingers on the respective shoulders. The posture is termed Vṛścika Kuṭṭita (scorpion in Nikuṭṭa).

K. 42

32
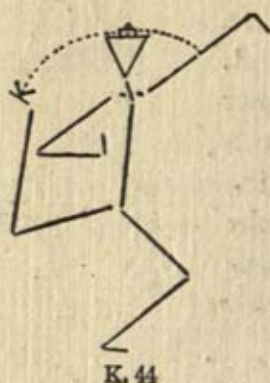
K. 44. The leg is arched backwards in Kuñcita Ūrddhva Latā. The left hand is in Latā. Kuñcita Ūrddhva Latā means bending the leg so as to expose the nether surface of the toes. Latā means putting the hands in Patāka (all the fingers stretched upwards) and in that pose stretching them obliquely at the sides, and then backwards. The pose is termed Latā Vṛścika (scorpion creeping down) and its usage is to indicate dropping to the earth from the skies. The moving of the hand backwards is shown by the dotted line.

K. 44

K. 46. Make Vṛścika of the leg ; place the two hands in Svastikā ; than make Recita of the hands separated from each other. Svastikā is crossing the wrists in the form of Svastikā. Then separate the hands and throw them about. (We do not go into the details of hand gestures). Recita has been explained above. This pose is called Vṛścika Recita (whirling scorpion) and its usage is to indicate flight in the air.

The Svastikā poses of thehands and then throwing them about are shown by the dotted lines.

K. 46

K. 47. The hands are bent towards the elevation of the shoulders, the right leg is bent towards the back and kept at some distance from it. This is termed as Vṛścika (scorpion) and it is used to indicate aerial flight, Indra's elephant (Āirāvata), etc. The leg in this Karaṇa is in the form of the tail of a scorpion.

K. 47

K. 50. Make Vṛścika of the right leg, and form Tilaka on the forehead with the thumb of the right foot. The dancer carries the thumb of the right foot. The dancer carries the left hand also to the forehead and places it with the thumb downwards so as to touch the forehead in the manner in which the Hindus make the Tilaka (beauty-mark). The Karaṇa is named Lalāṭa Tilaka (forehead mark).

K. 50
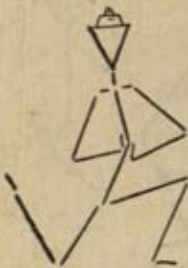
K. 52. The right leg is bent backward (Nata), the right hand is also bent (Kuñcita), and the left hand is in Uttāna, i. e. the act of placing the hands with the palm upwards. The pose is termed Kuñcita (angular bend) and is used to indicate the mental state of a person overflowing with joy during the worship of his favourite deity. The pose indicated is that of moving forward on the right knee, the left foot being flat on the ground.

K. 52

K. 53. Cakramaṇḍala (wheeled body) occurs when the hands are let down fully and the body is curved in Abhyantara Apaviddha. Abhyantara Apaviddha action means making the Apaviddha action with some space between the legs. Apaviddha action is the same as Baddha Cāri which is rubbing the two calves against each other crosswise. This is followed by Valana of the thighs. Valana is moving the knees into the space between the thighs. This posture is used to indicate haughty gait, ornament, decoration, etc.
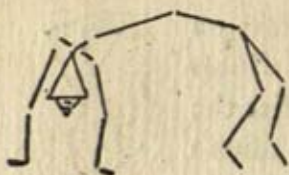
K. 53

K. 64. Niśumbhita or stamping occurs when the leg is bent from behind, the chest is elevated and the palm is placed in the Tilaka pose. The Tilaka pose of the palm is the same as in Lalāṭa Tilaka. This is one of the favourite dances of Śiva.

K. 64

K. 66. Make Atikrānta Karaṇa of the leg and stretch it towards the front. The hands should accord with the pose of the leg. Atikrānta means bending the leg, lifting it up and stretching it out in front and dropping it down gently. The pose is called Atikrānta (step beyond). This is more a gymnastic than a dance pose.

K. 70. The legs are stretched backwards, the hands are in Recita and the chest is well elevated. In Latā the two hands are stretched obliquely on either side of the dancer (as though the hands are creepers hanging down loose). In Latā Recita the left hand is in Latā and the right is whirled round and round. The posture is termed Garuḍapluta (kite's flight) and is used to indicate flying like a kite. The movement of the left leg and the right hand is indicated by the dotted lines.
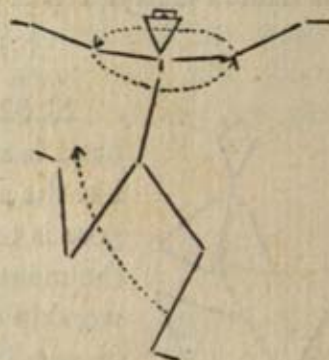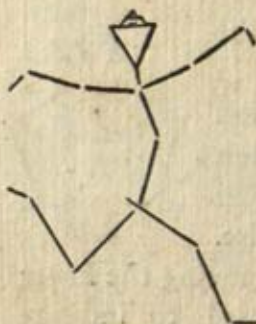
K. 75. Jump up and place the legs crosswise in front. At the same time keep the hands in Dolā. Jumping up should be in Hariṇapluta which is making Atikrānta (explained in K. 66) with the right leg. Jump up and throw down the leg. Then bend the left calf and throw it backwards. The hands should be in Sannata (well bent) and Dolā. Dolā occurs when the arms and shoulders are let down free and loose. The Patāka (see K. 44) of the hands is released. The Karaṇa is named Sannata (hands well bent).

K. 76. Sūci (needle) posture is practised by lifting up the bent leg and placing it so as to touch the ground in front. The hands should accord with the dance (action of the leg). Placing again the leg in front is shown by the dotted lines.
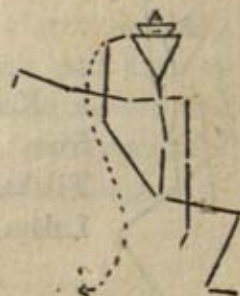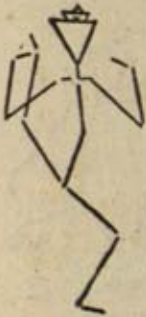
K. 80. Mayūralalita (peacock's grace) is made by making Vṛścika of the leg, keeping the hands in Recita and turning Trika round and round. Vṛścika and Recita have been explained in Karaṇas 26 and 14 respectively. Trika and Recita have been shown by the dotted lines.

K. 80

K. 83. Hariṇapluta (deer flight) occurs at the time of Atikrānta Krama (explained in K. 66). Jump up and throw down the leg and place it on the calf of the leg in a bent position.

K. 83

K. 84. Make the Dolā Pāda. Jump up and throw down the foot. The Trika should be in Parivṛtta. Dolā Pāda is first bending the leg and then swinging it from side to side and dropping it on the heel. Parivṛtta is spinning the Trika on its own axis. The movement is called Prenkholita (cradle swing). The dotted lines are given to show the Parivṛtta movement and the movement of the right leg.

K. 84

K. 99. Madaskhalita (tripping in intoxication) is, when the hands are hung down, the head is tossed about (from side to side) and the legs are in Valitāviddha. Valitāviddha is moving and bending the legs and these actions are to be performed alternately with the right and left legs. Its usage is to indicate intoxication.

K. 99

33

K. 100. Viṣṇukrānta or Viṣṇu's step occurs when the legs are stretched in front and bent as if in preparation for walking. The two hands are in Recita (explained above) and its usage is to indicate the gait of Viṣṇu.

K. 100

K. 106. Nāgāpasarpita (serpentine movement) is the movement when the legs are in Svastikāpasarpita. The head is moved from side to side. The hands are in Recita. Svastikāpasarpita is releasing Svastikā or crossing of the legs. The usage of this movement is to indicate passionate temper. The dotted lines indicate the movement of the head and releasing of the legs from Svastikā.
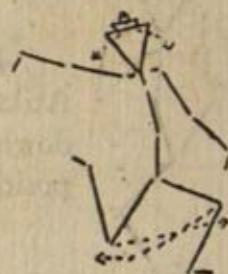
K. 106
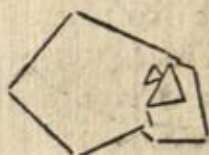
K. 107. The body is curved. The leg is stretched in Talasañcara. The chest is opened out. Talasañcara occurs when the heel is raised, the big toe is stretched out and the other toes are bent and moved slightly. The posture is termed Śakaṭāsya or cartwheel.

K. 107

K. 108. The feet with the heels turned up with the toes, the hands in Tripatāka (first make Patāka and then bend the ring-finger) facing downwards, and the head in Sannata constitute this Karaṇa. Sannata has been explained in K. 12. The pose is called Gaṅgāvataraṇa or descent of the Ganges and the name is suggestive of the purpose.

K. 108

From the above Karaṇas we also find that there are a few postures and movements which are very difficult to execute. The Karaṇa numbers are 26, 42, 50, 53, 64, 76 and 107. It should be remembered that some of the poses were deliberately exhibited to please the demons to suit their temperament (N. Ś. ch. 1, ślokas 106-113).

The total number of the Karaṇas, Aṅgas and Upāṅgas is 108. We are compelled to omit Pratyaṅgas here, as they are not enumerated by Bharata. According to Bharata, Upāṅgas and Aṅgas are six in number. It has been stated already that the commentator of the Nāṭya Śāstra clearly states that the Karaṇas are by no means exhaustive. It does not mean that Bharata did not know or did not willingly make an elaborate treatment of the postures and movements. Why then did Bharata not enumerate either 107 or 109 Karaṇas one more or less? In Hindu conception the numbers 108 and 6 are regarded as auspicious. Japa and Gāyatrī Mantras are repeated 108 times. After Validāna (animal sacrifice both in Dūrgā and Kālī worship) 108 lamps are lighted and arranged in rows placing them on plantain barks before the deities. At the time of the Dipāli ceremony, the minimum number of lamps for illumination in a house must be 108. Naṭarāja danced 108 types of dances at Tillai.

The number six also is a fundamental number in art. There are six Rāgas (musical notes) viz., Bhāirava, Kāuśika, Hindola, Dīpaka, Śrī and Megha (Nāṭya Śāstra). There are six major keys in Vīṇā and Sitar (musical instruments). According to Tantras there are six 'limbs' necessary for worshipping the deities. Those are heart, head, tuft of hair on the apex of the head, armour or amulet, three eyes and both the palms with their backs. The six Aṅgas prescribed in Yoga practice are :

प्रत्याहार, ध्यान, प्राणायाम, धारणा, तर्के, समाधि ।

(renunciation, meditation, control of breath, belief, argument and Self-realisation).

Bharata by mentioning six Aṅgas and Upāṅgas and 108 Karaṇas attaches importance to the meaning of these numbers. It is also to be noted that the number 108 is a multiple of six, it is eighteen times six.

A PARINIRVĀṆA RELIEF FROM BENGAL

by D. P. GHOSH

One of the latest additions to the Asutosh Museum of Indian Art, University of Calcutta, is a black stone sculpture measuring 7' 6" × 12' 6" from Khalisady, Dt. 24 Parganas. This is the first independent relief showing the Parinirvāṇa scene of the Buddha found in Bengal. Usually this particular scene is associated with the other principal incidents in the Master's life in the backslab of the image around the central figure of the Buddha. Separate representation of the subject is by no means rare in the schools of Gandhāra, Mathurā, Sārnāth and Bihar[1].

Considerable importance may be attached to this piece on iconographic and artistic grounds. The row of five Dhyāni Buddhas on the top, Indra or Śakra in regal costume holding a parasole beside the rising stūpa in the background, the kneeling figure of Brahmā bearded and with Jaṭāmukuṭa, supporting the feet of the dying Buddha with both hands are unusual. The traditional pair of Śāla trees of Kuśinagara between which the couch of the Buddha is generally placed, the mourning monks including the meditating figure of Subhadra, the last disciple of the departed Master seated

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1. R. D. Banerji, Eastern School of Medieval Sculpture, Archaeological Survey of India, Imperial Series, Vol. XLVII, pp. 81-83.

The pedestal of this relief is not reproduced. It is partly broken and shows above a 'pañcaratha' fillet, the stalk of the central lotus, symmetrical lotus scrolls and figure of a devotee.

under the couch according to the idiom of the Eastern School, are conspicuous by their absence. The Buddha is shaven headed like the early Kuṣāṇa Mathurā, and Maṅkuwār examples.

Confined within a rectangular framework bordered by horizontal bands of the Dhyāni Buddhas and the elaborately carved lotus pedestal, the disposition of the figures in the centre shows great animation. Most peculiar is the unorthodox manner in which the Buddha is depicted. He is not lying in the rigid conventional way ; he is reclining with an elegance reminiscent of a 'Sadyojāta' figure. Impetuous movement is active in the composition. It is set off against the vertical handle of the umbrella.

On stylistic grounds this sculpture may not be later than the 10th century A. D.

BṚHAT SAṂHITĀ (CH. 58)

by JITENDRA NATH BANERJEA

Writers on Indian iconography and iconometry have discussed the importance of chapter 57 on Pratimālakṣaṇam of Varāhamihira's Bṛhat-saṃhitā and have utilised its contents in various ways ; but very little notice has as yet been taken of the next chapter viz. Vanasaṃpraveś-ādhyāya and its bearing on image-making in ancient India. The latter lays down details regarding the ceremony of securing wood from the forest trees, and bringing it home for the purpose of making images of gods and goddesses. We are first told that the image maker should enter into the forest on an auspicious day selected by the astrologer and be careful about the omens which he would see on his way to it. Then a list of trees which are to be avoided in the search for proper wood is given ; trees which grow in cremation grounds, by the side of roads near temples or on ant-hills, in gardens and hermitages, 'caitya' or 'sthala vṛkṣas', those growing by the confluences of rivers, or which are planted by human hands, extremely bent ones, trees growing very close to other trees or over-grown with creepers, trees struck by lightning or broken by storms, falling by themselves or damaged by elephants, dried or burnt trees, or those on which bees make their hives—these are not to be selected by the sculptor. Next are given the names of those the wood of which is to be used for making images : 'deodar', 'candana', 'śamī', 'madhuka' for images to be set up by Brahmins ; 'ariṣṭa', 'aśvattha', 'khadira' and 'vilva' for those to be made for the Kṣatriyas ; 'jīvaka', 'khadira', 'sindhuka' and 'syandana' are aus-picious for images to be enshrined by the Vaiśyas while 'tinduka', 'kesara', 'sarja', 'arjuna', 'āmra', and 'śāla', are so for the Śūdras.[1] Before

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1. Suradāru candana śamī madhukataravaḥ śubhā dvijātinām, Kṣatrasyariṣṭāśvattha khadira-vilva vivṛddhikarāḥ, Vaiśyānāṃ jīvakakhadirasindhukasyandanaśca śubhaphaladāḥ, Tinduka kesara-sarjārjunāṃraśālaśca śūdrāṇām. (Verses 5-6).

The same list is given by Kāśyapa in his work ; Utpala quotes three couplets from it, in hi-commentary.

the selected tree is to be felled by the axe certain rites are to be performed by the sculptor. First he is to mark off on its trunk the various sections of the lingam or image to be made out of it in order that the top, bottom and the sides of the object to be fashioned correspond to those of the trunk of the tree.[1] Next he will propitiate the tree with various offerings and worship the gods, manes, Rākṣasas, Nāgas, Asuras, Gaṇas and Vināyakas at night and utter the following Mantra touching the tree with his hands :

Oh, thou tree, salutation to thee, thou art selected for (being fashioned into) the icon of deity ; please accept this offering according to rules. May all the spirits which reside in this tree transfer their habitation elsewhere after accepting the offerings made according to rules ; may they pardon me to-day (for disturbing them ; salutation to them).[2]

Lastly, in the morning after sprinkling water on the tree and smearing the blade of his axe with honey and clarified butter, he should cut round the trunk rightwards, beginning from the north-east corner. In the last verse of the chapter the author states that the further details about the felling of the tree omitted by him in this chapter, have been described in his chapters on Indradhvaja and Vāstuvidyā, and the same should apply in this case also. The information which we gather from a study of this chapter is also supplied to us in various other texts such as the sections on architecture and sculpture of the Purāṇas, Bhaviṣya, Viṣṇudharmottara, Matsya and others and such works as Mānasāra, etc. Of these the Bhaviṣya Purāṇa chapter on Pratimāvidhi (ch. 131) in the Prathama Brahmā Parva which begins just after the chapter on

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1. Liṅgaṃ vā pratimā vā drumavat sthāpya yathā diśaṃ yasmāt,
   Tasmācchnayitavyā diśo drumasyordhvamathavādhaḥ. (Verse 7).

Kāśyapa says :—
   Vṛkṣavat pratimā kāryā prāgbhāgādyupalakṣitā,
   Pādaḥ pādeṣu karttavyaḥ śīrṣamūrdhve tu kārayet.

2. Arcārthamamukasya tvaṃ devasya parikalpitaḥ,
   Namaste vṛkṣa pujeyaṃ vidhivat sampragṛhyatām.
   Yāni bhūtāni vasanti tāni valiṃ gṛhitvā vidhivat prayuktam,
   Anyatra vāsaṃparikalpayantu kṣamantu tānyadya namo 'stu tebhyaḥ. (Verses 10-11).

The same Mantra is to be found in the Bhaviṣya Purāṇa chapter on 'pratimā vidhi'. A few other passages common to both can be found in these two works.

Prāsādalakṣaṇavarṇanam gives details more or less similar to those noted above. Nārada while explaining to Sāmba rules for the construction of images of gods in general and Sūrya in particular mentions that seven kinds of images tending to the welfare of the devotees are known; viz. those made of gold, silver, copper, earth or clay, stone, wood and the ones that are drawn (on canvas and other objects); of these Nārada selects those made of wood as deserving special notice.[1] This shows that wood was the most frequently used material for image making from very early times. In the Viṣṇudharmottara Purāṇa a whole chapter entitled Devālayārtha dāruparīkṣaṇam (Bk. III, ch. 89) is devoted to the details of procuring wood for temple building and image making activities and rules similar to the above for marking off different sections of the images and building posts on the trunk of the tree are incorporated.[2] The next two chapters deal with Śilā-parīkṣā and Iṣṭakāparīkṣā in the former of which rites enjoined are somewhat similar to those mentioned in connection with Dāru-parīkṣā. The Mānasāra, a work giving details of architectural construction its foremost consideration, deals at great length with the topic of Dārusaṃgrahaṇa in lines 251-347 in the chapter on Stambhalakṣaṇam (P. K. Acharya's edition, ch. XV, p. 193 ff.). These particulars are of the same nature as those gleaned from the other texts, but there they apply chiefly to the construction of wooden columns. A formidable list of 'śakunas' is given in lines 260-94; in lines 295-304 are mentioned rules about sacrifices to the various kinds of evil spirits, the eight Dikpālas beginning with Indra and ending with Īśāna, to eight

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1. Atha te sampravakṣyāmi pratimāvidhivistaram
   Sarveṣāmeva devānāmādityasya viśeṣataḥ
   Arcā saptavidhā proktā bhaktānām śubhavṛdhaye
   Kāñcanī rājatī tāmrī pārthivī śailajā smṛtāḥ
   Vārkṣī cālekhyakā ceti murtisthānāni sapta vai
   Vārkṣīvidhānaṃ te vīra varṇayiṣyāmvaśeṣataḥ

   Bhaviṣya Purāṇa, Bk. I, ch. 131, verses 1-3.

2. Agraṃ mūlaṃ prayatnena kartyavyaṃ tasya cihnani
   Agraṃ devasya mūrdhānaṃ pādaṃ mūlaṃ tu kārayet
   Arcākṛtā viparyastā tiryakvā maraṇāvahā
   Agramūlaṃ viparyasaṃ stambhānāṃ ca vivarjayet
   Agramūlaviparyāse kṛte veśmakṣayaṃ vrajet
   Purvāgrā c. ttarāgrā vā drumā yojyā gṛheṣu ca

Rakṣas like Mukhya, Mṛga, Aditi, Udita, Vitatha, Antarīkṣa, Bhṛśa and Pūṣan and lastly to the Vanaspati.[1] The whole of chapter 257 entitled Vāstuvidyānukīrtanam of the Matsya Purāṇa deals in a succinct way with the Dārvāharaṇāvidhi : the next few chapters (258-263) discourse on details of iconometry and iconography incidentally referring to different kinds of materials used for image making. Thus, while recording the characteristic signs of the pedestals (piṭhikā), the author remarks that stone, earthen, wooden and mixed pedestals are to be assigned to images which are made of stone, earth, wood and mixed materials respectively.[2] In the next chapter on Liṅgalakṣaṇam, the author expressly mentions in the last verse that Liṅgas should be made of (such materials) as precious metals, crystal, earth and wood in the manner laid down in the previous lines'.[3]

The different classifications of images on the basis of materials out of which they were made occurs also in a few other texts. Gopāla Bhaṭṭa purporting to quote from Matsya Purāṇa and Hayaśīrṣa Pañca-rātra supplies us with two such groupings in his Haribhaktivilāsa. The first is that images can be divided into four broad divisions viz. 'citrajā' (i. e. those that are painted on canvas, wall or 'pātra'), 'lepajā' (made of clay), pākajā (made of molten metal, i. e. cast images) and 'śastrotkīrṇā' (carved by metal instruments). The second list includes seven different varieties, viz. 'mṛnmayī', 'dārughaṭitā,' 'lohajā', 'ratnajā,' 'śailajā,' 'gandhajā' and 'kausumī'. It will be seen that with the exception of the last two in the second list (or one, viz. 'kausumī', because 'gandhajā' may come under 'lepajā' in the first list) which are evidently 'kṣaṇika' (impermanent) images,

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Tasmātsarvaprayatnena cihṇaistaṃ kārayeddrumam,
Agre mūle ca dharmajñā tataḥ samyakpraveśayet.

1. A few other details are recorded here ; one such refers to three sex groups among the trees. The last lines in this section viz. 'Vṛkṣasya mūlaṃ mūle ca agre cāgraṃ tathaiva ca, Bhūmisparśa-mukhaṃ jñātvā tadūrdhaṃ parabhāgataḥ.' have been translated 'The base of the column is (to be marked) on the lower part of the trunk and on the upper part of the capital ; the part other than these (i. e. the middle part) is known to be that which touches (i. e. makes) the body (i. e. the shaft of the column).

2. 'Śaile śailamayīṃ dadyāt pārthive pārthivīṃ tathā, Dāruje dārujaṃ kūryānmiśre miśrān tathaiva ca.'

3. 'Evaṃ ratnamayaṃ kūryāt sphāṭikam pārthivaṃ tathā, Śubhaṃ dārumayañcāpi yadvā manasi rocate.'

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all the others can very well come under the first one. The Samarāṅga-nasūtradhara, a late anthology by king Bhojadeva also refers in these lines to the seven kinds of images—Pratimānāmatha vrumo lakṣaṇaṃ dravyam-eva ca, Suvarṅa rūpya tāmrāsmad dārulekhyāni śaktitaḥ. Citraṃ ceti vinirdiṣṭaṃ dravyamarcāsu saptadhā (Gaekwar Oriental Series, vol. II, ch. I, v. 1). This list is practically the same as that in the Bhaviṣya Purāṇa, noticed above, with this difference only that it omits reference to clay images while mentioning pictorial representations twice under the heads 'lekhya' and 'citra'. That clay was one of the most commonly used mate-rials for making images (as it is now in Bengal for the making of 'kṣaṇika' or impermanent ones) is fully borne out by a very interesting passage quoted by Gopāla Bhaṭṭa from Hayaśīrṣa Pañcarātra which lays down rules about preparing clay for this purpose. It can be freely translated thus :

'Members of all castes, from the highest downwards, should collect earth from river banks, cultivated fields or sacred places ; equal portions of powdered stone, karkara (sand) and iron should be mixed with it and the whole mixture should be pressed with some astringents ; extracts of 'khadira', 'arjjuna', 'sarjja', 'śrī', 'veṇṭa' (?) and 'kuṅkuma', 'kauṭaja' and 'āyasa' wood, and curds, milk and clarified butter etc., should be repeatedly stirred up with the above ; the whole compound should then be left over for a month till it will be ready to be shaped into images'.[1] This mode of the preparation of clay, however, shows that the material thus prepared was used for making images far more durable than ordinary clay ones, some of its constituents being powdered iron and stone. This compound is similar to the material known as stucco which was so copiously used by the Hellenistic artists of Gandhāra from the third to the fifth century A. D. ; if we are to understand that limestone is meant by the word 'pāṣāṇa', the similarity becomes greater. This seems to be the

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1. Mṛttikāvarṇapūrveṇa gṛhṇīyu sarva varṇiṇaḥ
   Nadītīre 'thavā kṣetre puṇyasthāne' thavā punaḥ
   Pāṣāṇa karkarā lohacūrṇāni samabhāgataḥ
   Mṛttikāyāṃ prapojyātha kaṣāyeṇa prapīḍayet
   Khādirenārjjunenātha sarjjaśrīveṇṭakuṅkumaiḥ
   Kauṭajaihāyasaiḥ snehairdadhikṣīraghṛtadibhiḥ
   Aloḍya mṛttikāṃtaistaiḥ sthāne sthāpya punaḥpunaḥ
   Māsaṃ paryāsitaṃ kṛtvā pratimāṃ parikalpayet

   Haribhaktivilāsa, 18th Vilāsa.

substance which was so frequently used in making the many figure sculptures on the towering gopuras of many of the south Indian temples. We are further informed in the same text that a central wooden frame designated here as 'pratimāśūla' of a length of 120 or 125 angulas ('daśatāla' or 'uttamadaśatāla' measurement) and made of 'khadira' or 'yajñīya' ('yajñadumbura') wood is to be set up on the 'ratnanyāsa' ('ratnavedī' or altar on which the image is to be placed), whereon the different limbs of the image are to be modelled according to the proportions laid down in the text[1]. Reference has already been made to the Matsya Purāṇa passage where there is mention of mixed materials used for image making ; evidently the compound just noted falls under this category. This text is of unique importance ; it not only gives the formula for the preparation of the stucco-like substance, but also shows how wood, clay and such other perishable materials were mixed up to make images of a comparatively durable nature.

The above extracts fully prove how in ancient and mediaeval times, wood (as well as clay) was one of the commonest materials for the making of images in India. Texts like the Bhaviṣya Purāṇa and the chapter 58 of the Bṛhatsaṃhitā which lay special stress on wood as the material for image making are of a comparatively early date. Some of the later texts like Agni Purāṇa, though mentioning wood among other materials, chiefly expatiate upon the use of stone. Much of the form and technique of the lithic monuments of India was influenced by their earlier and commoner prototypes of wooden structures. From this it does not necessarily follow that the indigenous craftsmen of India first learnt to use stone for architectural and sculptural purposes after their contact with the foreigners. Stone, though certainly in use from a very early date, was then much less frequently employed than wood and clay.

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1. Sthāpayet pratimāśūlaṃ ratnanyāsasya copari,
Śūlāñca khādirādināṃ yajñīyānāṃ prakalpayet.
Viṃśottaraśataṃ śūlaṃ kūryātvā pañcaviṃśatiḥ,
Pratimāṅgulamānena kṛtvā samsthāpayet budha.

<div align="center">Haribhaktivilāsa, 18.</div>

This wooden ('pratimāśūla') is described in present times, in the case of the clay images of Bengal as 'Kāṭhāmo' in Bengali language ; this latter is derived from Kāṭha or Kāṣṭha, wood. It is made of bamboo slits and straw in the impermanent icons of Bengal.

In the 6th chapter of Antāgaḍa Dasāo, a Jaina text, we find a reference to the wooden statue of the Yakṣa Moggarapāṇi in a shrine outside the city of Rājagṛha. Even long after stone began to be principally used for image-making, wooden images were also made. The finely carved wooden pillar bearing figure sculptures and various motifs on it, at Arial near Dacca and now preserved in the Arial Museum, and the weather beaten standing Viṣṇu and several other objects of carved wood in the collection of the Dacca Museum show that wood remained one of the materials for image making. Very few wooden images, however, of any antiquity have so far been discovered ; references to images in the literature of India are datable in the fourth century B. C., if not earlier.

KANTHĀ

by ST. KRAMRISCH

Kanthā means a patched cloth made of rags and the embroideries called 'Kanthā' and illustrated on Pls. X-XVI are stitched on rags. Rags of white cotton saris which have become worn out are sewn together almost invisibly and are frequently darned with white thread all over the field except where coloured threads drawn out of the borders of disused saris are stitched along the outlines, and fill the surface of the designs. Kanthās are made by women of all classes in Bengal, and chiefly in eastern Bengal. They are prepared in large and small sizes, from one foot square, to six by four foot in extent and their use varies with their size. Thickly quilted (Lep Kanthā) they are a wrap for the body and are worn in winter ; books and valuables of all kinds are wrapped in the 'bayton' (Pls. XII, XIV, etc.) ; mirrors and combs in the 'arshilatā' ; the 'durjani' is used as a wallet, the 'ooār' as pillow cover, the 'sujni' as bed spread and it is spread on ceremonial occasions for seating honoured guests ; hand-kerchiefs (rumāl) are also made in the same way.[1]

The technique is that of darning, the threads being drawn across the fabric in one direction and the stitches are so close that the seams of the several rags are scarcely perceptible and the entire field of the Kanthā appears rippled (Pls. X ; XVI₁).[2]

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1. G. S. Dutt, The art of the Kanthā, Modern Review 1939, pp. 457-461.

2. This may be called the pure and original technique of the Kanthā. Sometimes not all the ground is covered by the white, quilting stitches and the parts left plain contrast with the rippled surface. Several layers of cloth are superimposed, thickness and quilted effect vary. The outlines of the figures are produced by running the thread across twice. This has a twofold result, a continuous outline and an almost identical appearance of the two sides of the Kanthā. The 'ripples are employed with special effectiveness when threads of the same colour are drawn parallel and with larger stitches within the outlined figures. Pl. XVI, Fig. 1, altogether makes use of this effect.

The appliqué type of Kanthā will not be dealt with here.

It takes from six months to three generations to make a Kanthā.[1] No commercial incentive accelerates or vitiates the process of making a whole out of discarded, worthless bits. They are joined and reinforced by innumerable small stitches which give to the ground with its figures a new life and an ageless meaning.

Kanthās are given as presents on festival occasions. They are the work of women who design and stitch them. Their symbols and the connection of these symbols are most closely related to Ālpona drawings.[2] These are also made by women only, on festival occasions in execution of certain vows (vrata). They are drawn with powdered rice paste, on the mud floor and form the 'basis' of the ritual. The rites are acted and the Ālpona is drawn. These rites are performed exclusively by women, by matrons (nārī vrata) and young girls (kumārī vrata) or by priests on behalf of women (śāstrīya vrata). Men cannot draw the Ālponas nor do they embroider the Kanthās. The total stock of their designs is entrusted to the memory of the women. Stitch by stitch they realise the meaning of the ground which they cover even if they are unable to explain it. This ignorance of knowledge implies a correctness in doing things, an infallibility which is evident. It results in a display, in a manifestation where everything has its place in relation to the whole. The work of the hand in the Ālpona, forms part of the ritual of the Vrata. The knowledge which goes to make a Kanthā and its execution, stand in the place of the ritual ; the symbols and their reference are identical.

The Ālpona is meant for the moment of the festival occasion. Once dried, the white rice paste which makes the design is quickly blown away. The knowledge of the Ālpona has permanence as long as it rests with the women and it can be activated into the corresponding design at any moment for which it is destined.[3]

The women of rural Bengal act as a repository of a knowledge from which each can draw at the given occasion, be it that of a ritual or in

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1. D. C. Sen, Bṛhad Baṅga, Vol. I, pp. 430, 431.

2. See the plates in A. Tagore, Baṅglār Brata, Calcutta.

3. The oldest Kanthās still preserved do not go beyond the beginning of the last century. Some are still being made to-day. Ālponas are drawn even to-day by young girls with a sure hand and at great speed.
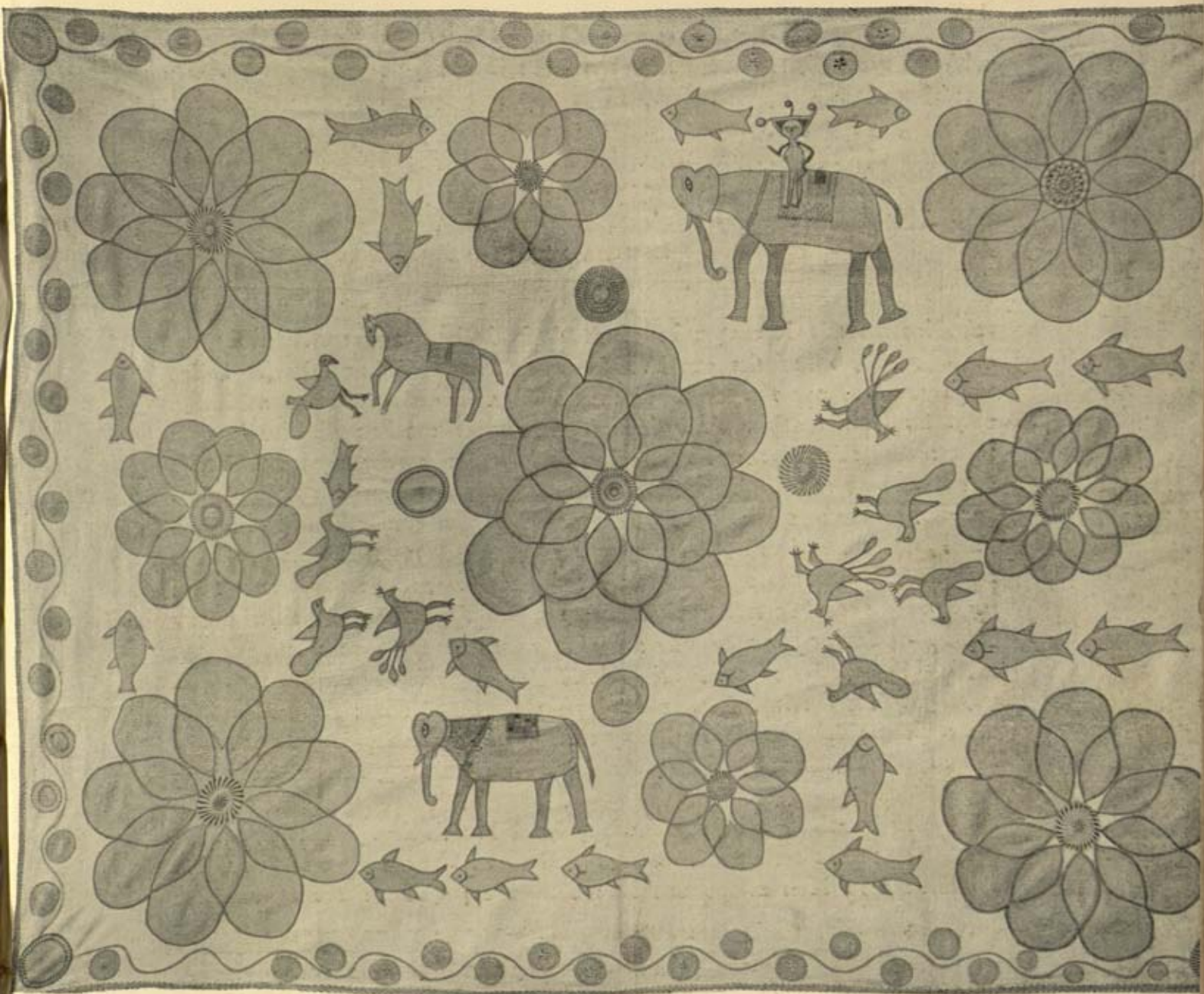
transmitting a token of friendship. In the Kanthā, the symbolic action is equally in the embroidery and in its material. It is embodied in its texture by restoring wholeness to rags, by joining the torn bits and tatters and by reinforcing them with a design of such a kind that when a Kanthā is spread out, it unfolds the meaning on which life is embroidered.

Symbolism of the material

The textile symbolism of the Kanthā begins with the rags which are its foundation—and which itself is often reinforced by threads drawn across it—and it ends with the thread of coloured cotton which shows off the many designs. The foundation is made of rags, and this has been considered a sign of thrift of the Bengali women. So it is; it exemplifies that nothing is being wasted, useless bits are joined and acquire wholeness and a unity of meaning. This act of preservation carries with it and becomes the technique and symbolic form of an imperishable knowledge. It belongs especially to women. The needle and the thread string together the single parts of the object and also the maker of the object.

In the Tanjur (Rgyud 195. 1)[1] is told the story of Guru Kantalipa (the 'rag-plastering' Guru), one of the eighty four Siddhas. He was a sweeper and used to pick up rags from the rubbish heaps, and to stitch them together. While thus engaged one day he pricked his finger and begun to weep. A Ḍākinī who happened to be near by took human shape and, hearing the cause of his sorrow, she exclaimed : If this slight pain already upsets you, what will you do in face of the untold sufferings which you will meet in the ever renewed cycle of becoming ? Do you not want to be freed from it ? 'I would' said Kantalipa, 'but I do not know how to do it.' The Ḍākinī thereupon instructed him in the art of meditation and gave him the following subject :

"Śūnyatā is the space of the sky and also that between the rubbish.
With thought and knowledge thread the needle.
Sew the cloth with the needle of compassion.
Meditate to embrace all living beings in the three worlds."

The joining of the tatters, of meaningless rubbish, is achieved with thought and knowledge. They dwell, in this formula, on Śūnyatā, the void

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1. I am indebted for the reference to Anagarika Govinda.

which is everywhere the same, in the space of the sky, and between the particles of the rubbish heap as well. The needle of understanding, threaded with thought and knowledge, sews together the fabric; the tatters are joined, wholeness results and the living beings in the three worlds, all find their place in it.

The story told here refers to the becoming, while making, whole. It leads to a meditation on the basis of sewing. Wholeness as a state of being is symbolized by the wholeness of the cloth, which is a re-integration. In this sense also is to be understood the 'patched robe' (saṅghāṭi) worn by the Buddhist monk and by the Buddha. In the Cīvara Khandhaka the Buddha tells the monks to get sufficient material from rags taken from the dust heap or from bits picked up in the bazar, and the making of the robe must be completed within twenty-four hours.[1]

The restoration of wholeness, out of the tatters of daily wear is symbolized by the robe of the Buddhist monk. It covers his body, like a Lep Kanthā, with a fabric which has been re-united. His covered body moves in a world of wholeness, of rule and order.[2] The upright images of the Buddha, show the Tathāgata standing or walking—and holding with his left hand the end of his robe, his patched outer garment. This is no chance gesture, nor is it derived from Hellenistic sculptures. Like certain Mudrās, it also occurs in Gandhāran works as generally as in sculptures of the various indigenous schools. It is not amongst the recorded Mudrās. As in the case of the shape and position of the Uṣṇīṣa[3], the action of the hand holding the garment is also self-explanatory. The garment is the manifested universe, of which the multiple parts are joined into one, when they clothe the Buddha; this cloth the Buddha holds in his hand; images of other divinities hold other objects of which the meaning in a certain sense is analogous; the book for instance with its many leaves (Mañjuśrī, Prajñāpāramitā), or the lotus flower with its many petals (Avalokiteśvara, Tārā). The hand which invariably holds the patched cloth, is the left hand.

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1. Mahāvagga VIII 142 ; Beal, Catena 216.

2. Unification is the action of the 'unique being,'. the Buddha when on receiving four bowls of offerings, full of barley and honey from the Mahārājas of the four quarters of the world, the bowls fuse into one bowl, in his left hand. This is his pātra, the begging bowl.

3. Kramrisch, Emblems of the Universal Being. JISOA, 1935, pp. 148-165.

The robe of the Buddha is a patchwork of rags, as is also the Kanthā. The rich embroidery on the ground of the latter is absent from the robe of the monk. The Kanthās are used as wraps and covers of objects, and of the body. The manifested world in its state of order is wrapped round the Buddha; it is his "saṅghāṭi" (literally : joined together) and covers the whole body in sculptures representing the Tathāgata (it leaves the right shoulder bare, on images of the Bodhisattva).

There are few images of divinities in India with their body bare; various pieces of apparel and jewelry clothe them; Kālī is shown in her nakedness, nothing envelops her : it is she who envelopes everything. The same simile is used by the Digambara Jainas whose garment is the sky and by images of Śiva as Bhikṣāṭana mūrti, with the appearance of a naked beggar; there is nothing in between their body and the extent of the manifested universe; Kālī herself is entire manifestation and its absorption. Naked are also the Gopīs in the Vastraharaṇa scene—their clothes are taken by Kṛṣṇa. The scene plays in Vṛndavana; trees grow on the bank of the river and Kṛṣṇa sits in the centre of the tree in the middle and the garments are hung on its branches. Nudity as a condition of initiation is the state of the naked Gopīs, their clothes are up in the tree, around Kṛṣṇa. Kṛṣṇa is a form of Viṣṇu. Viṣṇu is the sun, and the sun is beheld as the fruit of the tree of life. "When the sun is risen his banners (ketavaḥ), his rays are like shining fires".[1] The banners as shown in Indian reliefs (Bharhut, etc.) are streamers of cloth; folded scarves are waved at the same festive occasions when banners are flown. The garments of the Gopīs have returned to whom they belong. The sun has got back its rays, on rising; the 'absorption' of the Gopīs is illustrated in Indian paintings by the double symbolism of their nakedness and the return of their garments to their place of origin, to Kṛṣṇa, the sun of their life.

The garment as symbol of manifestation corresponds to the 'sheaths' (kośa) of Vedānta imagery. In actual worship, the images of the gods are clothed in silken and resplendent garments; the Śiva liṅga has a metal 'kośa'; for the purpose of worship the images and emblems are made more concretely manifest than by their form alone.

The entry into manifestation is also illustrated by the story and the

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1. Atharva Veda XIII. 2, 16.

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corresponding reliefs of the birth scene of the Buddha when the guardian gods of the four quarters approach with a piece of silk on which the child is to make the first seven steps on earth.

The garment (cloth) is a symbol of manifestation, of wholeness and integrity. Sacred texts written on palm leaf are wrapped into brightly coloured pieces of cloth. This gives a festive appearance to the libraries in Buddhist monasteries, and elsewhere. It is also held that the Buddha had received from his foster-mother Mahāprajāpati a garment of golden tissue ; at the moment of attaining nirvāṇa he entrusted it to Kāśyapa, his disciple, who should give it to Maitreya, the future Buddha. Kāśyapa goes to mount Kukuṭṭapādagiri. The mountain opens in front of him and he awaits the coming of Maitreya in the mountain.[1] The garment of manifestation given to the Buddha by his foster-mother Mahāprajāpati— the great mistress of creatures—the robe in which the Buddha-being is to be clothed, is transmitted by him through his disciple to the Buddha of the future. The continuity of the Buddha within manifestation is thus transmitted from Śākyamuni to Maitreya.

The wrap or cloth is a symbol of manifestation, the patched wrap or cloth as symbol of unification. The rags and tatters by themselves and prior to being joined have also their implied meaning. As far as their material is concerned, it is one with that of other textiles ; as far as their condition is concerned, it is particularly their own. The worship of the Lord of rags and tatters, Chindiyadeo ; the Saint of rags and tatters, Chirkuṭwā-Pīr, Lingri Pīr ; the rag hero, Chithariya Vīr,[2] consists in the various provinces of Northern India and the Deccan in a rag thrown at, or presented to, their image or emblem. Chindiyadeo gives a new and whole cloth for the old rag and similar exchanges and boons are granted by the other divinities. They join the piece to the whole, the wish to its fulfil-ment. In the lower Himalayas, rags are hung on cane bridges and trees near them, rags are tied to twigs and stones and they are planted on cairns, as offerings to the mountain spirit. The Buddhist prayer flags are scarcely more than such rags and the texts printed on them word the intention

1. Beal, Hiuen Tsiang, p. 142.
2. A. C. Lyall, Gazetteer of Berar, Bombay 1870, p. 171 ; S. C. Mitra, On a curious cult of Orissa, A. S. B., N. S. XXX, 1934, p. 19 ; Crooke, Religion and Folklore in Northern India, p. 138 ; cf. also Kantheśvara Tīrtha, (Śiva Purāṇa) a place of pilgrimage sacred to the 'Lord of Kanthās'.

in which they are hoisted on bamboo posts; the Lataband mountain, 'mountain of rags' has rags hung on its peak by the people so that they may obtain anything they want; while some offer the rags, others take away one from each cairn and hang them round their neck.[1] The rag offering as an indication of joining the part to the whole on the side of the divinity, has its corresponding action in the taking away of a rag from the heap, as a token of the wholeness into which it has been re-constituted and in which the wearer now is 'wrapped'.

Rags and prayer flags are put up as offerings on high places, cairns, trees and bamboos and so are the clothes of the Gopis in the Vastraharaṇa scene. There they return to Kṛṣṇa; the rays are once more around the sun; the rag in every single act of offering means a return of the part to the whole, so that a new and whole cloth will be given for the stray, old bit; the prayer printed on a rag or flag is carried upwards into the Empyrean, Vyoma, the 'cover' or 'wrap', the highest heaven.

Re-integration, the one possibility of the woven fabric : its being torn and worn, and joined again, is most intimately that of the Kanthā; the opposite and complementary symbolism needs also to be taken into account, i. e. that of initial wholeness. The cloth on which the Buddhist temple flag (prabhā) is painted must be woven to size. It must neither be cut nor joined.[2] A special sari, 'śrīkhaṇḍe', uncut, and woven in one piece, is made by the village weavers to be worn by women in the fifth, seventh and ninth month of pregnancy[3]. This refers to the embryo and it has its analogy with regard to the cosmos, the world-'egg' (brahmāṇḍa).[4]

The universe is frequently spoken of as a woven fabric,[5] where every one and every thing has its place, at the meeting of the main thread of the warp and the threads of the woof. The picture implies an indefinite number of horizontally spread out layers of the woof which are traversed by the vertical warp threads, so that each vertical thread passes through

1. Mir. M. Sultan Moh. Khan, The life of Abdur Rahman Amir of Afghanistan, Vol. 1. p. 218; Sven Hedin, Trans-Himalaya, Vol. II, p. 200; Waddell, Himālayas p. 115.

2. M. Lalou, Iconographie des Etoffes Peintes dans le Mañjuśrīmūlakalpa, p. 27.

3. Man in India, 1924, Customs and Taboos in W. Bengal, p. 177.

4. Garuḍa Purāṇa XV. 25-30.

5. RV. VI. 9. 3; X. 130. 1; Bṛhadāraṇyaka Up. III. 8. 7-8, Muṇḍaka Up. II. 2. 5; Kramrisch, Emblems, l. c., p. 161.

each of these layers and links them up in a close texture. The layers are the various states of existence, and each vertical thread unifies those states along its direction and with reference to the special point at which it traverses the entire horizontal stack. The vertical thread acts like a ladder of which the rungs are the horizontal threads of the woof on the various levels. Into this tissue is woven the macrocosm and the microcosm.[1] The main thread, the vertical, which in each particular instance passes across the many levels is known as Sūtrātman.[2]

Sacred texts are the world fabric in a likeness, They also are spoken of in textile terms as consisting of Sūtras (threads); the warp of the doctrine is given in the 'Tantras'.

In the symbolism of the thread two meanings are leading : the warp in a web, and the thread sewn across a fabric already woven. The cosmic counterparts to them are beheld in the rays of sun and moon. The sun weaves, the moon sews the fabric of the universe.[3] The symbolism of the thread itself, apart from the fabric, is one of connection and obligation ; ties, knots and ligatures bind the ultimate and the contingent. This symbolism belongs to the network technique 'jāla'[4] and only some of its uses can be indicated here, i. e. the 'upavita', (cf. 'vyoma') the sacred thread ; or the thread tied round a branch of a tree and its remaining portion around the right wrist of the worshipper who utters the following Mantra : "O Lakṣmī, do not go away, do not go away, I tie you with this sacred thread."[5] Analogously and on a higher level, speech itself, "'Vāc' is the string and the names form the knots by which all beings are connected".[6] The connecting thread is either a straight line between a permanent origin and a particular instance or individual, or it makes a

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1. AV. X. 2. 13 ; Br. Up. III. 7. 2 ; III. 9. 26.
2. Kramrisch, l. c. p. 155.
3. Rākā, the full moon is asked to sew with an unbreakable needle, R.V. II, 32, 4.—This division is not strict. The old woman who resides in the moon, is busy spinning ; Man in India, 1930, p. 118.—The thread symbolism itself is not one of completeness. It is only a link between the absolute and the contingent. If it is beheld apart from this connection the thinness of individual fate is seen as thread in the hands of Clotho (the spinner), Atropos and Lachesis.
4. Kramrisch, l. c., p. 160 f.
5. A note on the Dhātrī Pūjā, J. A. S. B. XIII. p. 321.
6. Aitareya Āraṇyaka II. 1. 6. 1-2.
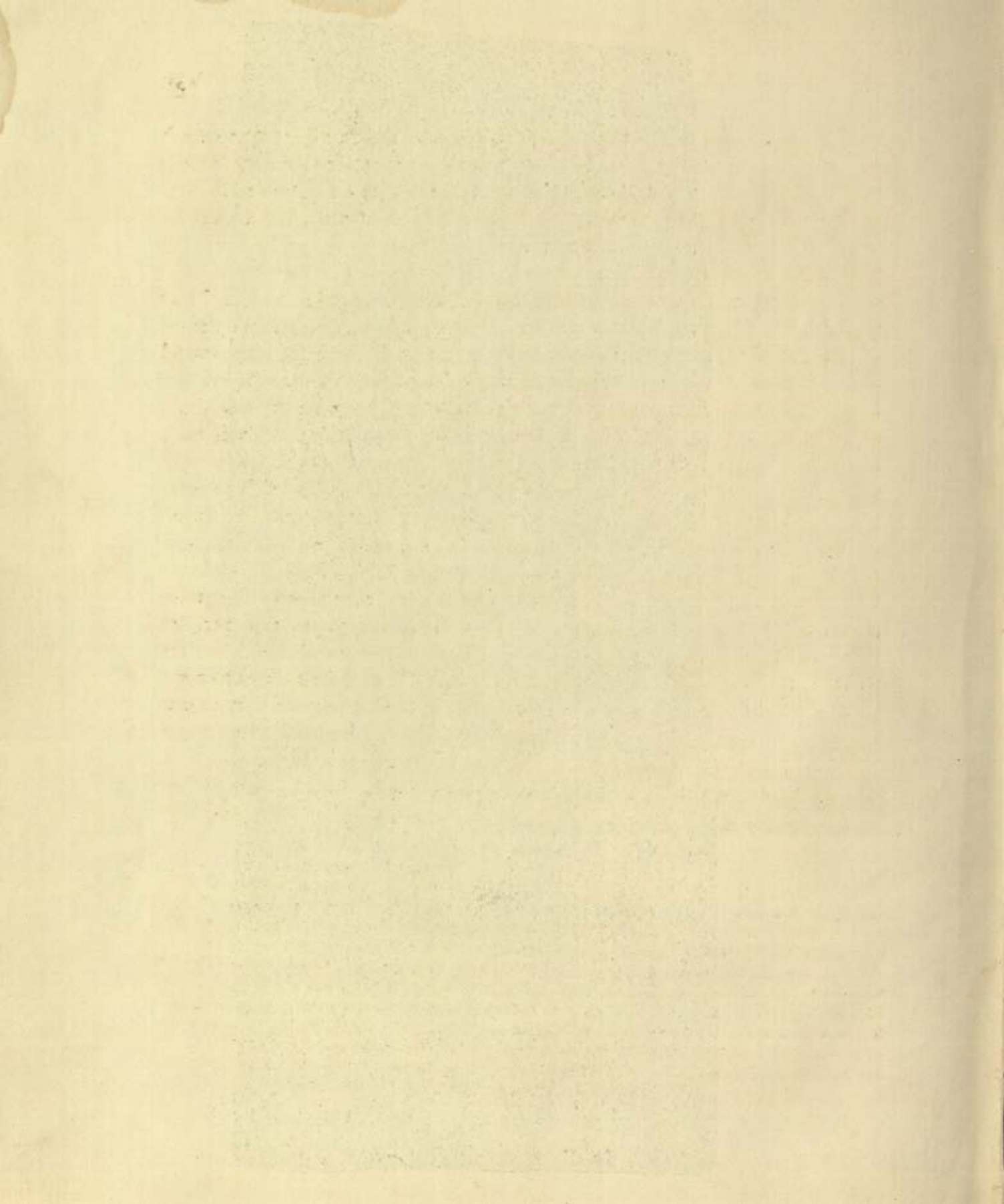
circle, a loop and knot.[1] The circle is whole, wholesome and protective ;[2] the loop constitutes the emblem of the noose, which is held by Yama (Pāśin) the god of death. The shape of the noose is between that of the straight line and the circle, its symbolism is not original but functional.

Symbolism of the form

In the last mentioned instances, the symbolism of the material[3] was seen to be supplemented by its form, as line, circle, etc. Having dwelt on the material symbolism of the Kanthā which is its foundation and contributes towards its 'design' the latter, being truly a 'symbol' or 'synthesis'[4], will now be viewed. The inseparable connection of Vratas, i. e. certain rites and Ālponas, of Ālpona and Kanthā design has already been referred to (p. 142). Less obvious seems the relation of the Kanthā to the Yantra design, of which it must be considered a sub-variety. The central point, the Bindu, and the Maṇḍala or the lotus, the two have in common.[5] Borders with several patterns replace in the Kanthā the enclosing and angular lines of the Yantra.

The conformity and interrelation of these designs suggests a common origin which is none other than that of the working of mind itself, its beginning from a point, the centre, its building up from there the radii and petals of the lotus, its reaching out towards its own fulfilment which is the circumference of the circle, its hovering there with marginal irradiations, dwelling on certain directions and altogether coming to a rest in the square or rectangular precinct of the 'Kanthā as a whole'. On this ground plan the many figures of the Kanthā are embroidered. The single figures are equivalent each to a Mudrā or seal. They are not

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1. H. A. Rose, A Glossary of the Tribes and Castes of the Punjab and North West Frontier Province, i. 126. On the second day of the bright fortnight, people place the forefinger between their eyebrows, fling a cotton thread towards the moon, hoping to get a silver thread instead ;—cf. situation and meaning of Buddhist and Tantrik : Ūrṇā, Ājñā cakra, Candra maṇḍala.

2. Cf. Rakṣa, the protective thread, tied round the wooden foundation of the masonry shaft when digging wells, Crooke, op cit. p. 343 ; also the festival of 'Rakhī' Pūrṇimā ;—Crooke, op. cit. p. 408 also refers to a double thread ritual, when women wind a cotton thread 108 times around the trunk of a Pipal tree when a boy is invested with the sacred thread.

3. René Guénon, Le symbolisme de la Croix, ch. XIV deals with the symbolism of tissue.

4. The literal meaning is "thrown together" and "put together".

5. This applies to the majority, though not to all the Kanthās.

shown engaged in action, the one with reference to the other[1] ; they have their place with reference to the centre.

The central lotus is the most widely recurrent symbol (Pls, X, XII —XIV, XVI,2, etc.). It has a varying number of petals, from four to 'thousand' and significantly enough but rarely five, or a multiple of five. For it is not the natural lotus flower but its aspect of being totally unfolded, which is an emblem of cosmic manifestation. The total unfoldment around the centre is instanced by the varying figures of the field. The latter has generally a life tree in each of the four corners (Pls, XII, XIII[1, 3]). The square or rectangular field of the Kanthā, a restitution of the ordered fabric (of the cosmos) requires that the four corners are equivalent with four directions[2] and mark the four cardinal points. They give fixity and mark the limits. The four life trees are but the four-fold one tree of life which holds in its branches all manifestation. They grow from the four quarters, i. e. from everywhere, towards the centre.[3]

The display within the field is freely balanced. It fills the intervals between the central lotus and the borders. The central lotus itself is often enlarged by concentric bands of symbols which are also used in the border stripes ; the latter are narrow or broad and have one or more bands, each with a different pattern and this may even change in the same band from one side of the Kanthā to the other (Pls. XIV[1], XVI[2]) ; narrow stripes which copy weaving patterns[4] are embroidered right on the edges.

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1. This does not exclude a considerable number of scenes from legends. These scenes with their figures however have one connected meaning, as is the case otherwise with each single symbol.

2. They correspond to the four intermediate directions, but not if the Kanthā is laid 'on edge' (Pl. XV, Fig. 2).

3. The trees are mostly either 'Kadamba' trees which are sacred to Kṛṣṇa and have round flower and fruit-balls ; these are indigenous. The other variety are "Kalkā" shapes, i. e. cones of which the point is drawn out into a hook. They are supported by a stand, or 'stem' and have to be traced back to the pine tree pattern as woven in Kashmiri shawls and painted with a more or less straight, or wind tossed top in Persian and Indian miniatures. Barring the Kalkā-life tree, which is also very frequently repeated as a border pattern, no other Persian symbolic forms have found their way into the Kanthā.

4. One type of Kanthās (Pl. XV. Fig. 1) is made by the women of the weaver (Yugī) caste. The designs are more geometrical, the length of the stitches are not equal. The single stitches are longer on the front than on the reverse side ; bands predominate in borders and fields, and the band effect as colour contrast runs in any direction, parallel with the borders, diagonal and circular, right through the rows of figures (see the elephants, etc., Kalkā and lotuses in the inner rectangle ; also the circle of four petalled lotuses), within the sharply outlined silhouettes. Incidentally : Yugī, cf. Yogī, and that, according to 'Man in India' 1930 p. 248, "the members of the weaver (Yugī) caste, children under two years of age and persons who have renounced the world are buried, all others are burnt".

The material symbolism of the Kanthā, its being made of rags, joined invisibly, is that of a restitution of wholeness. The symbolism of the embroidery is that of universal manifestation and of a return to the centre ; the disc of the central lotus, and the trees in the corners pointing with their top to the centre are the 'leitmotive'. The design of the Kanthā directly results from this dual symbolism. The rags when sewn together and reinforced by darning stitches[1] conform in shape with that of any woven fabric in its wholeness. It must be square or rectangular according to the threads which are interwoven at right angles. The four cornered cloth has its centre fixed by folding it crosswise. The Bindu, the centre of the lotus wheel and the trees in the diagonals are marked at the same time. The rest of the design is inserted consistently, concentric circles around the lotus and stripes or panels parallel with the edges, and as much as is left of the field between the central lotus and the edges is filled with figures. The proportions of central lotus, marginal stripes and the intervening field vary. The trees in the corners, the lotus in the centre are generally though not always present. Sometimes the trees are virtually present, Pl. XIV, where they are embroidered in one or two corners out of the four—or in none of them, Pl. X. The diagonal direction implies their presence. In other cases the central lotus is absent and substituted by a bilateral symmetry of the design, in which it may appear, freely repeated (Pl. XI), or its place is left empty and images and emblems are wreathed around its implicit presence (Pl. XVI₁).[2] The ideograms throughout the Kanthās consistenly refer to one and the same reality ; they can be exchanged, the one for the other (lotus for tree, for inst. Pl. X ; leaf for tree, Pl. XVI₁) or else they can change into another, Kalkā into bird, tree into Vajra (Pl. XV₁ inner spandril, and second marginal border) etc., in exactly the same manner as in Sāñcī, on the railings of stūpa II and in Bharhut, when the outer concentric circle around the lotus petals is transformed from one filled with scrolls into

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1. The white threads in the intervals between the figures are drawn parallel to the edge and they also run along the outlines of the figures. This shows that the darning of the ground is subsequent upon the stitching of the outlines of the figures. In a large number of Kanthās it is omitted.

2. The 'presence' of the lotus even if not embroidered in its proper place or altogether absent, is valid to the same extent throughout the Kanthās, as that of the Buddha in the non-iconic early Buddhist reliefs of Sāñcī, Bharhut, etc.

one of serpents or bird's heads.[1] The Protean changeability of manifestation shows it derived from one principle, and results in a similarity of form. The figures in the Kanthās belong to a world of metamorphosis, of similes which are identifications in legend, and form.

In this consistent world of pictures, the women who design[2] and embroider the Kanthās, are free to employ their individual skill in executing any of the possibilities inherent in the theme and the technique[3] of the Kanthā.

The coloured threads, which are drawn out of the coloured borders of the disused saris, are black or/and blue, and red in the main, with a more or less considerable addition of yellow and green threads. The quantity of the two latter colours is greater in Kanthās where recourse is had to a variety of stitches besides the darning stitch. It may be concluded that originally the Kanthā has black or deep blue and red figures only on the white ground, these being the colours of the three Guṇas. Yellow and green in addition to these, correspond to their use in painted Maṇḍalas.[4]

The colour scheme, the distribution of surfaces, the 'style' varies from one Kanthā to the other. There are as many differences as there are different women who embroidered the patched cloths. These differences are equel to the many possibilities of one tradition and one craft under conditions of the rural life of Bengal which have not changed even outwardly. Of the hundreds of Kanthās seen by the writer only two were more or less alike ; one of them is reproduced on Pl. XV (Fig. 2). They seem to have been intended as a pair ; the distribution of the symbols in the single 'bayton' lacks the usual balance.

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1. Barua, 'Barhut' III, Pl. XXXIV, bottom. left; Marshall-Foucher, The Monuments of Sanchi III, Pl. LXXX, 33b ; other examples from Bharhut are in the Indian Museum, Calcutta.

2. The outlines are drawn with dark or reddish lines which mostly have disappeared after washing.

3. The original and ubiquitous darning stitch, is supplemented by flat stitches in some examples (Pl. XV. 3); borrowings from other types of embroidery occasionally occur and are used effectively (Pl. XVI. 2, etc.). The original technique (Pls. X, XIII. 1, XVI. 1) with the varieties it allows, attains a greater clarity.

4. Kramrisch, A Survey of Painting in the Deccan, notes 34 and 35. p. 203.—Blue and yellow thread, called 'Kāma' is used by the Ojhās for tying the amulets on the arm, waist and neck.

None of the preserved Kanthās goes beyond the nineteenth century, and some are the work of more than one generation. Time has nothing to do with the symbolism of Kanthās nor with their making. The symbols stored in the Kanthās belong to the primeval images in which man beholds the universe. Their meaning is present in their shape and in the position and relation which these shapes have within the whole ; symbol and composition are inseparable in the Kanthās.

Altogether only relatively recent survivals of textiles are preserved in India.[1] Of these, the Chamba Rumāls and Kashmir shawls are partly connected with the Kanthās. The former are either purely geometrical or else pictorical. The symbols of the first variety are very limited in number ; the second variety is a translation into embroidery of the paintings of the Western Himalayan hill schools of Kangra and Chamba. It is not an original textile form. The Kashmir shawls share with the Kanthā the life tree (Kalkā), and creeper devices, the circular centre and the demarcation of the four corners. Whether hand woven or embroidered, such as they are preserved they were made for the use of princes and the wealthy people from the time of the Moguls to this day. The range of symbols is small, the store of memory depleted.[2]

The Bengali Kanthās (Pls. X-XVI) on the other hand have conserved a full treasure. Guided by some of the symbols in these embroideries the meaning is made clear of certain identical symbols on 'early' Indian sculptures and which as yet have not been explained. This refers to two instances, to the 'vardhamāna' symbol and to the spirals carved on the ends of the Toraṇa beams at Sāñci.

Vardhamāna

The Bayton Kanthā illustrated on Pl. XII has the disc of the concentric central Maṇḍala beset with a number of radial devices. These are in more or less regular succession : a number of double spirals, an ellipse,

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1. The oldest version of a textile fabric in terra-cotta, from Kauśāmbī is reproduced for the first time, JISOA 1939, Pl. VII, Fig. 16, the oldest painted version of a painted (or printed) cloth is in Śittaṇṇavāśal. Cf. JISOA 1937, Pl. XXVII.

2. Their appeal to the contemporary Bengali women is shown by Kanthās being embroidered in this century, to look like Kashmir shawls ; a stunted and misled production.

double spirals and a 'standard'. The double spiral symbolises exactly what it shows, i. e. involution and evolution. Double spirals face the standards. In one case, i. e. on the right, upper standard, they are confronted, while the standard on the left has its upper part made of two addorsed double spirals ; the surface between them and the point of the standard are filled with stitches in a contrasting colour. The double spirals and the standard with its point are the main elements of the Vardhamāna symbol.[1] The widest use of this emblem is made in Sāñci, where the railing reliefs of stūpa II (about 110 B. C.) and the Toraṇas of stūpa I assign to it a paramount position. Some Bharhut reliefs have also to be referred to.[2] The double spirals, etc., on the Kanthā, Pl. XII show more clearly than the carved versions, the essential parts of the Vardhamāna. The reliefs make the double spirals appear as if they were the outline only of a peculiar device, which has been called a 'shield device' or 'Śrīvatsa'.[3] But it is not so much the field that matters ; this is secondary. The outlines are the essential components, i.e. the two confronted double spirals,—once they are given serpent shape in Sāñci[4]—and the point of the central staff. A complete Vardhamāna results if the field between the point of the standard on the right in Pl. XII, and the lateral double spirals is seen as one surface. Thus it is carved in the 'early' reliefs : a double spiral on either side of a vertical axis ; the point of the axis higher than the upper volutes of the

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1. Prof. Johnston has dealt with the Vardhamāna, in 'Notes on some Pali words' JRAS, 1931, pp. 588-92 ; Vardhamāna and Śrīvatsa, JRAS, 1932 pp. 393-398 ; and in a subsequent note 'on Vardhamāna again', ibid. p. 690 ; Dr. Coomaraswamy in 'Notes on Indian Coins and Symbols', Ostasiatische Zeitschrift, 1927-28, pp. 180-182 ; in JRAS, Oct. 1931, and in the Harvard Journal of Asiatic Studies, 1939, p. 154, discussing certain Pali words, deals with the Vardhamāna.

2. Other 'early' occurrences of the Vardhamāna have been quoted by Coomaraswamy and Johnston. Re. Sāñcī, see : Marshall and Foucher, The Monuments of Sanchi, 1940, railing of stūpa II : Pls. LXXV ¹b ; LXXXII 40a ; LXXXIII 44c and also LXXXVIII 75b ; XC 83b ; XCI 88a ; and 'leafy' varieties : Pls. LXXIV 3a ; LXXVII 16b, 17b, 19a ; LXXVIII 22a, etc. ; on Toraṇas of stūpa I, apart from the North Toraṇa : Pls. XXXIX, LXIX a ; leafy varieties : Pls XXXVII a, b ; XLIII, etc., LXIV b. Re. Bharhut, cf. Barua, 'Barhut', Pls. XXVII, 23 ; XXXV, 25 ; and Pls. VII and XXVI, 22 for leafy varieties.

3. Foucher, l. c. p. 172, says : "another symbol, the shield or Śrīvatsa, so far enigmatic...". Cf. description of Pl. LXIXa, and also earlier authors, in the various reports ASIAR ; Re. Śrīvatsa, see Coomaraswamy, O. Z., l. c. The double spirals like the svastika belong to the symbols which occur at all times and everywhere. The Vardhamāna is a specially Indian synthesis of double spirals.

4. Marshall-Foucher, op. cit., Pl. LXXXIV 53b.
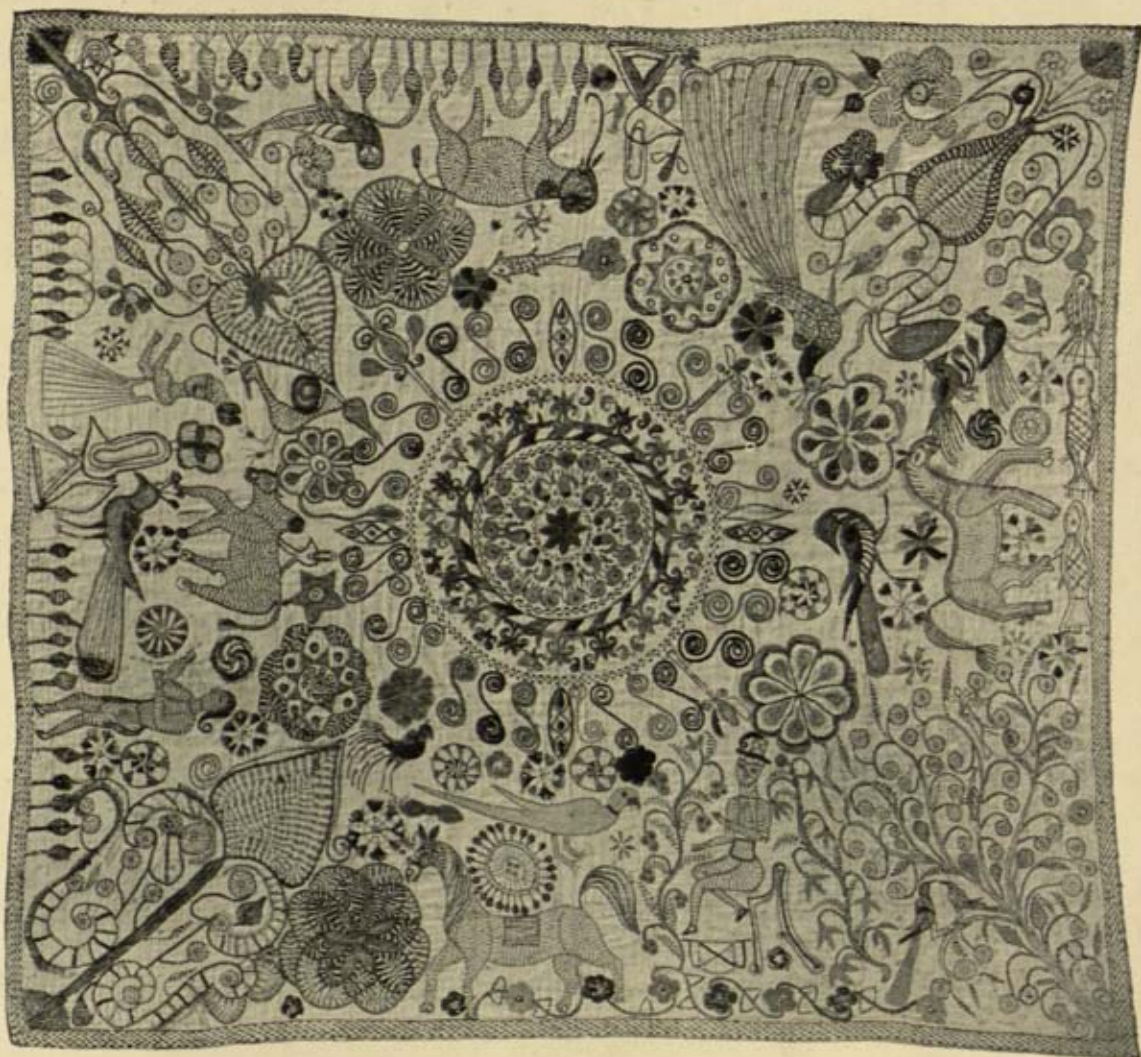
symmetrical double spirals ;[1] the two lower spirals connected by a line which repeats the curve of the upper horizontally connecting curves between the point of the staff and the spirals. This lower, horizontal curve with its central point it sometimes reduced to a yoke-line. The central staff is shown below it, as a handle or shaft of the standard, in Bharhut, (Barua, op. cit. Pls. XXVII, 22 ; XXXV, 25). The latter relief shows four such symbols out of a total of sixteen, the other being eight lotuses and four 'triratnas' around a central lotus, akin in form and disposition to those on the Kanthā.

A relief of the railing of Sāñci, stūpa II (op. cit. Pl. LXXXII 40 a) has thin lines incised on the surface of the Vardhamāna, a vertical line in the centre, and others reminiscent of the veins of a leaf. The Vardhamāna transformed into two lateral, spiral leaves, one upright leaf in the centre, another broad leaf at the bottom, is very frequent in the earlier and later Sāñci reliefs and occurs in many versions ; in half-medallions, or serially in vertical rows ; with or without the ground leaf ;[2] the latter also belongs to other plant-symbols, in Sāñci.

The central upright is the immutable axis, on either side of which the ceaseless process of evolution—involution, manifestation and absorption is figured as a double spiral. The spiral in this case is placed vertically, in the upward direction which is given by the central axis. The entire emblem is called Vardhamāna, i. e. increasing, growing ; it is the symbol of the process of becoming (and un-becoming), along the immutable axis of being, and these two are united in the shape of the emblem, in the early reliefs. The process of growth is shown furthermore by giving the curves a

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1. If it is said that the 'vaddhamānaya' is 'svastikapañcaka' (Johnston, l. c. 1931, p. 591), it refers to the five points of the Vardhamāna, i. e. the four scrolls and the point of the vertical axis ; the 2 upper scrolls and the point of the axis are referred to in the Divyāvadāna, p. 690 (Johnston, 'on Vardhamāna again') when the asterism Puṣya is described as 'tritāram vardhamāna saṃsthānam'. The three stars of the asterism recall the leafy, and also the more purely linear Vardhamānas in which the lower part (the broad bottom leaf) is not shown. Svastikapañcaka does not refer to five svastikas ; it means that the five points of the Vardhamāna are 'svastika' emblems, that 'it is well' (su asti).

2. A half roundel filled with half a lotus often replaces it, and not only in the reliefs, but also in the main bilateral emblem on the Toraṇa of Bharhut, (Barua, l. c. Pl. XVII). This emblem also belongs to the Vardhamāna family. Its central point holds aloft the Cakra.

vegetation body. The zig-zag of crinkled leaves presents them in the process of unfolding ; they are young leaves, growing up and opening.[1]

The Vardhamāna in the early Buddhist monuments is of equal value in position and number with the 'triratna' symbol.[2] The two are shown in juxtaposition (Bharhut, op. cit. Pl. XXXV, 25) or else the Triratna holds the Vardhamāna as its nucleus. This emblem, carved as bilateral relief, crowns symmetrically on either Toraṇa, the north and east gates of stūpa I, Sāñcī. It occupies the centre of the Triśūla and replaces the full extent of its central prong ; the latter is only indicated, a small triangular shape and on its point is balanced the Vardhamāna. The Triśūla stands for triple time (trikāla) ; the Vardhamāna in it fills the present, the moment of 'becoming' ; it is held by and touches upon, past and future. The Triratna symbol shows 1) the Vardhamāna as the centre of 2) the Triśūla, and this emblem is supported 3) by the wheel of the sixteen petalled lotus, in which is implied the presence of all the manifested world, the petals radiating into the four main and the intermediate directions. Everywhere and at all times, at every instant of becoming these standards on the Toraṇas proclaim the doctrine taught by the Buddha, who has gone beyond the ever renewed becoming.

The Triratna standards on top of the highest Toraṇa beam rest on a base. It consists of a rectangular post on a stepped plinth ; on either side a tendril-spiral device, a volute, reaches up to the circle of the lotus rim. The spirals or scrolls on the upper end of these volutes are turned outward towards manifestation ;—the spirals of the Vardhamāna, to the side of the central peak are always turned inward in the process of involution. Some of the leafy variations of the Vardhamāna, in archæological literature called 'palmette' or 'honeysuckle', show sometimes the upper scrolls turned inward, confronted, while in other instances they are turned outward, addorsed. They are emblems of becoming in its complementary stage of evolution and involution, of going out and coming back. In this

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1. 'Vardhamāna' is also the Sanskrit name of the castor oil plant (ricinus communis); it is so called from its rapid growth.

4. 'Triratna' (three jewels) is the name of this symbol ; Foucher, l. c. p. 172 and others call it also 'nandipada' or taurine. We adhere to the name Triratna ; there are three 'jewels', the Cakra, the Triśūla and the Vardhamāna, corresponding to the Buddha, Dharma and Saṃgha.

sense not only vegetation, but also other living signs associate themselves with the double spiral. Today, in Ālpona designs in Bengal the footprints of the Goddess have this shape[1] and they are combined in strict analogy to leafy Vardhamāna variations in Sāñcī, etc.[2]

The spiral

The scroll and spiral, of which the double spiral is the most complete possibility are key shapes of Indian art. The rambling, wavy line which issues from the mouth of elephants or Yakṣas and runs along the entire length of the coping stone of Bharhut[3] and on the lowermost Toraṇa beam on the south gate, etc. in Sāñcī is another variety, the most extensive one, while a third possibility is shown by the discs filled each by a closely winding spiral, as they are carved in pairs, on the end on each face of each of the beams of all Toraṇas, in Sāñcī. Between these two spiral discs, the beam extends curved like a yoke or like the line that connects the two base-spirals of the Vardhamāna emblem.

The convolutions of these two terminal spiral discs, along with the elastic curve of the yoke-like band—it is completely covered with reliefs— may be seen like a photographic film which is being unrolled, in order to show part of it, while the major part remains rolled up on either side. In this way some scenes are exposed to the glance of the pilgrims who come to visit the stūpa. They are a selection only from the vast repertory of scenes, which, one must know, are contained in the rolled up ends, in the spiral discs of the Toraṇa beams.

On the lowest beam of the Toraṇa of stūpa III, Sāñcī, the coils of the spiral are extended into the middle of the beam and terminate with serpent hoods, while part of the serpent body is laid in the waters which

1. A. Tagore, Bānglār Brata, op. cit., Pls. 20, 76, 77, 114 ; five lines or curves stand for the toes ; Pl. 96, shows the footprints on either side of a central field or 'shield' of which the apex is particularly marked with a point, identical with that of the Vardhamāna, in shape, position and meaning.

2. The Vardhamāna is frequent on seals, for instance found in Basarh, cf. ASIAR, 1913-14, Pls. XLVI, 166, etc ; p. 152 ; and also on coins of Arakan ; see : Phayre, Coins of Arakan, Pegu and Burma, Pl. V, 6, 7 ; Pl. II, 10. An Ankuśa is here placed inside the Vardhamāna (cf. Ankuśa as part of coiffure of two terra-cotta figures from Kauśāmbī, JISOA, VII. p. 99). In Ālpona designs a full circle (Bindu) with outer concentric ring lines is inside the field of the Vardhamāna (Bānglār Brata, op. cit. Pl. 98).

3. Kramrisch, Grundzüge der indischen Kunst, 1924, p. 23.

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are carved with small waves and near the terminal discs. The serpent (Ananta) without end is the nearest shape, theriomorphically, to the coils of the spiral.[1] The Toraṇa of Bharhut ends with another emblem of the waters, the Makara. Its tail is turned up as terminal spiral. The Makara is the Vāhana of Varuṇa, and also the cognisance of Kāma. Kāma is the god of love. Varuṇa is Mṛtyu, death.[2] Beginning and end of existence are breathed forth and swallowed up by the wide open jaws of the Makara as they are carved on the Bharhut Toraṇa. Its tail curls up on the end of the Toraṇa beams, and alludes to the spiral. The Makara is considered foremost amongst the monsters and animals of the waters. The water is the symbol of possibilities. The development of the possibilities is figured as spiral ; two of them confronted and turned in opposite directions, show the two extreme possibilities, the entry into manifestation and the return to the dragon's mouth, or to the rolled up and invisible contents of the spiral disc, into the non manifested.

The Kanthās (Pl. X—XVI)

The patched ground of the Kanthās is stitched across with symbols of manifestation. Their manifold reference to the centre has already been shown. A few Kanthās are illustrated on Pls. X-XVI. Their quality and style vary according to the natural endowment of the women who made them. With them also rests the selection of symbols, from the store of memory. The symbols are consistent throughout all Kanthās in existence and in every single Kanthā they are assigned their proper place.

Pl. X.[3] A Sujni Kanthā, 5′ 1″ × 4′ 2″ ; colours : red, blue, yellow, very little green. Pale rose-blue effect on cream ground. The border is strengthened by coloured threads which are drawn all along the edges. A wavy line

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1. The spandrils close to the spiral discs, are almost always filled by the leafy Vardhamāna. These symbols belong together in the world of thinking in pictures and form.

2. Love and death, two forms of one principle, coincide in an intensity of realisation. Cf. Jayadeva, Gītagovinda, 'Love is the tiger who springs on her like Yama (the god of death).' As. Res. III, p. 198 ; re. Makara, see Coomaraswamy, 'An Indian crocodile', Bulletin of the Museum of Fine Arts, XXXIV, pp. 26-27 and 'Yakṣas', Part II, pp. 47-56.

3. The Kanthās illustrated on Pls. X-XVI are from villages in the Jessore District, Bengal. Pl. XVI, Fig. 1 is from Mymensingh.

X III

with circles,[1] the latter marked in the centre with wheel or vortex symbols, frames the field. Lotuses in the corners instead of the usual life trees, interspersed with four small lotuses ; four circles with whirl design outside the central lotus have their reference to the fifth, in the middle of the central lotus.

The symbols are displayed along the diagonals and also along ortﬁﬆﬀﬆﬀ gonals which divide the field of the Kanthā into nine rectangles. Fish and birds are freely distributed along these directions, the two elephants are within the main diagonal zone, the figure of a horse is in the other diagonal. The only human figure—it is placed on the largest elephant—may be Indra if the objects held in his hands are a whip (?) and a net (?). The rider is more likely a spirit[2] and the other elephant and the horse (of blue colour) may be destined for similar rides. Doves, birds of Yama, and other birds, fish as emblems of life and also as abodes of the spirit of the dead, form the constellations on this spacious Kanthā of suspended rhythms.

Pl. XI. Inner field (4′ 2″ × 1′ 9″) of Kanthā, 6′ 4″ × 3′ 10″ ; colours : red, black, very little yellow (middle panel only). Two life trees with lotuses of unequal size on top, grow towards the centre, in the middle of the central field of which the two long sides are occupied by rows of horses and elephants ; intrusion of a horse facing the opposite way, in the row of elephants. Three other horses cut across the central panel, two of them between the lotus tops of the trees, a small one at the bottom of one tree. Birds are perched on the branches, some peck at the flowers and pomegranates and others do not. They all belong to the family of 'sun and moon', Indra and Soma, the two birds who keep on flying round the same tree. One eats the sweet Pippala, the other looks on......on this tree all the birds build their nest (RV. I. 164, 20 ; cf. also the parable of the birds of heaven which rest on the branches of the tree, St. Matthew XIII, 31, 32). The stem of the tree is tripartite, it rises from three roots (cf. Idā and Piṅgalā, Suṣūmṇā in the centre). Re. 'triple root' see also Pl. XV, 1, second marginal border.

The elephants picking up flowers are related to those who carry lotus

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1. Cf. Bharhut, coping stone, etc.
2. JISOA, Vol. VII. p. 101. Re. Indra, cf. RV. III, 33, 11, and AV. VIII, 8, 5,

flowers in Bharhut, the horses on the other side are fed from the same source as the birds ; one bucket for two confronted animals is a frequent symbol in Mediterranean embroideries and other works.[1]

The borders of this Kanthā (only the innermost is shown on Pl. XI) are : 1) Kalkās (see p. 150) laid horizontally and separated by Vajras (cf. XV, 1, second marginal row ; 2) a broad band of circles, each circle made of four lancet leaves ; lotuses in the centre of each circle ; heart shaped leaves between the circles.—Nine leaves (plants) are sacred to Durgā. They are worshipped in the Nāvapatṛka rite.—3) a row of upright Kalkās. 4) a row of concentric circles. The design of this Kanthā is compact, the colours are heavier than those of Pl. X. The technique is similar to that of the Kanthās made by women of the weaver caste (Pl. XV, 1). Large stitches and thick quilting.

Pl. XII. A Bayton Kanthā, 3' × 2' 10". Colours : light red, two shades of indigo blue, yellow and light yellowish green.[2] Central lotus with eight petals ; within the concentric rings : life trees, circles, connected by 'wave' line, whirl, stripes, scroll 'palmettes' (cf. Vardhamāna) ; re. symbols outside of the disc, see p. 153. The four ellipses are each filled with a Vajra, cf. also 'trees' on Pls. XV, 1 ; they too, are Vajras. Three of the four life trees, Pl. XII, consist of various leaf shapes, lancet, Betel and Pipal tree leaves, sacred to Durgā ; the Pipal leaves are the emblem of Ṣaṣṭhī. Small wheels are connected with these leaves, by curves. The tree-candelabra, on the top left, is crowned by a large betel leaf and shows suspended from its 'pinnacle' a lamp (as used in mosques). The candelabra display of the life tree shows a light in the top of the tree in lieu of the sun as the fruit of the tree of life. The small Triśūla configurations within this tree, are summed up in the tree on the right, top corner, with the outline of a cow's skull—a cow's skull is placed at the door before worshipping Caṇḍī. This 'taurine' tree makes a Pipal leave take the place of the skull, the horns end in the shape of banana flowers. Such metamorphoses go on

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1. The whole of this primordial scene has an analogy in one of the engraved silver vases from Maikop, Kuban, (Eremitage), third millennium B. C.—Birds in India frequently rest on the back of horse, elephant, etc.

2. The colours of all the Kanthās (Pls. X-XVI and with the exception of Pl. XV₁) are fast ; indigo, aloe and turmeric, and green (indigo and turmeric).

in this Kanthā; things are connected if their shapes are similar. The fourth tree is of the 'scroll-Kadamba' variety. Late 'Mogul plus Regency', delicate flowers droop from the plants next to it. In its branches sit two birds. Bihaṃgama and Bihaṃgamī[1], a large green parrot,—the Suka who plucked a fruit of the tree of immortality[2]—confronts a gentleman in European dress and perched on a Regency chair.

Besides Durgā (Caṇḍī, Ṣaṣṭhī), the two main divinities whose presence this Kanthā shows, are Indra and Śiva. The large peacock (sahasrākṣa) on one of the life trees, the two horses and the elephant are Indra[3]; Śiva's bull is there and carries on his back the lingam; another lingam stands below, and near the margin. Two human figures, one a Gopa (neat-heard), the other a woman[4] are wedged between the emblems. 'Lotuses', wheel-sun, pentalpha (pañcakoṇa) and whirls, etc., are freely distributed in the crowded field, fish and birds, too (cf. Pl. X and its spacious display); along the edges, a floral creeper, a row of fish; on two adjacent sides leaves are put in a row, each with its stalk, in the process of being connected variously amongst themselves, and also with life tree and bird shapes.

This Kanthā is about a century old; contemporary costume and style find their place amidst the ageless symbols.

Pl. XIII.

1. Corner of Bayton Kanthā, 2' 6" square, colours blue and red; bordered panels along the edges, with life trees in the diagonals and in the four main directions, riders on horse back and elephant. The horses are 'pakṣirājas', kings of birds, for their fleetness. They are placed on either side of a life tree; their riders are the Aśvins, who are day and night, and sun and moon[5]; an oil lamp burns near the one horse; peacocks in the spandrils; '1000' petalled lotus disc in the centre.

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1. They are immortal (cf. L. B. Dey, Folk Tales of Bengal, p. 38). Their young ones are also spoken of. They belong to the same flock of birds as those on the life trees, Pl. XI.

2. Ibid. tale X.

3. One name of Indra is 'Ulūka' the owl. The owl with its yellow moon eyes (Pl. XII), dances,— cf. G. S. Dutt, The Brata dance of Rajghat, Modern Review 1933, p. 646, when Śitalā is besought in the name of Śiva,—close to the thousand eyes of the sun-peacock.

4. Cf. the 'Khopa' in a song quoted by G. S. Dutt, The Tiger's God in Bengal Art, Modern Review 1932, pp. 520-29.

5. Yāska, Nirukta, XII 1, Muir Sanskrit Texts, V, 234.

The crossing curves in the borders indicate interlaced serpents (with their heads shown, in Pl. XIV). This Kanthā is as old as the previous one.

2. Central portion of Kanthā, 3′ 6″ × 1′ 10′ ; colours deep red, and blue. The central hexagon consists of six petalled 'flowers' with seeds or pistils in the inner hexagon. Haṃsas peck at the flowers[1].

3. Bayton Kanthā, 2′ 8″ square ; colours : black, red, yellow, buff. The four irregular fields, each framed by a sari-border weaving pattern, show at the bottom : Durgā slaying Mahiṣāsura. The eight-armed goddess stands on her lion and the demon ; above her high crown Śiva appears riding on his bull. She is accompanied by Lakṣmī and Sarasvatī, Kārttikeya and Gaṇeśa ; the field on the left encompasses a life tree, scroll and spirals and the words :

Anitya saṃsār dekhā	Impermanent is mundane existence behold
Anitya śarīr sthir nāhi	Impermanent the body ; it does not stay,
Hay padma patrer nīr	The water on a lotus leaf.
Haribol Haribol	Say Hari, say Hari,
Harinām satya	The name of Hari is truth,
Saṃsār anitya	Mundane existence is impermanent.
Eai khātār mālik	This Kanthā's owner :
Śrī Hīrālāl Kuṇḍu	Śrī Hīrālāl Kuṇḍu.

Our passing through existence, and the body are impermanent ; they do not stay for ever, as little as water on a lotus leaf. This statement supplements the question which the Dākinī asked Guru Kantalipa. The whole lotus is shown with its 'thousand' petals and the life trees which grow towards the centre. Permanent symbols are stitched into the Kanthā and the dedication on it says why.[2]

Kalkā life trees carry their reduplications in the corners ; they are also in the border along with Vajras filled with 'flowers'. Symbols and images are combined in the field of this Kanthā.

Pl. XIV. 1. Bayton Kanthā, 2′ 11″ square ; colours : light blue, different reds, yellow and green. The narrow, innermost ring of the

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1. Cf. Haṃsas on the drum of Mauryan capitals, for inst. lion capital, Rampurvā.

2. The elephant in the panel on the next side, has ten and a half heads in one line linked up with the saddle—as riders ?—a twelfth head is separately outlined. The twelve Ādityas ? The fourth panel has a rider on a stiff legged horse—possibly a hobby horse on which rides a Bhakta, taking part in a processional dance ; peacock, horse, etc., in the same panel.

XIV

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central lotus holds a row of lamps, threaded along the direction of their flames. This narrative Kanthā has a quick flux of outlines ; the life trees are potentially present and indicated in one corner, by a small palm tree. Some scenes illustrate Bengali myths and the majority is from the Rāmāyana. Each scene as a whole is an emblem, for instance the one at the bottom which illustrates "The lady on the lotus", Kamala Kāminī. The version of this story is given in the Candikā-Maṅgala of Kavikaṅkana Mukundarāma Cakravartī : Dhanapati, a Bengali merchant and worshipper of Śiva, derides the goddess Candī, prior to his departure for Ceylon. He incurs her wrath. All but one of his ships founder in a storm, and when he nears Ceylon, the goddess casts a spell on him. He sees a beautiful maiden seated on a lotus in the waters of Kālīdaha, repeatedly swallowing and vomiting a huge elephant. Dhanapati relates this story to the king of Ceylon, but fails to show to him the maiden and the miracle. Thereupon he is cast into prison.

In his absence his wife has given birth to his son. Śrīmanta grows up, a believer in Candī, sets out on a voyage in search of his father and sees the same vision in the waters of Kālīdaha. He also fails to make the king of Ceylon see it. His execution is ordered. On the execution ground he prays to Candī, the king of Ceylon sees the vision, marries his daughter to Śrīmanta and he and his father return to Bengal, with all their riches.

The Kanthā shows a large 'peacock-winged' boat, a Mayūrapakṣī, with a Makara ending of the hindpart. In the boat are the king of Ceylon— an umbrella is held above his head,—Śrīmanta and oarsmen, behind him. A Kalkā life tree between the two main figures ; below the flag of the boat, a Makara ; on the left the vision of the beautiful maiden and the elephant.

This is an illustration of the initiatory symbol of navigation across the ocean,[1] the psychic domain which has to be crossed in order to come to the end. The Rākṣasī power of Kamala Kāminī, the swallowing and bringing up again of the elephant,: is an image of the perils of sea and psyche.—The Makara and the peacock, which figures here as the Vāhana of Kārttikeya, confirm, and the life tree anticipates

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1. R. Guénon, De la Confusion du Psychique et du Spirituel, Voile d' Isis 1935, p. 89.

and makes present, the end of the journey, the conquest of peace and permanence.

The Rāmāyaṇa scenes : Rāma in his chariot—4 lingas, 2 life trees in the chariot on four four-spoked wheels—and aided by Hanumān ; Rāvaṇa ten headed, the shooting of arrows ; episodes of the story of Kārttikeya, Keśin and his retinue, etc. Bhūtas under a tree, a woman beating a man with a broom, "the woman who beats her son-in-law, the son-in law's father and stands in a coquetish way", surrounded by scorpions, Makaras, centipeds and weird, flying shapes are part of the witches vigil of the psychic domain, which is finally crossed and appeased by the happenings in the stories. They are wreathed around the disc of the lotus, the central and abiding seal.

The four margins contain : a row of fish ; one of life trees, with lamps suspended on them (see also Kanthā Pl. XII), another of three interlaced serpents, the fourth connects scrolls, wave and cross.

Pl. XIV. 2. Bayton Kanthā, 3' 3"×3' 1" ; colours : light red and middle blue. Under each chariot a huge cobra, Śeṣanāga.[2] The large, male figures are possibly messengers of Yama, Yamadūtas, one of them holds a long noose[3]. This Kanthā turns its many figures, and their parts (faces, etc.) 'more geometrico' into circles, squares and rectangles, see also the row of rectangles on top, with two dancers, confronted peacocks, etc.). Few of the wheels embroidered in this Kanthā are those of the cosmic vortex ; all is ordered here and static. Triangular bird shapes, between the lotuses in the row on the left.

Pl. XV.

1. Corner of Kanthā, 6'×4' 3½" ; colours : black and red (not fast colour) ; very little yellow and blue. The names "Sim Tikhir Dāsundarī Devī" are embroidered on the back of the Kanthā. It is a very good example of the work of women of the weaver (Yugī) caste. Black and red divide in bands the shapes of elephants, etc., also of the four-petalled lotuses laid in a ring around the central lotus.

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1. Cf. Verses chanted by beggars ; quoted by G. S. Dutt, The Tiger's God, etc. l. c., p. 525.

2. Every temple site is surrounded by the world serpent, the temple being the world in a likeness. This holds good also for the house. In Bengal, a line representing a snake is drawn around a house...cf. E. A. Gait, Census Report, Bengal, 1902.

3. Bhaktas hold long canes with round loops ; the handle of the loop, on the embroidery shows too strong a curve, for a cane.

The Kalkā life tree is repeated in the outer and inner corners and, in a row, along the margin. The outermost border is one of betel leaves, outlined by involuted spirals; a broader, inner border gives the complement to these scrolls; they are shown by the white ground, between the outer and the inscribed heart-shaped leaf. Heart-shaped are also the petals of the lotuses in the inner ring[1]. Leaf, inverted triangle, heart, they all stand for the presence of Śakti. Different from the Kalkā trees in the border, are those of the tridents, which have a triple root (see Pl. XI) and three branches and alternate Vajra-like, as above, so below, only inverted, with the Kalkās in the marginal band. The water zigzag in the innermost ring is a symbol which also occurs on neolithic objects; it is a weaving pattern and is also seen in the interstices between the male figures and the leaves or cones of life trees forming one of the main lateral rows. The figures have their arms raised and hold aloft some objects, possibly palm leaf fans or Yak tail whisks at the festival of the transplantation of rice, a rite of fertilisation performed by men[2].

The Kanthās made by the women of the Yugi caste are less flexible in their display than all the other types of Kanthās. The self imposed technique leads at times to clashes or omissions (cf. horse, etc., third row of margin) and also to clear and powerful rhythms. This Kanthā may have been used as an 'ulloca' (cf. JISOA 1937 p. 225).

2. Bayton Kanthā (part of), 3' 1" × 2' 11"; colours: blue and red. The life tree is the main theme on this Kanthā. With a prolific number of Kadamba flowers or Cakras, its stem shows the central staff (or current) Caduceus-like straight between the lateral currents. Five more life trees in cusped niches (not all of them shown in this figure) form one broad, lateral band. Another such life tree is inserted into the context of chariot, elephants and human figures. Those forming one group seem to hold branches plucked from the large tree of life.

3. Small panel from a Sujni Kanthā; all the usual colours. Kadamba flowers with fish, bird and human figure. Human figures are very frequently shown with hands raised or lowered, the arms bent in the

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1. Cf. rows of hearts, on Sasanian eighth century metal plates and ewers, (Eremitage); animals with foliate tales, cf. Kanthā on Pl. XII, are also found there.
2. Crooke, Religion and Folklore in Northern India, p. 50.

elbow and these are variations of the standard type, shown in part of a Bayton Kanthā, Pl. XV, 4, the two figures outside the central lotus and between two peacocks ; they are adaptations of the Vajra symbol to the human appearance, and in angular terms[1].

Pl. XVI.

1. Ooār or pillow cover, 1' 10" × 1' 6" ; colours : red, black, bright blue, blue-green and yellow. Iconographically this Kanthā is a synthesis of Śākta and Vaiṣṇava images above, and of the peacock and serpent symbols below, all within the four corners marked by Pipal leaves. They are in the place of life trees and are the emblem of Ṣaṣṭhī ; her Vāhana, the cat, is embroidered near to Kālī-Kāla, Śiva, on whom Kālī dances ; the next group is that of Kṛṣṇa playing the flute and Rādhā by his side standing on separate lotuses, one placed above the other and that of Rādhā is the broader shape and forms the basis of both the divinities. An attendant Gopī standing on a rug with tassels waves a fan.

Pipal leaves connect the upper row of images with the central and lower part. In the centre is the serpent and next to it a tree[2] ; further Pipal leaves are around the two large peacocks. They hold a small serpent in their beaks. Their crowns are connected by a loop and leaf-like shape. Below, near the margin—it is marked by a few black stitches only—there is an ant, one of the shapes of Indra.[3]

The four corners of the Kanthā are occupied by Pipal leaves ; the seemingly free display of some Pipal leaves in the field of the Kanthā is along the diagonals. The actual centre is left vacant. It is surrounded by serpent, leaves and lotuses, all emblems of potentiality and unfoldment, of becoming and manifestation wreathed around the central point, which is not marked but referred to by all the figures and their position.

The two peacocks are but one ; the loop which connects their heads shows it, just as the life trees, in the four corners (Pls. XII, XIII, 3), are illustrations of the one tree of life. The peacocks stand for Indra, the

1. Cf. Ālponas, Bāṅglār Brata, op. cit. Pls. 85-87, with the central axis extended into the lower half of the Vajra.

2. One of the nine plants sacred to Durgā.

3. RV. I. 51. 9. This shape Indra took in his fight against Vṛtra, the serpent.—Or it may be a bee (madhukāra) and also mean Indra.

sun, and hold the serpent, a prey, i. e. passive potentiality which is raised from darkness to the nearness of the active principle ; the serpent appears once more, large and holding the ground near the centre and wearing the crown.

Parkṛti, 'mother earth' and 'nature' in her various symbols, leaf, tree and serpent, surrounds the centre. The serpent upheld by the sun bird ; Kālī who dances on Śiva[1] ; Rādhā by the side of Kṛṣṇa, all these positions and symbols of the female in relation to the ultimate principle are displayed in this small Kanthā[2] and the entire display refers to the centre, the Bindu which is not marked nor given any shape.

2. Bayton Kanthā, 2′6″ × 2′5″ ; colours : deep red, blue, green, orange, yellow. The ground is partly visible in some of the marginal bands only. All the rest is completely covered with embroidery, darning and flat stitches, in the liveliest colours. A change in the inner marginal designs adds to a seemingly bewildering display of well known symbols in their proper places. The central lotus is the seal by which this Kanthā also is marked as belonging to the family of Yantras and Maṇḍalas.

The textile symbolism of the Kanthā is in its white ground ; its patchwork is a reintegration, a restitution of wholeness and order. It is made manifest in the colourful display of the embroidery, in ever present symbols. The coloured threads of the embroidery pass across, strengthen and cover the white ground.

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1. By this contact Kālī evokes, and is charged with Śiva's energy.
2. The name embroidered on the left is : Benal (Bimal) Kāminī. The spelling is defective.

SIMŚUMĀRA—ŚIRAH

by V. S. AGRAWALA

In the Draupadī-svayaṃvara parva of the Mahābhārata, Ādi Parya[1] we find the following śloka :

ततः पारजनाः सर्वे सागरोद्धत निःखनाः ।
शिशुमारपुर' प्राप्य न्यविशंस्ते च पार्थिवाः ॥

I. 176. 15.

The variant readings found in the foot-note to this verse are : K, D, S śiṃ (G₅ śi) śumāra-giriṃ (K₄ "śiram' ; D₄ °śiraḥ').

Thus we have two other readings, viz., 'śiṃśumāra-giriṃ' and 'śiraḥ' from the Mss. The reading in all the printed editions of the Vulgate text is 'śiṃśumāra-śiraḥ. The Kumbakonam edition (Ch. 200. 24) also confirms it. We have therefore to examine the original reading as to whether it was 'śiraḥ', 'puraṃ', or 'giriṃ'.

It seems as if 'giriṃ' and 'puraṃ' were readings better suited for an intelligible meaning. Dr. Sukthankar kindly informed me that he preferred 'śiśumāra-puraṃ' and considered it to be the name of some locality where the 'samāja-vāta' for Draupadī's 'svayaṃvara' was built ; it may have been in the vicinity of the capital of Drupada. The other reading 'śiṃśumāra-giriṃ' appears to be the attempt of some puzzled copyist or commentator, who could make little sense out of 'śiṃśumāra-śiraḥ', and so cut the Gordian knot by changing 'śiraḥ' into 'puraṃ. But such an emendation of the text due to lack of understanding of its meaning cannot be justified.

We therefore submit that the reading 'śiṃśumāra-śiraḥ' as preserved in the Vulgate is correct. 'Śiṃśumāra-śiraḥ' has been used as a synonym for

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1. Published from the Bhandarkar Oriental Research Institute, Poona, under the editorship of V. S. Sukthankar.

'makara-toraṇa', the well known motif of the ancient gateways in Indian architecture. The verse says : "The citizens clamorous like the surging sea, as well as the other kings approached the 'śiṃśumāra-śiraḥ' (the architrave of the gateway adorned with fish-tailed crocodile), and thence entered the arena".

'Siṃśumāra' and 'makara' are synonymous. The head of the fish-tailed Makara occupied the ends of the architrave beams in early Indian art. There is no 'makara-toraṇa' in any of the Sāñcī gateways where only plain spiral volutes are found, but the superstructure of the three architraves of the Bharhut gateway (in the Indian Museum) shows all the twelve faces of the volute ends adorned with the 'makara' motif represented with coiled fish-tail and a gaping mouth ('karāla-mukha'). The school of Mathurā also abounds in 'makara toraṇas'. In the fragments Nos. M. 2. and M. 7, for example, consisting of the end of a 'toraṇa' architrave the curled-up fish-tail of the yawning crocodile follows the curved outline of the stone. (Vogel, Catalogue of the Mathurā Museum). Many other specimens are preserved in the museums at Mathurā and Lucknow.

The 'makara' motif occurs in the art of the Śuṅga period and in the subsequent centuries down to the Kuṣāṇa epoch, roughly from the middle of the second century B. C. to the end of the second century A. D. The mention of the motif in this particular passage of the Mahābhārata incidentally sheds light on the problem of its probable date. The literary tradition of the 'makara-toraṇa' or 'śiṃśumāra-śiraḥ' ante-dates our knowledge of it in the lithic art of the Śuṅga period by several centuries ; it is believed that the patterns executed in stone were preceded by works in wood.

THE ROCK-CUT MONASTERY AT KUNDANE
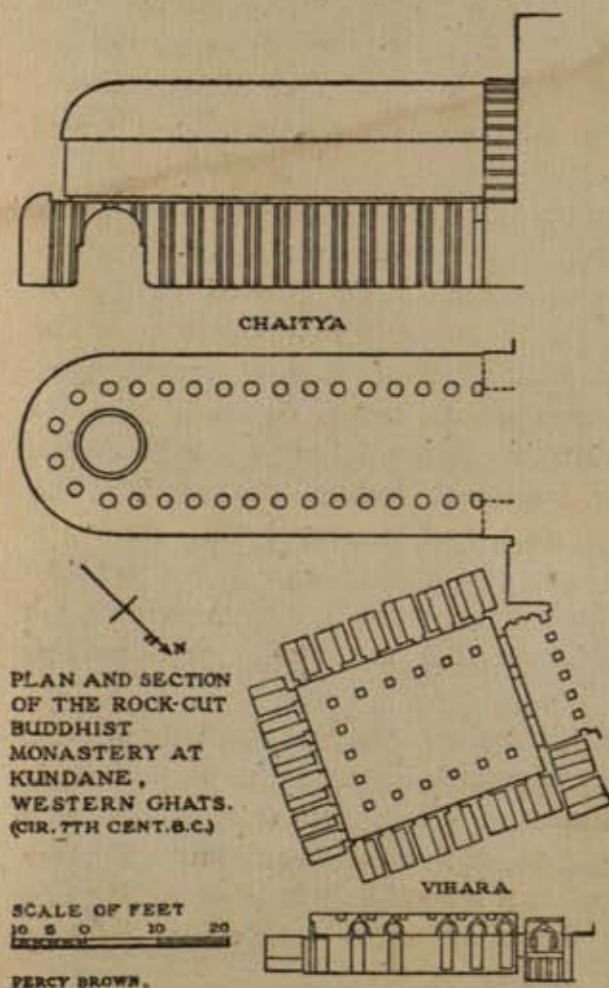
by PERCY BROWN

Deep within the forest of the Western Ghats, approached by only two paths, either the long and arduous one across the undulating plain, or a quick descent down the rugged mountain side, lies the ancient Buddhist monastery of Kundane. One of that early group of excavated retreats produced by the Hīnayāna Buddhists, it was cut in the rock face probably in the 2nd century B. C. and was a living home of a priestly community which was maintained for several centuries. At what date it was finally deserted is not known, but it has no doubt been unoccupied and falling into decay for considerably over a thousand years. Now with the pillars of its columned hall shattered, its facade broken, and its monastic quarters merely a hollow shell, it is but a desolate ruin of what it was in the early centuries of the Christian era when it must have been a very active and thriving religious centre. No hand of man could have reduced this apparently stable production, part of the very mountain itself, to its present broken condition : some natural convulsions of the earth's surface, a series of earthquakes of considerable violence may have broken all its columns and flaked great pieces away from its facade leaving it defaced and ruined. None the less enough remains to enable one to reconstruct this ancient example of the rock-architecture of the Buddhists, and to visualize it when it was originally excavated out of the mountain-side over two thousand years ago.

The monastery at Kundane was a self-contained conventual retreat as it consisted of a caitya hall or temple and its accompanying vihāra for the accommodation of its priestly establishment, which probably numbered about thirty members. It forms one of a group of rock-cut monasteries devoted to the Hīnayāna or earlier form of Buddhist worship which existed in this locality, such as that at Bhaja, Karli and Bedsa, all

now easily approached from Lonavla railway junction, about eighty miles from Bombay. Kundane was however perhaps the most remote or out-lying example of the group, and apparently situated deeper in the forest. Here indeed its congregation fulfilled to the letter as well as the spirit the fundamental principles of monachism, the aim and object being to retire into rocky fastnesses, forest recesses, or lonely deserts, and there for its members to dedicate their lives to the doctrine. No spot could have been more perfect or no surroundings more ideal for a contemplative existence than this rocky abode sheltered by trees in the fastnesses of this extensive mountain range.

As already indicated the monastery as a whole (see plan and section, p. 171) consisted of a pillared temple or caitya hall for religious ceremonial, and by its side another smaller hall, the vihāra, square in plan and surrounded by a series of some twenty cells thus providing dormitories for the resident monks. The dimensions of both these halls are not great. For instance the caitya hall is sixty-six feet long and twenty-six feet wide, while the height up to the crown of its vaulted ceiling is twenty-eight feet. There is an apsidal end

CHAITYA

PLAN AND SECTION
OF THE ROCK-CUT
BUDDHIST
MONASTERY AT
KUNDANE,
WESTERN GHATS.
(CIR. 7TH CENT. B.C.)

SCALE OF FEET
10 5 0   10   20

PERCY BROWN.

VIHARA

containing the stūpa and the whole area is divided into a nave and aisles by a colonnade of thirty pillars, octagonal in section and without capitals. It will be seen therefore that not only in proportions but also in the general disposal of its parts it is not dissimilar to a Gothic village church in England.

As to the vihāra the central hall is a flat-roofed rectangular compartment twenty-three feet wide by twenty-nine feet deep, with a height of a little over eight feet. Leading out of the three interior sides are the ranges of cells each containing a rock-cut bed, as do all the cells in the monasteries of this early phase. But where this particular vihāra differs from all the other examples of its period is that the central hall contained a colonnade of fifteen pillars dividing the entire space into a form of nave and aisles. It was almost the invariable practice for the vihāras of the Hīnayāna sect to be astylar in design, no interior pillars being provided, but in this instance such a convention has not been observed. In all other respects this vihāra is laid out according to type.

Such are the dimensions and general disposition of this rock-cut monastery as a whole, but its architectural treatment especially of the facade is of more than ordinary interest (Pl. XVII). Taking first of all the exterior of the caitya hall it will be found that this consists of the usual large horse-shoe archway (caitya arch) filled in with curved transomes of wood leaving semi-lunar openings, while on each side is a projecting and enclosed balcony of intricate design. Except for the curved transomes of wood of which only fragments remain, the whole of this facade is carved out of the living rock, and moreover this carving is executed in a most dexterous manner equal in technique if not superior to any other example. There is little figure-work or ornamentation, but the actual patterning and chiselling show that those who produced this facade were adepts at their art.

But where this facade is most instructive is the fact that it reproduces in the rock with more than ordinary faithfulness wooden forms, permanent copies of the style of timber architecture which flourished at this early time. And is was timber construction of a most interesting character, its design and execution indicating that a notable school of architecture in wood prevailed in India long before any other methods of building-construction in masonry were even thought of.

It should be mentioned that although in the course of over two thousand years the actual wood-work of this period has disappeared, a few rare examples have survived. Buried deep in the silt at Kumrahar near the modern town of Patna wooden platforms have been brought to light forming some portions of the Mauryan emperors' palace at
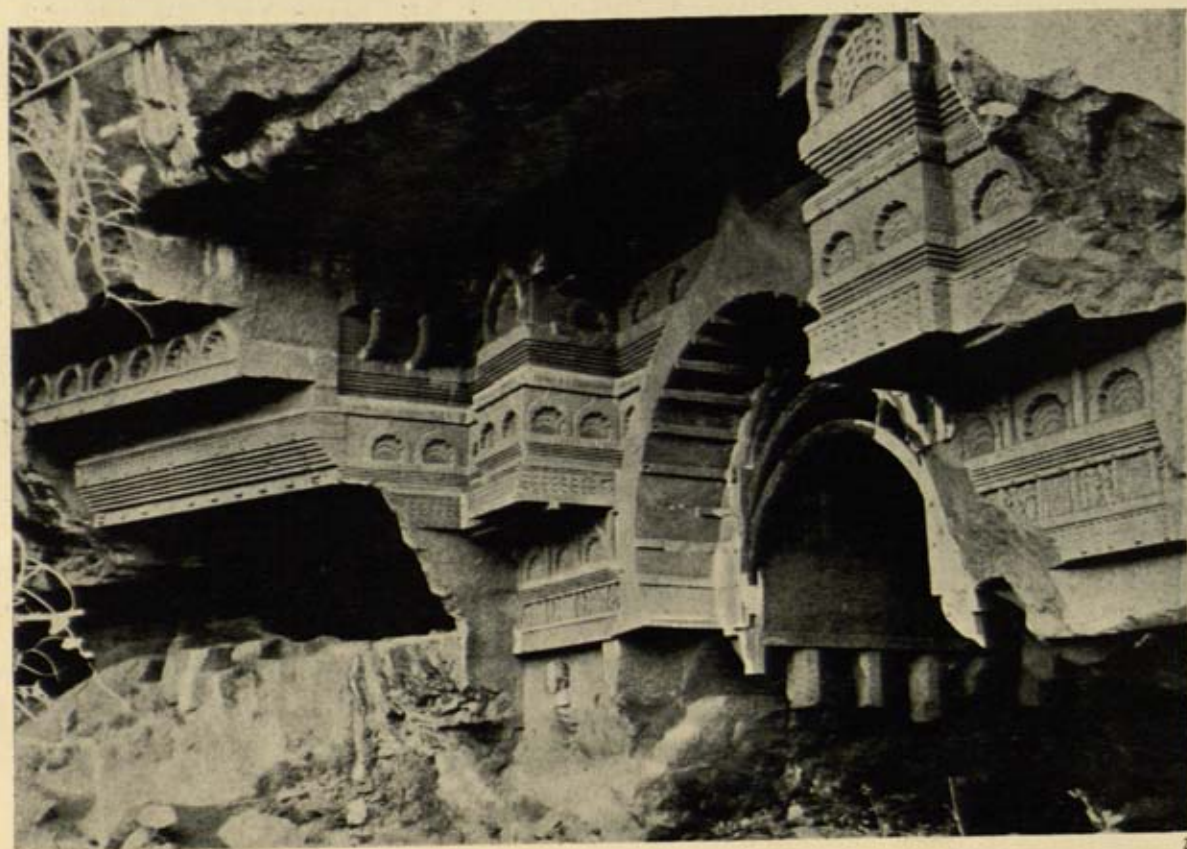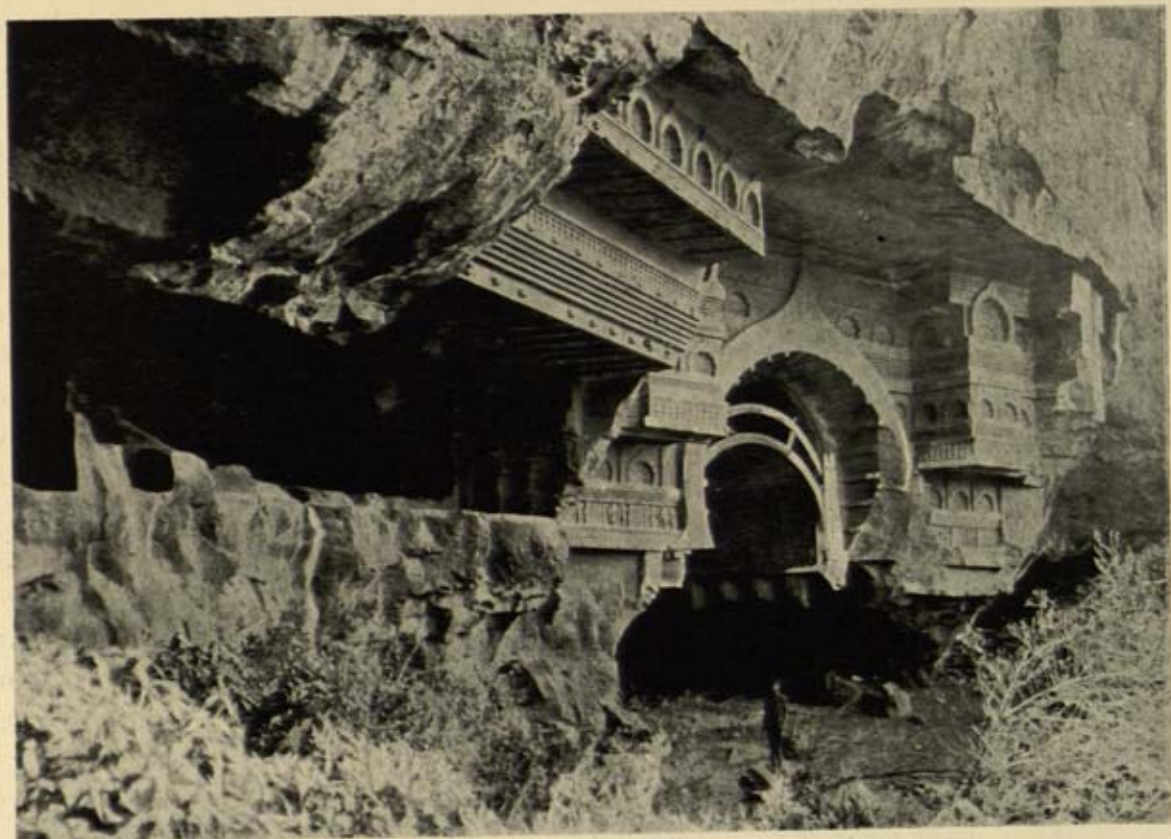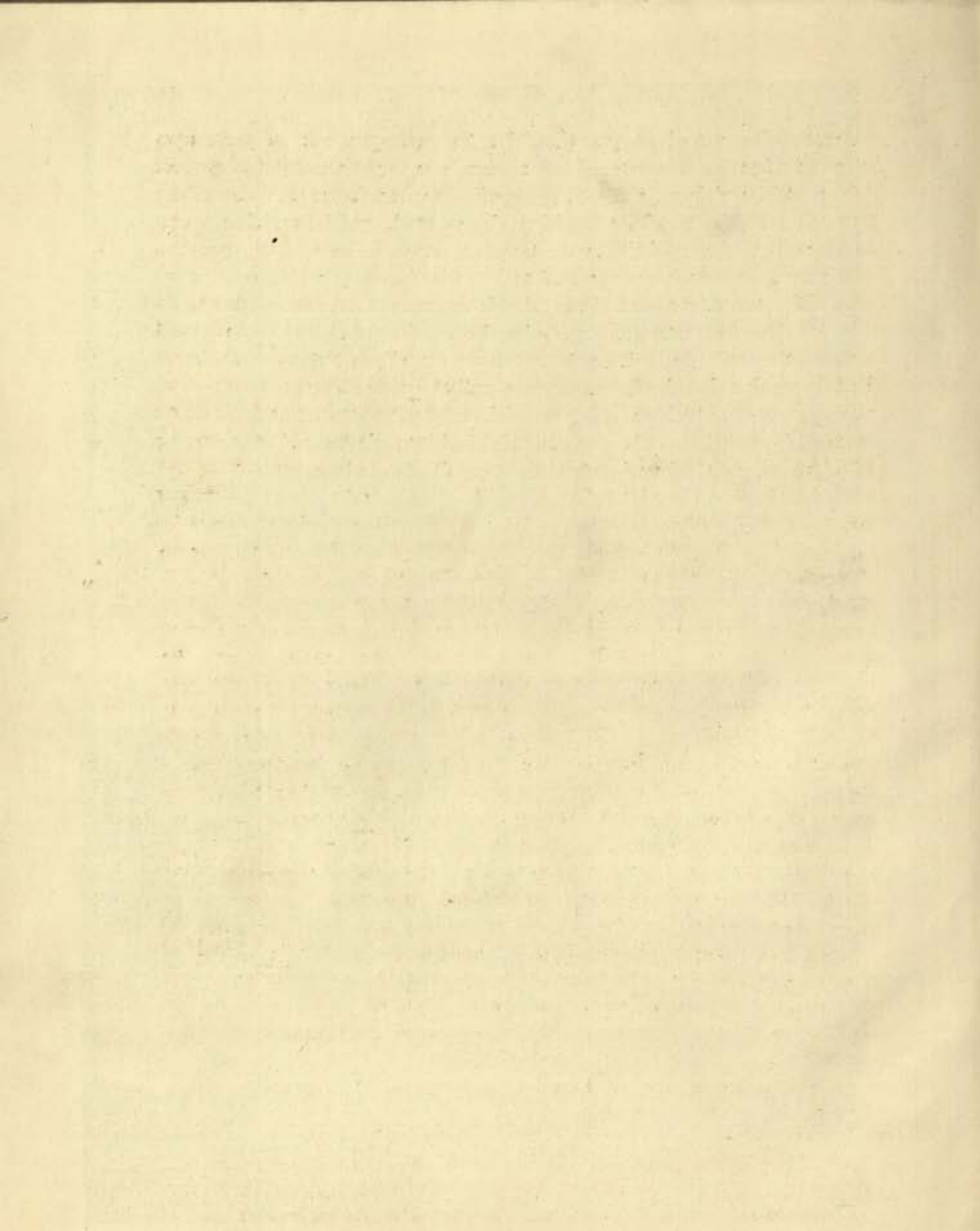
Pāṭaliputra of the third century B. C. showing evidences of more than ordinary technical experience. Composed of beams jointed together "with a precision and reasoned care that would not possibly be excelled", they illustrate "the absolute perfection of such work and those who executed them would find little indeed to learn in the field of their own art, could they return to earth today".[1]

And it is quite clear from the reproductions of wooden forms in the rock that not only were the craftsmen of this era skilled carpenters and joiners, but their architecture was in a style having great elegance. Perhaps on account of its religious or ritualistic significance the designers re-iterated one particular element, the horse-shoe arch motif. On the other hand the devices and expedients illustrated in the Kundane façade, the hanging balconies, the curved brackets, and, above all, the trellis work anticipating by a thousand years the 'moushrabiya' of the Arabs, are also admirably produced, some of it obviously imitating interlaced bamboo.

Of the larger forms of its architecture much might be said ; some of these were probably accessories in wood attached to the lower portion of the main archway which have perished, and what remains of the pillars shows that these possessed a definite inward slope, or rake, a proof of their early date. That these columns have all broken may have been due to their somewhat slender proportions, a defect that was corrected in some of the later productions as may be seen in the massive and substantial piers so closely set in the caitya hall at Karli. Inside the vaulted hall are the sockets which at one time held the curved wooden braces of the roof, and some of the flat surfaces of the walls may have been prepared for mural paintings, of which there are however now no trace.

Turning to the front elevation of the vihāra this also contains many interesting features. Unfortunately it is very seriously damaged but enough has survived to enable its original appearance to be readily conjectured. Apart from the pillars in its interior hall, there was originally a row of five pillars in antis forming its facade, above which was a massive projecting cornice in two tiers with the details and construction of its wooden prototype most accurately rendered. The ceiling joists may be seen jointed through the main beam and other structural

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1. Archaeological Survey of India Report 1912-3, p. 76.

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expedients of the carpenter, all faithfully copied by the rock-cutter but serving no practical purpose except to illustrate the irresistibility of tradition. This exterior row of columns led to a verandah within which was a wall containing three openings, the central one being the entrance doorway with a window on either side. All these portions seem to have been tolerably plain, the pillars having no capitals, and their shafts being merely chamfered, although the flat walls inside the verandah may have been decorated with mural paintings. On the end wall of this verandah however there is an architectural carving of some significance as it seems to represent a stūpa within a vaulted and columned hall, reproduced according to the pictorial conventions of that period. Here depicted in bas relief may be supplementary evidence of the architectural and other arrangements of these ancient temples of the early Buddhist period.

A PAINTED CEILING

by ST. KRAMRISCH

The Pañcatantra has been called one of the world's most famous books. More than two hundred different versions exist in over fifty languages. A genealogical table[1] shows the main recensions, translations and editions of 'the five (fold) warp'—this being the literal translation,—of the Pañcatantra. The original Sanskrit text is lost.

The actors of the stories are mainly animals. A maxim which introduces and a moral which finishes the fables, shows some of the later and preserved Indian versions as guides in moral conduct and political wisdom. Language and acts of the animals appear to conform with the mentality of men of the world. The animals retain their animal appearance and behave like men ; while they act in this way in many countries and during about two thousand years or more, their original nature remains intact ; in the protective disguise of clever acting they remain the ideograms (ālekhya) or illustrations of a meaning which they safeguard.

Some of the Pañcatantra stories are figured on a painted ceiling of a Maṇḍapa of a Viṣṇu temple, 'Chhoti Kachari' at Madanpur in the Lalitpur District, C. I.[2] The temple was built during the reign of Madana Varma, 1130-1165 A. D. and the paintings were added most probably shortly after the completion of the building[3] and approximately at

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1. Compiled by F. Edgerton, in 'The Ocean of Story' Vol. V. facing p. 242.

2. P. C. Mukherji, Report on the Antiquities in the District of Lalitpur, Roorkee, 1899.

3. In style they are more closely related to western Indian miniature paintings of the twelfth to fourteenth centuries than to those of the 15th century (see W. Norman Brown, Stylistic varieties of early western Indian miniature paintings, JISOA 1937, Pls. I-IV). The dating of Indian wall paintings of these centuries must as yet be tentative. In south India, the earlier layer of paintings, at Tiruparuttikunram and the second layer of paintings at Tirumalai (JISOA. 1937, p. 220) have certain affinities, the former in costume, the latter with regard to some of the human figures (cf. ibid. Pl. XXXI, Fig. 2, the Sādhus, with the fowler on Pl. XVIII, Fig. 2 of the Chhoti Kachari paintings).

the time when the tales were translated into Latin by John of Capua in the thirteenth century under the title 'Directorium Vitae Humanae'. The flying Vidyādharas in the central field of the ceiling (Pl. XVIII, Fig. 1) to which the Pañcatantra scenes (Pls. XVIII, Fig. 2 ; XIX, Fig. 2) are adjacent, show their place in a higher region than that of human life.[1] The painted fables are not allegories with a moral intention.[1] They are pictograms exposing in marginal annotations the contents of the central panel. Only the western half of the painted ceiling is preserved above the entrance (Maṇḍapa on the left, Pl. XIX, Fig. 1). The central rectangular field contains a lotus which fills the width of the panel. The petals (eight and sixteen) are grouped in three rings or enclosures around the central circle. The identity of this lotus is easily seen with those in the centre of the Kanthās, and also with the carved lotuses on the stone ceilings of contemporary and earlier temples in central India. Flying Vidyādharas are balanced in horizontal movement and fill the remaining part of the rectangle as far as it is preserved. The peacocks between lotus and Vidyādharas —one has a serpent in its beak—have a stodgy appearance. Their symbolism is the same as on the Kanthās (p. 167). The rectangle is edged by a lotus circle border.

The Pañcatantra scenes are on the underside of the southern architrave ; they are partly in a precarious condition.[2] They are painted in earth colours, ochres, brown and black ; the outlines are black or brown, the ground white.

Several Pañcatantra versions are preserved from about the tenth century A. D. onwards. Stories which occur in the Pañcatantra are also to be found in the Jātakas[3] while Pañcatantra scenes are also figured on brick plaques on the temple of Paharpur, Bengal, of the tenth century approximately.[4]

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1. The woodcuts in 'La Moral Filosofia' by A. F. Doni, Venice 1552, show personified abstractions in illustration of the moral which the author permits himself to draw from the fables.

2. A few scenes could not be photographed at all—they are half hidden by the bracket capital— or in part only ; Mukherji, op. cit. enumerates the figures in the fourteen scenes. (There are 15 scenes). His description is not always correct and the scenes are not identified by him.

3. Cf. A. K. Coomaraswamy, Miniatures from Turkish and Persian Books of Fables, B. M. F. A. (Boston) XXVI, pp. 89-91.
   The 'origin' of the stories remains unknown. They are preserved in the mind of the people today as most probably at all times of which we know historically and, no doubt, also before that time. Cf. W. N. Brown, Pañcatantra in modern Indian folklore, JAOS, Vol. XXXIX, pp. 1-54.

4. K. N. Dikshit, Excavation at Paharpur, A S. I. Memoir 55, p. 63. Pls. XLIII, LII, etc.
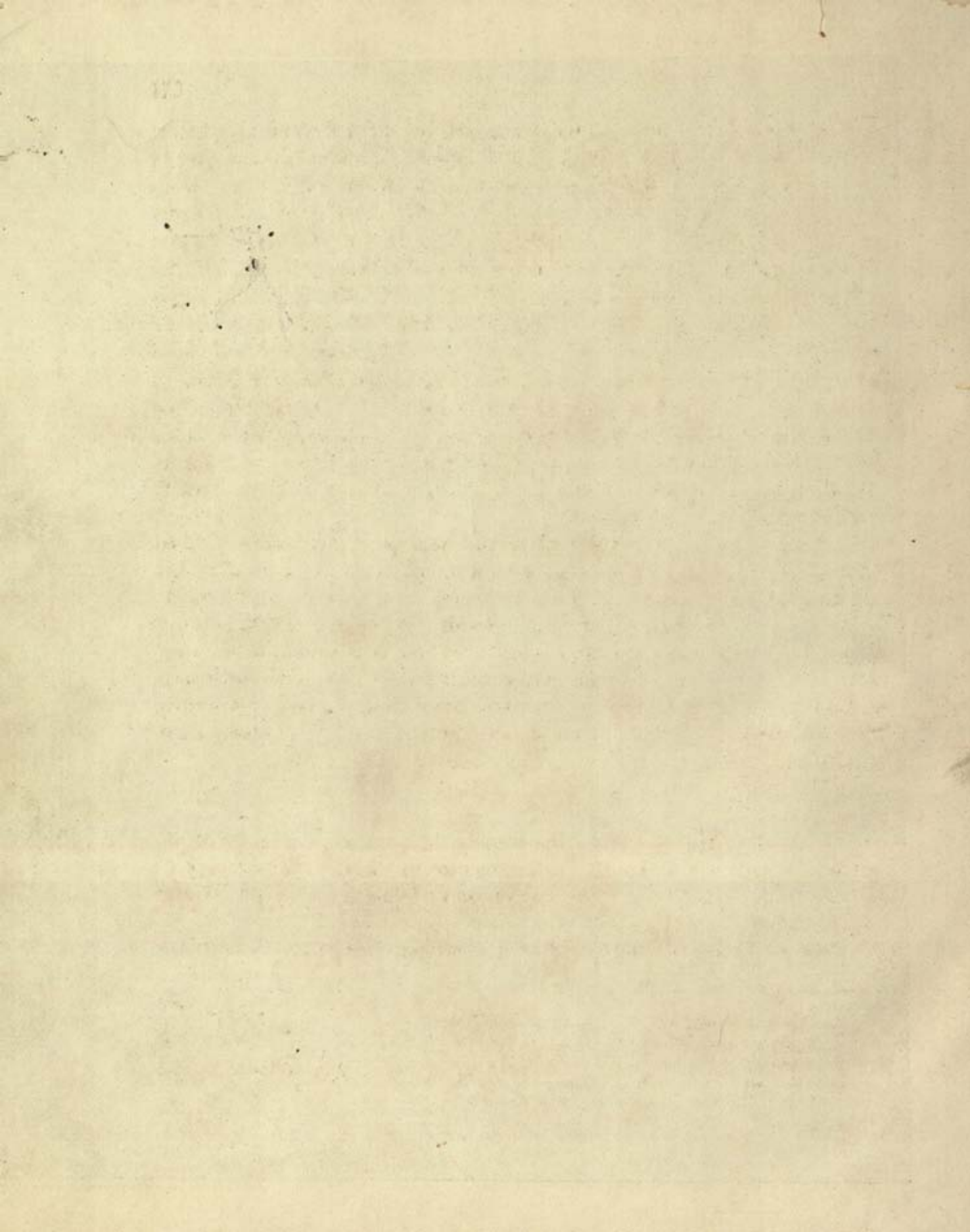
The stories are illustrated in bordered panels by presenting the main actors in the most important moments. No accessory figures are introduced and no setting of any kind. Balance is established within the painted fields by circles, squares and leafy scrolls; their size depends on the weight which has to be thrown in for the stabilisation of the acting figures. Their seemingly powerful movements, as that of the fowler (Pl. XVIII, Fig. 2, second panel from right), are descriptive statements of the part they play and belong to the figure as actor; the movements do not exceed the figures in the rhythm of the painted panel. The heftiness which is in the movements is inherent also in figures without action and in the form of the symbols; for instance in the stem and top of the tree, next to the agitated figure of the fowler, and also in the correspondingly squat lotus half roundel in the adjacent panel. The fowler is the centre of his sphere of action and this is dotted by flowers, lozenges, etc., in a circle around his figure.[1]

Each of the flying Vidyādharas in the main panel is equally confined to the field of his activity. A pattern of interlaced and inverted arches results from the symmetry of the two figures. The arches lie flat in the horizontal and open towards the top, towards the central lotus. Their cup shape is repeated by the fluttering scarves. These are bent upwards, with Sasanian reminiscences and their flutter too, is staid, for the open cups held aloft by their ends are carried by narrowed bands; no fanfare arises from these trumpets. They are instruments of a potent silence. Similarly staid are the lotus petals in the triple circular enclosure in the centre.

The scenes, beginning on Pl. XVIII, Fig. 2 and read from left to right are :

1. Upper part of panel : the serpent Mandavisarpa who bites to death the son of a Brahmin. This refers to the story of the 'old serpent and the frogs', Pañcatantra (Tantrākhyāyika) III, tale X; Kathāsaritsāgara V, p. 112[2], Hitopadeśa IV, 12.

An old snake, unable to catch frogs remained motionless. The frogs,

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1. Raised arms and head, running legs and pendent end of 'dhoti' show this figure also based on the Vajra—ideogram, embroidered with the meaning of 'human shape' in Kanthās (Pl. XV, Fig. 4) and drawn most clearly in Ālponas.

2. The references are to the Pañcatantra, ed. Hertel, Harvard Or. Series, Vol. XIV and to the 'Ocean of Story', Tawney's translation of the Kathāsaritsāgara.

from a safe distance ask : Why do you no longer eat frogs ? The serpent replies that while pursuing a frog one day he bit a Brahmin and he died. By the Brahmin's father's curse the snake was made a 'bearer of frogs'. The king of the frogs when hearing this allows himself and his ministers to be carried about by the serpent. The serpent, exhausted by this labour asks for food, the king permits his followers to be eaten up by the snake, blinded with pride at being carried about by a serpent.

The panel illustrates the prelude only. Its consequence is the Brahmin's curse. That this action and its consequence are invented as a ruse by the serpent, the illustration does not show, nor by what food the hunger of the serpent and the vanity of the king are being satisfied.

The death of the son of a Brahmin and his father's curse set off the absurd vanity of the king. It is correct in its own dark sphere because it is successful—success being the standard by which things are measured there, among reptiles and amphibia.—The serpent figures here in his malign aspect.

2. The scene below, shows a crab cutting off the head of a bird and illustrates the tale of 'heron, fishes and crab', Pañcatantra I, tale V, and its version in the Kathāsaritsāgara (The Ocean of Story) Vol. V. p. 48. The same subject is the theme of the Baka Jātaka (Vol. I, Jāt. 38).

The bird (crane or heron) offers itself as a carrier to the crab, to some better lake, whither he says he has already taken the fish of that lake so that they should not be caught by the fisherman. This ruse of the old bird to devour the crab does not succeed. The crab allowing himself to be carried by the bird, on being put down, cuts off its head.

In the Kathāsaritsāgara and other versions, the crab is replaced by the Makara. The crab (karkaṭa) is the sign cancer. The Makara is the constellation of capricorn. These are the two solstitial doors of heaven. The 'door of men' corresponds to the summer solstice with the zodiacal sign of cancer.[1] The door of the gods corresponds to the zodiacal sign of capricorn. The painting shows the crab, and not the Makara.[2] The crane (baka) is a bird of cunning and deceit, a 'dark' bird, like the crow (vṛka),

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1. The doors lead to the Devayāna and the Pitṛyāna, to the Uttarāyana and the Dakṣiṇāyana, to the day and night of gods. cf. RV. I, 183, 6 ; 184, 6 ; R. Guénon, Symbolisme du Zodiaque chez les Pythagoriciens, Etudes Traditionelles 1938, pp. 224-230.

2. The Ocean of Story, p. 48, footnote 1, remarks that the Makara in the versions of this tale is 'nearly always taken to mean a crab'.

the bird of the dark night, i. e. when the sun takes the downward course on passing the sign of cancer, the summer solstice.

3. A bird, somewhat similar to the one in scene 2 occupies the upper left corner, a seated monkey the lower right part of this panel. The monkey holds an indistinct object in his left hand. This scene refers to the fable of the 'monkey, glow-worm and bird', Pañcatantra I, tale XIV, Kathāsarit-sāgara, Vol. V, p. 58.

Monkeys try to warm themselves in the cold weather at a firefly. A bird points out to the monkey when he tries to fan the firefly with his breath, that it is not fire, but a firefly. The ape is annoyed and throws a stone at the bird which crushes him.—The object in the hand of the monkey seems to be the stone.

4. An animal with equine legs, feline face and a spotted coat, in a prancing attitude. A disc on the right (cf. also scene 2, bottom, etc.).

Cf. "The ass in the panther's skin",[1] Pañcatantra III, tale I, Kathāsarit-sāgara, Vol. V. p. 99 ; Hitopadeśa III, 3 ; Sīhacamma Jātaka (Jāt. No. 189 ; Vol. II, p. 76).

5. A dark man of low caste stands on the left. He holds a small bird in his right, his pendent left holds a net (?). He faces a seated woman, whose right hand is raised in 'vitarka mudrā' ; the left hand and the lower part of the woman are not sufficiently clear in the present condition of the painting, to allow any further identification.[2]

6. A large tree on the left, a bird peeping out (from its nest), a dark man rushes towards it. "There was in a certain forest region a great Śālmali tree, and in it there lived a crow, named Laghupātin (quickly flying), who had made his dwelling there. One day, as he was in his nest, he saw below the tree a terrible-looking man arrive, the fowler". Kathā-saritsāgara Vol. V. p. 73, Pañcatantra, frame story of second Tantra ; Hitopadeśa, Chapter one, first tale.

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1. Lion and tiger, panther and leopard are blended in 'pictures' of these animals in Indian sculptures and paintings.
  The vertical shape on the right, above the hoof and across the disc is not clear (a blemish ?). The paintings have not been cleaned and stand in need of conservation.
2. The panel may refer to the 'story of a wife who falsely accused her husband of murdering a Bhilla.' Kathāsaritsāgara, Vol. V, p. 81. The wife is described as a beautiful woman, she elopes with

7. A river cuts across the panel with a sinuous vertical band. On the right a loaded man (only part of his figure is to be seen on Pl. XVIII, Fig. 2). On the left, a naked woman, squatting, a jackal, a fish, a bird a 'piece of meat'. These figures faithfully illustrate the story of the 'adulteress tricked by her paramour'.[1] A villager's wife is tempted to run away from her husband, and carry off his wealth. When she arrives, with her gallant, at a river, he persuades her to entrust him with the property, and her clothes, to convey them across ; after which he is to return to her. This, however, he omits to do, and she is deserted. In this state she sees a jackal, approach with a piece of meat in his mouth. The jackal, seeing a fish on the edge of the water, lays down the meat, to make the fish his prey ; the fish escapes, and, in the meantime, a vulture carries off the meat. The deserted wife laughs at the incident, when the jackal thus applies it to herself ; 'Your wisdom is double that of mine ; for here you are, naked in (near) the water, and have neither a husband, nor a gallant.'

The subsequent scenes (8-9) are half hidden by the capital.[2] Pl. XIX. Fig. 2 begins with part of a panel in which the figure of a woman is to be seen.

10. The next scene illustrates the 'ass as singer'.[3] A washerman's ass rambles about at night and meets a jackal. They break into enclosures and feed on their contents. The ass is so happy that it must sing a song. The jackal reprimands him, stealing is done in silence ; moreover, the

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the dark Bhilla. In the evening the Bhilla returns from hunting..or else, the female figure may be the Goddess Bhavāni—if her Vāhana, the lion can be discerned crouching below her. The Bhilla means to offer the husband to the goddess, the next morning.—The eyes of the figures in this panel are painted in the original in a manner corresponding to those of the Vidyādharas, Pl. XVIII, 1. This can not be discerned in the reproduction.

1. Only a part of this scene could be photographed. It suffices for the identification of the story.

The story is quoted by H. H. Wilson, as the ninth tale of the fourth section of the Pañcatantra ; pp. 46-47, in "Essays on Sanskrit Literature" Vol. II, London 1864. Wilson used three copies of the Pañcatantra, one procured in Calcutta, the others in Benares (l. c. p. 5). Cf. the account given of the chief recensions of the Pañcatantra, in the 'Ocean of Story' Vol. V, Appendix I, pp. 209-14.

2. Mukherji, l. c. describes them as a man holding a flower, and a woman beaten by a man. This may be referred to Hitopadeśa II, Tale VI, 'the adventures of Kandarpaketu' where a cow keeper, on having found his wife consulting with a procuress, gives her a good beating.

3. Wilson, l.c., p. 65.

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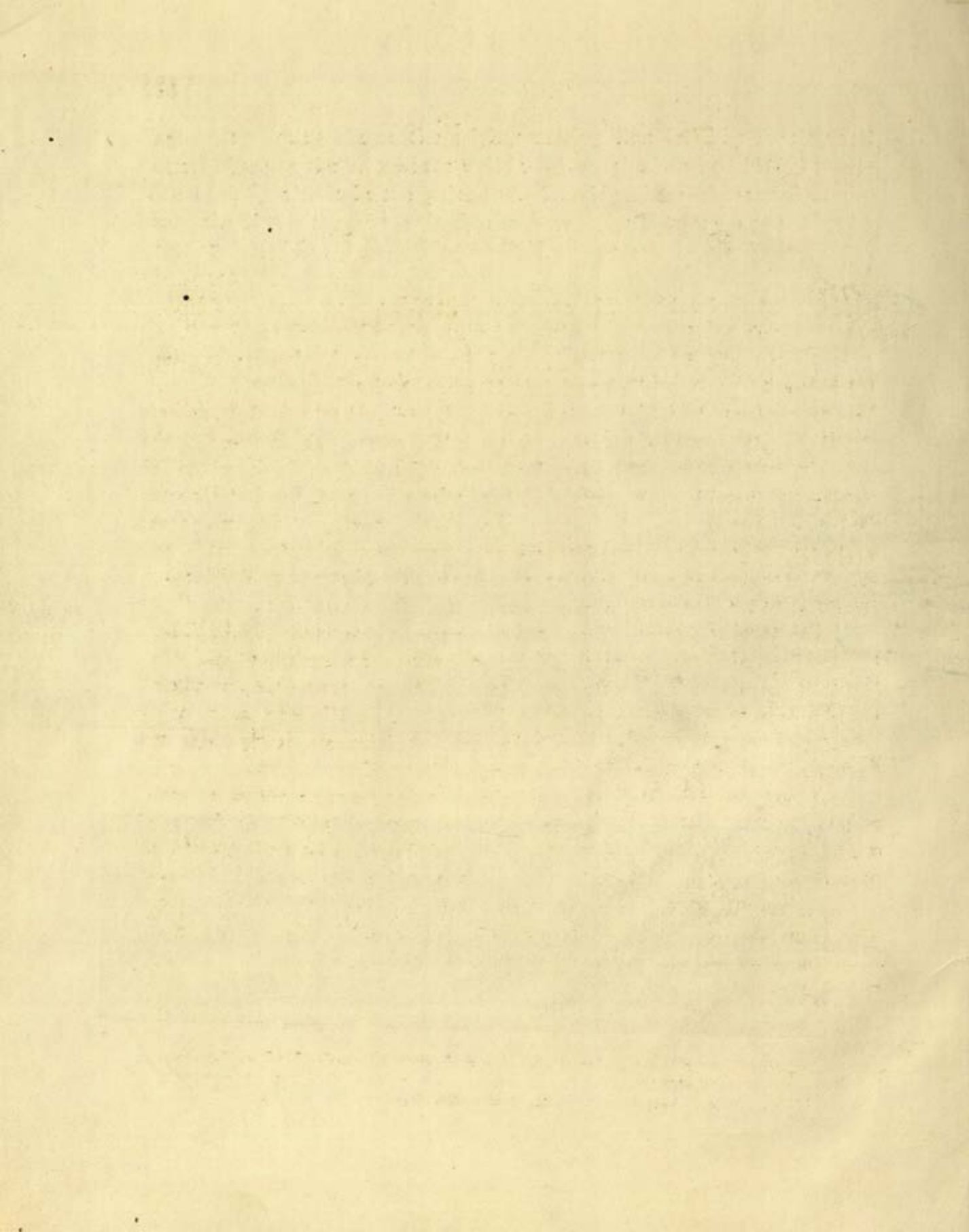
voice of the ass is abominable. Uddhata, the ass feels hurt and the jackal suggests that he would go to the door of the garden so that he could see the gardener should he come. The jackal having provided for his own safety, the ass begins his chant. The gardener is awakened, comes to the spot and ties the ass by one of his legs, to a post. The panel shows the conceited ass, his right hind leg is tied to a post.[1] Circular devices balance the panel.

11. A seated man, one hand raised to his head, the other rests on his knee. A tree on either side, on top. He sits on a cushioned seat.[2]

Scenes with human actors are interpolated into the animal scenes and the examples set by their actions are not direct symbols. Similarly, human figures had been interpolated into the vegetation symbolism in the reliefs in Sāñci, stūpa II, and to a greater extent in Bharhut. They are concessions to those who are not in a position to understand the language of the animals or the form of the plants, and lead them to an approach for which they are prepared. On the other hand, these scenes are no disturbing elements. They refer to the course of the world such as it is. They have also their place amongst the scenes of the marginal frieze of the main painting with its unfolded central lotus.

12. A pure emblem however is the scene of the 'lion and the hare.' It illustrates one of the most widely spread myths (Pañcatantra, I, Tale VI ; Kathāsaritsāgara, Vol. V. p. 49 ; Hitopadeśa II. Tale 9 ; re. the many versions in the vernacular literature, see W. N. Brown, l. c., JAOS. 1919, pp. 22-28). There are several brick plaques showing the lion looking into the well, in Paharpur (op. cit., Pl. LII d, for example).

A lion killed all the other animals. They propose to send him one animal every day for his dinner. The hare, on the day allotted to him, is late and apologizes to the lion saying he had been detained on the road, by another lion. The lion, anxious to see this second lion follows the hare to a well, roaring with anger, and seeing his own reflection in the clean water, and hearing the echo of his own roar, thinking that there was a rival lion there roaring louder than himself, he threw himself in a rage into the well.

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1. The position and shape of the legs is very similar to that of the ass in the panther's skin Pl. XVIII. Fig. 2, fourth scene.

2. No identification is possible in the present state of the painting.

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The painting shows the mighty roaring lion faced by the tiny and intrepid hare on the brim of the well in which the lion beholds his reflection (faintly visible in the painting). Leaving alone the moral of the story, the lion is the sun animal, the hare belongs to the moon. In the painting the mighty lion holds the field, above and below the surface of the water.

13. A monkey crouching below a tree. He holds a long tube to his mouth. The other end of the tube is in the pond, painted in the lower part of the panel. A second tree helps to frame the drinking monkey, of whom the Nalapāna Jātaka (Jātaka 20, Vol. I) tells in a more succinct way than the Pañcatantra (V. 8) : A demon in the pond devoured all creatures which touched the water. The monkey does not touch the water, he drinks it with the help of a hollowed cane (in the Jātaka and in the painted version) or, out of a tube made of leaves, according to the Pañcatantra version.

14. A seated figure seems to have caught a bird in a loop[1].

15. The figures in this panel are painted upside down, one figure can be discerned on one side of a river, the rest is blurred.[2] Re. river, see Pl. XVIII, 2.

The paintings on the ceiling of the Maṇḍapa of the ruined Viṣṇu temple at Madanpur are the sole vestiges known hitherto of wall paintings in central India. The fables illustrated on Pls. XVIII and XIX are only a part of the original frieze near the main field. In this position they do not teach morality and the conduct of human life for its own ends. They show it in its proper place, bordering upon and connected with the flight of the Vidyādharas, an offering of garlands, actions and meanings ordered to the attainment of the centre in the lotus.

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1. Cf. Jātaka 118. A quail being caught by a fowler starves itself till no one will buy it, and in the end escapes.—The figure in the loop, etc., are not clear enough to be definitely identified.

2. This panel has not been reproduced.

SCULPTURES FROM KOTYARKA

by M. R. MAJMUDAR

The ruined shrine of Koṭyarka stands on the top of a hillock at the village Khaḍāt-mahuḍi in the Vijāpur Tālukā to the north-east of Gujarat, in Baroda State. It is situated on the right bank of the Sābarmati or the ancient Śvabhrā of the Purāṇas and commands the view of the Saṃgama with the river Hāthmati from the high mound.

The remains of the temple belong to different periods. As the name suggests, originally it may have been a Sun-temple ; there is a 'kuṇḍa' in the vicinity known as Sūryakuṇḍa. Sun-worship, we know, was eventually overshadowed by that of Viṣṇu, one of the twelve names of Āditya (Ādityānām ahaṃ Viṣṇuḥ), that all pervading God who traverses the three worlds. Marble images of Viṣṇu of the mediaeval period of Hindu sculpture are found strewn over the ruins.

The surrounding territory is studded with hills and is full of forests and fertile valleys watered by great rivers and lakes ; old monuments abound, temples, sanctuaries of departed heroes and step-wells. The valley formed by the confluence of Sābarmati with Hāthmati is very rich in archaeological remains, ranging from the third century onwards.

The locality seems to have been in a flourishing condition possessing large cities in the past, reservoirs and step-wells spread all over the country. In the 6th century Grahāditya, son of Śilāditya of the Maitraka

clan (from 'mitra', sun) acquired this territory from the Bhils after the sack of Valabhipur by Arab invaders, who, it is said, killed Śilāditya and destroyed the city.

Prehistoric stone implements belonging to the neolithic age were secured long ago (in 1894) in the vicinity of the Kotyarka temple from the banks of the Sābarmati. Kṣatrapa coins of Rudradāman dated 150 A. D. were unearthed from the vicinity of this site. Sasanian or Gadhaiyā coins bearing the figure of a sacrificial horse, and belonging to the Gupta period are also found on this site. The large size bricks unearthed from the ruins have a crude finger mark, as was the practice during the Gupta period. Only recently huge bronze images not yet conclusively identified, were found while digging the foundation of a house. The back-side 'prabhāvali' of one these images has an inscription on the back in minute late Brāhmi script, placing the image in the early 7th century.[1]
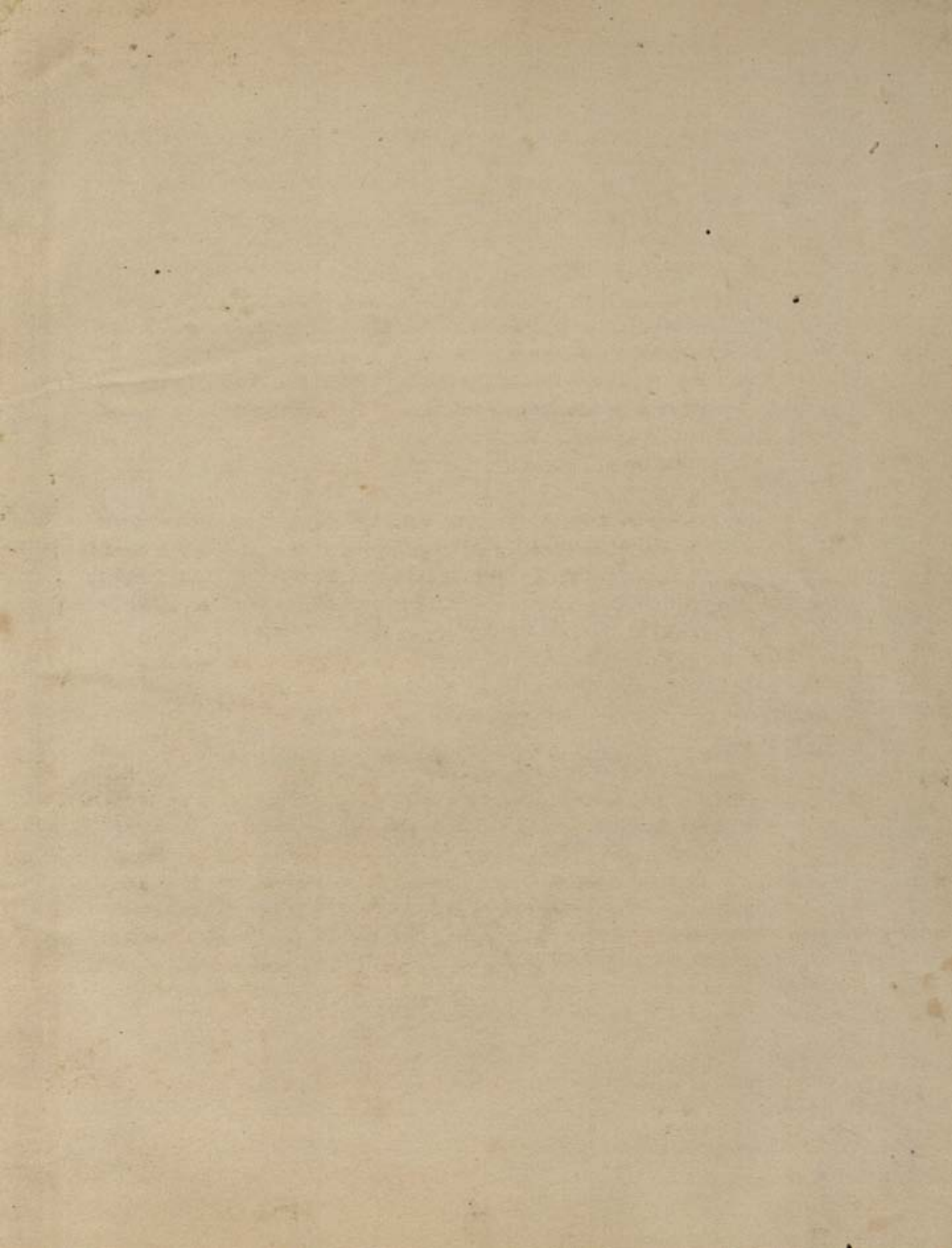
One of two sculptures in the round, carved in dark granite available in the vicinity, may be noted here. The local grey granite called Dentrāl stone, yields to elaborate carving and is capable of good polish though difficult to work upon. They are remarkable for their theme and execution.

The illustration on p. 183 shows a small boy enjoying a ride on the shoulders of a bigger child ; and the mother is offering some eatable to the chubby boy. A peacock hides behind the sari of the mother, with its eyes fixed towards the things offered to the baby. All the three figures have smiling faces.

A sculpture of Śiva-Pārvati (circa 6th century A. D.) in the Archaeological Museum at Himatnagar (Iḍar State) situated on the banks of the Hāthmati, opposite to the site of the Kotyarka shrine, bears a resemblance to the present group. Both Śiva and Pārvati stand and Pārvati carries the infant Gaṇeśa in two of her four arms. Both are wearing the 'uttariya' ; the peacock on the side of Pārvati, seems very interested in the child. The mother is also partly reminiscent of Pārvati in the betrothal scene of Śiva and Pārvati in the Elephanta caves (circa 8th century).

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1. See Dr. Hirānanda Shāstri's "Annual Report of the Arch. Department, Baroda State for 1037-38", p. 7.